

# KORG



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ENGLISH  
OS Ver. 2.00  
MAN0001093

# User's Manual

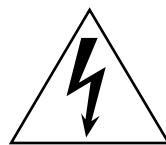
# Important safety instructions

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Mains powered apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.
- Clean only with dry cloth.
- Do not block any ventilation openings, install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet. (for U.S.A. and Canada)
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Turning off the power switch does not completely isolate this product from the power line so remove the plug from the socket if not using it for extended periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Do not install this equipment on the far position from wall outlet and/or convenience receptacle.
- Do not install this equipment in a confined space such as a box for the conveyance or similar unit.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



**WARNING:**  
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT  
EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

	<b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN	
<b>AVERTISSEMENT:</b> RISQUE DE CHOC ÉLECTRIQUE—NE PAS OUVRIR.		
注意 感電の恐れあり、キャビネットをあけるな		



The lightning flash with arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

## CAUTION

Danger of explosion if battery is incorrectly replaced.  
Replace only with the same or equivalent type.

### THE FCC REGULATION WARNING (for U.S.A.)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the user's authority to operate this equipment.

### CE mark for European Harmonized Standards

CE mark which is attached to our company's products of AC mains operated apparatus until December 31, 1996 means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

And, CE mark which is attached after January 1, 1997 means it conforms to EMC Directive (89/336/EEC), CE mark Directive (93/68/EEC) and Low Voltage Directive (73/23/EEC).

Also, CE mark which is attached to our company's products of Battery operated apparatus means it conforms to EMC Directive (89/336/EEC) and CE mark Directive (93/68/EEC).

### IMPORTANT NOTICE TO CONSUMERS

This product has been manufactured according to strict specifications and voltage requirements that are applicable in the country in which it is intended that this product should be used. If you have purchased this product via the internet, through mail order, and/or via a telephone sale, you must verify that this product is intended to be used in the country in which you reside.

**WARNING:** Use of this product in any country other than that for which it is intended could be dangerous and could invalidate the manufacturer's or distributor's warranty.

Please also retain your receipt as proof of purchase otherwise your product may be disqualified from the manufacturer's or distributor's warranty.

## Data Handling

Data in memory may sometimes be lost due to incorrect user action. Be sure to save important data to floppy disk or hard disk. Korg will not be responsible for damages caused by data loss.

## Example screens

Some pages of the manuals show LCD screens along with an explanation of functions and operations. All sound names, parameter names, and values are merely examples and may not always match the actual display you are working on.

## Cleaning the display

Use a soft cotton cloth to clean the screen. Some materials, such as paper towels, could cause scratches and damage it. Computer wipes are also suggested, provided they are specifically designed for LCD screens.

Do not spray any liquids on the LCD screen directly. Always apply the solution to your cloth first, then clean the screen.

## Trademarks

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## Disclaimer

The information contained in this manual have been carefully revised and checked through. Due to our constant efforts to improve our products, the specifications might differ to those in the manual. Korg is not responsible for any eventual differences found between the specifications and the contents of the instruction manual – the specifications being subject to change without prior notice

## Liability

Korg products are manufactured under strict specifications and voltages required by each country. These products are warranted by the Korg distributor only in each country. Any Korg product not sold with a warranty card or carrying a serial number disqualifies the product sold from the manufacturer's/distributor's warranty and liability. This requirement is for your own protection and safety.

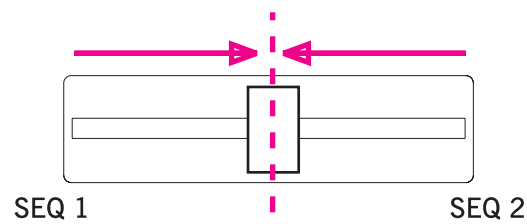
## Service and User's Assistance

For service, please contact your nearest Authorized Korg Service Center. For more information on Korg products, and to find software and accessories for your keyboard, please contact your local Authorized Korg distributor. For up-to-date information, please point your web browser to [www.korgpa.com](http://www.korgpa.com).

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## The BALANCE slider

When turning the instrument on, please be assured the BALANCE slider is set to the center. This sets both Sequencer 1 and Sequencer 2 to their maximum level. This will avoid you start a Song without hearing anything.





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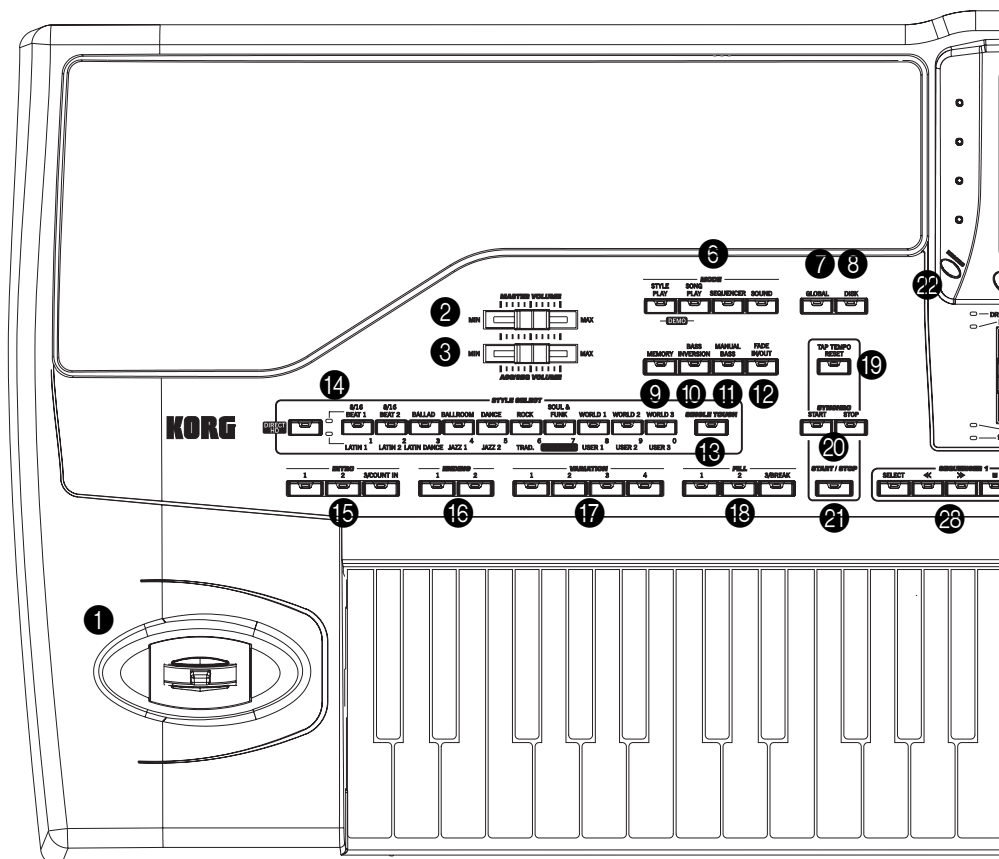
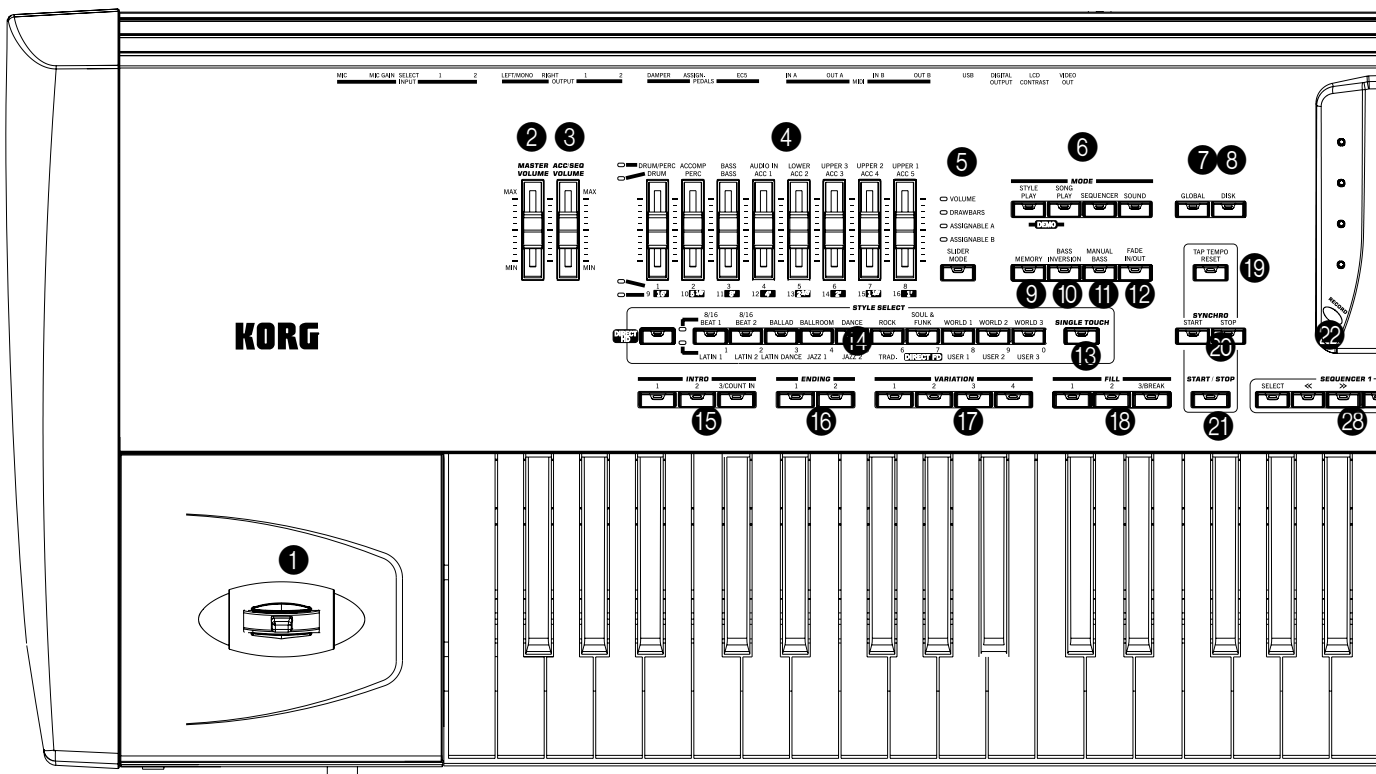
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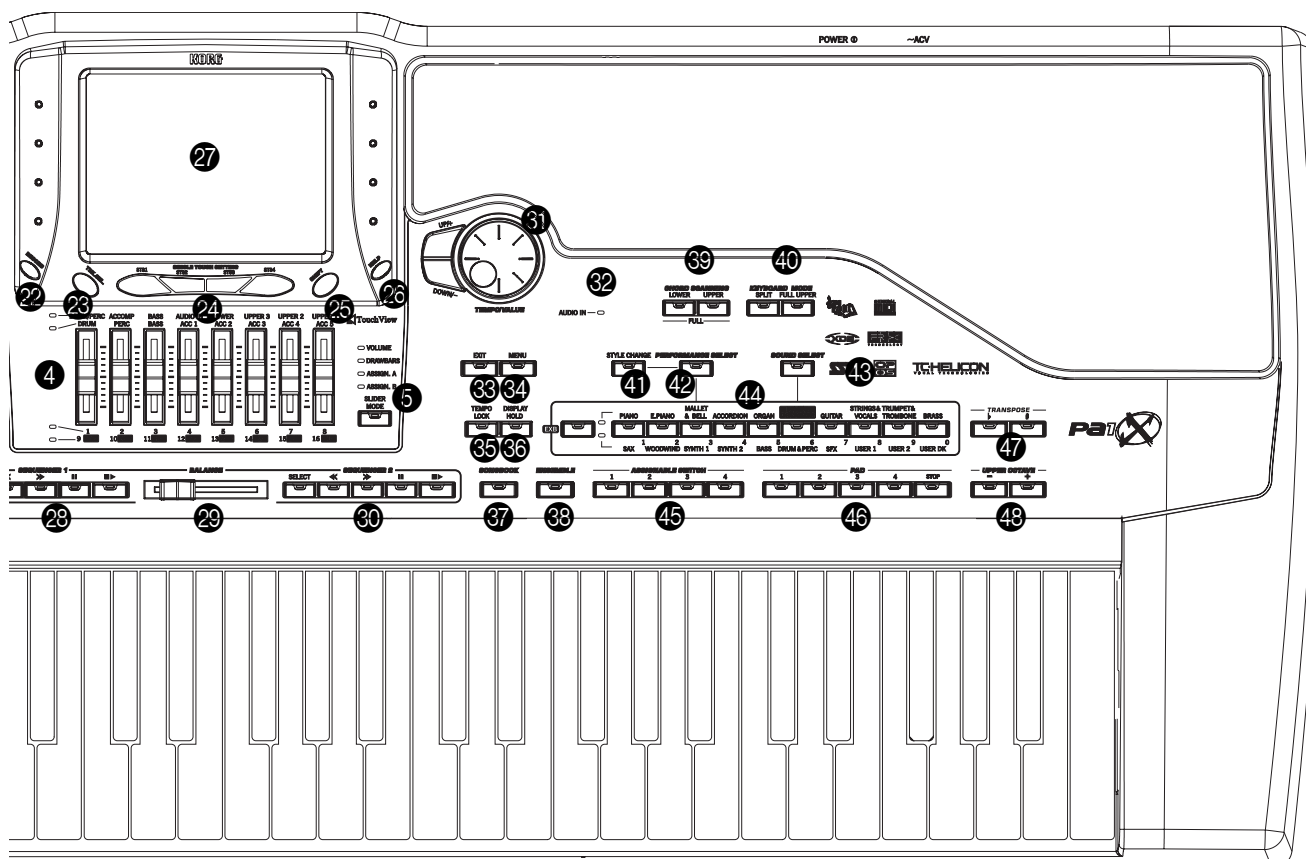
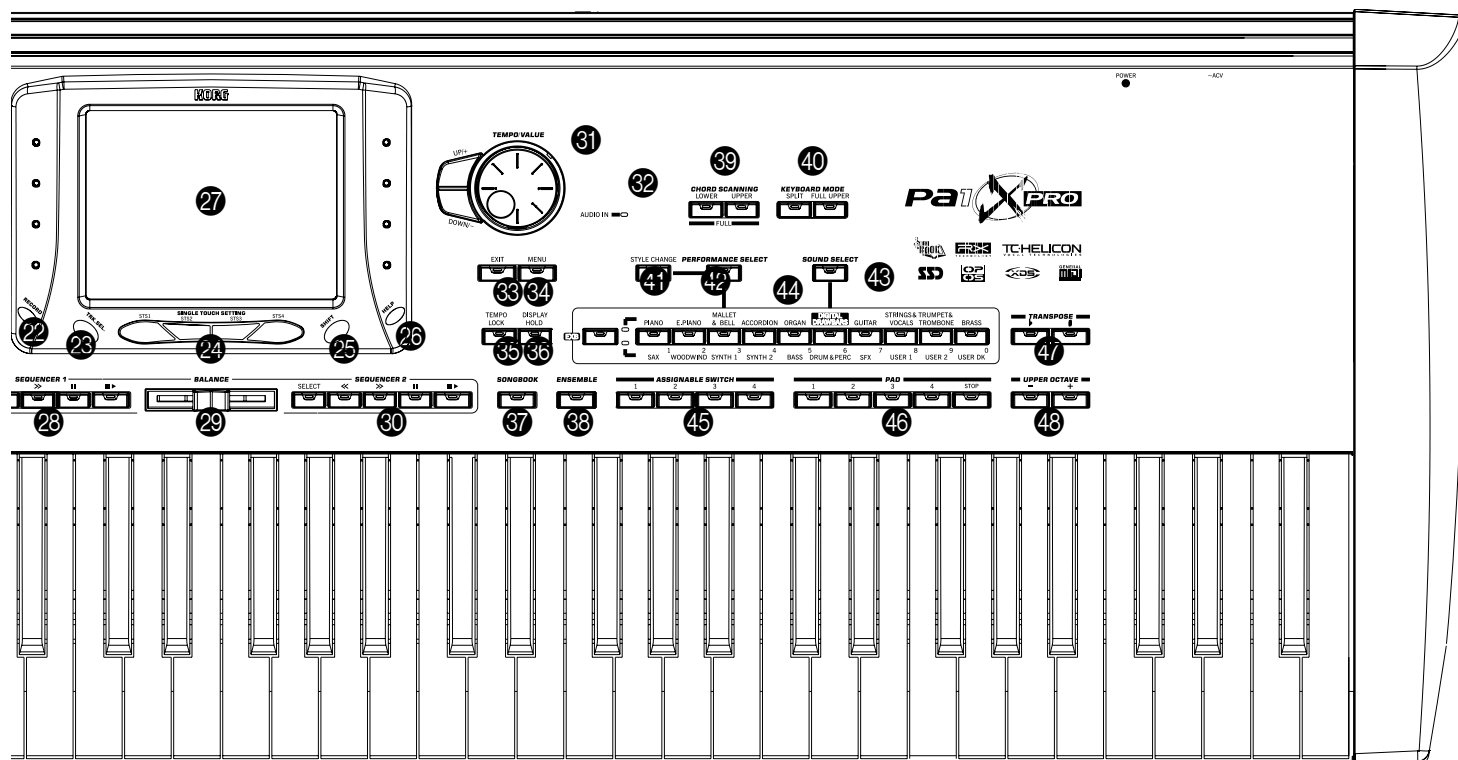


# Introduction

# Front panel









**1 JOYSTICK**

This joystick triggers different functions, depending on the direction it is moved towards.

- X (+/-) Move the joystick towards the left (-) to lower the pitch, or towards the right (+) to raise it. This is also called Pitch Bend.
- Y+ Move the joystick forward to trigger Modulation.
- Y- Move the joystick backward, to trigger the function assigned in Sound mode.

**2 MASTER VOLUME**

This slider controls the overall volume of the instrument, both of the internal speakers (only Pa1X), the LEFT/MONO and RIGHT outputs, and the HEADPHONES output. It does not control the volume of the 1 and 2 sub-outputs.

This slider also controls the volume of the signal entering the MIC input. It does not control the signal entering the line inputs (1 and 2).

**Warning:** At the maximum level, with rich-sounding Songs, Styles or Sounds, the internal speakers of Pa1X could distort during signal peaks. Should this happen, lower the Master Volume a little.

**3 ACC/SEQ VOLUME**

This slider controls the accompaniment tracks volume (Style Play mode) or the Song tracks volume, excluding the Keyboard tracks (Song Play and Sequencer modes). This is a relative control, whose effective maximum value is determined by the MASTER VOLUME slider position.

**4 ASSIGNABLE SLIDERS**

►GBL Gbl

These are freely assignable sliders (see “Controllers: Assignable Sliders” on page 229). Four operating modes are available, and can be selected by pressing the SLIDER MODE button (see below).

**5 SLIDER MODE**

►PERF ►STS ►STS<sup>SB</sup>

Use this button to select one of the four available operating modes for the sliders.

- VOLUME Each slider controls the volume of the corresponding track in the display.
- DRAWBARS Each slider controls the corresponding drawbar of the selected Digital Drawbars Sound.
- ASSIGN. A First set of freely assignable controls.
- ASSIGN. B Second set of freely assignable controls.

**6 MODE section**

Each of these buttons recalls one of the instrument's operating modes. When selected, each mode excludes the others.

**STYLE PLAY** Style Play mode, where you can play Styles (automatic accompaniments) and/or play up to four Keyboard tracks.

In the main page, Keyboard tracks are shown in the right half of the display. You can reach the main page by pressing EXIT from any of the Style Play edit pages. If you are in a different operating mode, press STYLE PLAY to recall the Style Play mode. If Keyboard tracks are not shown in the display, press the TRK. SEL. button to see them.

This operating mode is automatically selected when turning the instrument on.

**SONG PLAY** Song Play mode, where you can play back, directly from disk, Songs in Standard MIDI File (SMF) or (optionally) MP3 and Audio CD format. Since the Pa1X is equipped with two sequencers, you can even play two Songs at the same time, and mix them with the BALANCE slider.

In addition to the Song tracks, you can play one to four Keyboard tracks, along with the Song(s). In the main page, Keyboard tracks are shown in the right half of the display. You can reach the main page by pressing EXIT from any of the Song Play edit pages. If you are in a different operating mode, press SONG PLAY to recall the Song Play mode. Use the TRK. SEL. button to cycle between Keyboard and Song tracks.

**SEQUENCER** Sequencer mode, where you can play, record or edit a Song. The Backing Sequence mode lets you record a new Song based on the Keyboard and Style tracks, and save it as a new Standard MIDI File.

**SOUND** Sound mode, to play single Sounds on the keyboard, or edit them. By pressing RECORD you can enter the Sampling mode, Pa1X full-featured sampler.

**DEMO**

Press the STYLE PLAY and SONG PLAY buttons together to select the Demo mode. This mode lets you listen to some Demo Songs, to let you understand the sonic power of the Pa1X.

**7 GLOBAL**

This button recalls the Global edit environment, where you can adjust various global settings. This edit environment overlaps any operating mode, that still remains active in the background. Press EXIT to go back to the underlying operating mode.

**8 DISK**

This button recalls the Disk edit environment, where you can execute various operations on files and disks (Load, Save, Format, etc...). This edit environment overlaps any operating mode, that still remains active in the background. Press EXIT to go back to the underlying operating mode.

**9 MEMORY**

►SB

This button turns the Lower and Chord Memory functions on or off. Go to the “Preferences: Style Preferences” edit page (Style Play mode, see page 93) to decide if this button should be a Chord Memory only, or a Lower/Chord Memory button. When it works as a Lower/Chord Memory:

**Note:** This function can be automatically activated by playing harder the keyboard. See “Velocity Control” on page 93.

- ON The sound on the left of the split point, and the chord for the automatic accompaniment, are kept in memory even when you raise your hand from the keyboard.
- OFF The sound and chords are released as soon as you raise your hand from the keyboard.

**10 BASS INVERSION**▶PERF ▶STS ▶STS<sup>SB</sup>

This button turns the Bass Inversion function on or off.

**Note:** This function can be automatically activated by playing harder the keyboard. See “Velocity Control” on page 93.

- ON** The lowest note of a chord played in inverted form will always be detected as the root note of the chord. Thus, you can specify to the arranger composite chords such as Am7/G or “F/C”.
- OFF** The lowest note is scanned together with the other chord notes, and is not always considered as the root note.

**11 MANUAL BASS**▶PERF ▶STS ▶STS<sup>SB</sup>

This button turns the Manual Bass function on or off.

**Note:** When you press the MANUAL BASS button, the Bass track volume is automatically set to its maximum value. The volume is automatically set back to the original value when the MANUAL BASS button is deactivated.

- ON** The automatic accompaniment stops playing (apart for the Drum and Percussion tracks), and you can manually play the Bass track on the Lower part of the keyboard. You can start the automatic accompaniment again by pressing one of the CHORD SCANNING buttons.
- OFF** The bass track is automatically played by the Style.

**12 FADE IN/OUT**

When the Style is not playing, press this button to start it with a volume fade-in (the volume goes from zero to the maximum).

When the Style is playing back, press this button to stop it with a volume fade-out (the volume gradually decreases).

You don't need to press START/STOP to start or stop the Style.

**13 SINGLE TOUCH**

This button turns the Single Touch function on or off.

- ON** When a different Style (or the same again) is selected, a Single Touch Setting (STS1) is automatically selected, meaning that the Keyboard tracks and effects will change, together with the Style tracks and effects.
- OFF** When you select a different Style (or the same again), the Style tracks and effects are changed, while the Keyboard tracks and effects are not changed.

**14 STYLE SELECT section**

▶PERF

Use these buttons to open the Style Select window and select a Style. See “Style Select window” on page 73.

The leftmost button lets you select the upper or lower row of Style banks, or the DIRECT HD Style banks (only if the hard disk is installed). Press it repeatedly to select one of the rows. (After both LEDs have turned on, press the button again to turn them off).

UPPER LED ON

Upper-row Styles selected.

LOWER LED ON

Lower-row Styles selected.

BOTH LED ON

**DIRECT HD** Styles selected (if any). Direct HD Styles are accessed by pressing buttons [1-9].

**A word about Style banks and names.** Styles from “8BEAT/16 BEAT” to “WORLD 3”, and from “LATIN1” to “TRADITIONAL” are standard Styles, the user can't normally overwrite with a Load operation (unless you remove the protection; see “Factory Style and Pad Protect” on page 265).

“DIRECT FD” Styles are Styles directly accessed from floppy disk (no need to load from disk). See “The DIRECT FD bank” on page 98.

“DIRECT HD” Styles are directly accessed from the hard disk, if installed (again, no need to load from disk). See “The DIRECT HD bank” on page 97.

Styles from “USER1” to “USER3” are location where you can load new Styles from disk.

Each button (Style bank) contains four pages, each with up to eight Styles. Repeatedly press a bank button to cycle between the available pages.

**15 INTRO 1-3/COUNT IN buttons**▶PERF ▶PERF<sup>Sty</sup> ▶SB

These buttons set the arranger in Intro mode. After pressing one of these buttons, start the Style, and it will begin with the selected intro. The INTRO LED automatically goes off at the end of the intro.

Press them twice (LED blinking) to let them play in loop, and select any other Style element (Fill, Intro, Variation...) to exit the loop.

**Note:** Intro 1 plays a short sequence with different chords, while Intro 2 plays on the last recognized chord. Intro 3 is usually a one-bar Count In.

**16 ENDING 1-2 buttons**▶PERF ▶PERF<sup>Sty</sup> ▶SB

While the Style is running, these two buttons trigger an Ending, and stop the Style. Press one of them, and the Style will stop running with an Ending. If pressed while the Style is stopped, they act as an additional couple of Intros.

Press them twice (LED blinking) to let them play in loop, and select any other Style element (Fill, Intro, Variation...) to exit the loop.

**Note:** Ending 1 plays a short sequence with different chords, while Ending 2 plays on the last recognized chord.

**17 VARIATION 1-4 buttons**▶PERF ▶PERF<sup>Sty</sup> ▶SB

Each of these buttons select one of the four variations of the current Style. Each variation can vary in patterns and sounds.

**18 FILL 1-3/BREAK buttons**▶PERF ▶PERF<sup>Sty</sup> ▶SB

These buttons trigger a fill-in. Press them twice (LED blinking) to let them play in loop, and select any other Style element (Fill, Intro, Variation...) to exit the loop.

**Note:** Fill 3 is usually a Break.

**Note:** This function can be automatically activated by playing harder the keyboard. See “Velocity Control” on page 93.

**19 TAP TEMPO/RESET**

This is a double-function button, acting in a different way depending on the Style status (stop/play).

**Tap Tempo:** When the Style is not playing, you can “beat” the tempo on this button. At the end, the accompaniment starts playing, using the “tapped in” tempo.

**Reset:** When you press this button while the Style is playing back, the Style pattern goes back to the previous strong beat.

**20 SYNCHRO START / STOP buttons** ▶SB

These buttons turn the Synchro Start and Synchro Stop functions on or off.

START ON, STOP OFF

In this situation, just play a chord in the chord recognition area (usually under the split point, see “CHORD SCANNING section” on page 11) to automatically start the Style. If you like, turn one of the INTROs on before starting the Style.

START ON, STOP ON

When both LEDs are lit, raising your hand from the keyboard momentarily stops the Style running. If you play a chord again, the Style starts again.

START OFF, STOP OFF

All Synchro functions are turned off.

**21 START/STOP**

Starts or stops the Style running.

*Note:* This function can be automatically activated by playing harder the keyboard. See “Velocity Control” on page 93.

**[SHIFT]** You can reset all ‘frozen’ notes and controllers on the Pa1X and any instrument connected to its MIDI OUT, by using the “Panic” key combination. Just press SHIFT + START/STOP to stop all notes and reset all controllers.

**22 RECORD**

This button sets the instrument to Record or Sampling mode (depending on the current operating mode).

**23 TRK.SEL. (TRACK SELECT)**

Depending on the operating mode, this button switches between the various tracks view.

STYLE PLAY MODE

Toggles between Keyboard and Style tracks.

SONG PLAY MODE

Toggles between Keyboard tracks, Song tracks 1-8, and Song tracks 9-16.

SEQUENCER MODE

Toggles between Song tracks 1-8 and Song tracks 9-16.

**24 SINGLE TOUCH SETTING buttons**

These buttons allow to select up to four Single Touch Settings. Each of the Styles and SongBook entries includes a maximum of four Single Touch Settings (STS), to automatically configure

Keyboard tracks and effects, and the Voice Processor, at the touch of a finger. When the SINGLE TOUCH LED is lit, an STS is automatically selected when selecting a Style.

**25 SHIFT**

With this button held down, pressing certain other buttons accesses to a second function.

**26 HELP**

Press this button to open the context-sensitive Help.

**27 COLOR TOUCHVIEW™ GRAPHICAL DISPLAY**

Use this display to interact with the instrument.

**28 SEQUENCER 1 TRANSPORT CONTROLS**

Pa1X is equipped with two sequencers (Sequencer 1 and Sequencer 2), each with its own set of transport controls. The Sequencer 1 group is also used for the Sequencer mode.

**<< and >>** Rewind and Fast Forward commands. If you use them while the Song is in play, they make it scroll back or forward.

When pressed once, these buttons move the Song to the previous or following measure. When kept pressed, they make the Song scrolling continuously, until you release them.

**[SHIFT]** In Jukebox mode (Sequencer 1), keep the SHIFT button pressed, and press these buttons to scroll to the previous or next Song in the Jukebox list (see “Jukebox Editor” on page 147).

When playing back CD tracks, keep the SHIFT button pressed, and press these buttons to scroll to the previous or next track.

PAUSE

Pauses the Song at the current position. Press PAUSE or PLAY/STOP to start the Song playing again.

PLAY/STOP

Starts or stops the current Song. When you stop the Song, the Song Position goes back to measure 1 (i.e., the beginning of the Song).

**[SHIFT]** In Song Play mode, pressed while keeping SHIFT pressed, starts both sequencers at the same time.

**29 BALANCE slider**

In Song Play mode, this slider balances the volume of the two on-board sequencers. When fully on the left, only the Sequencer 1 can be heard. When fully on the right, only the Sequencer 2 can be heard. When in the middle, both sequencers play at full volume.

**30 SEQUENCER 2 TRANSPORT CONTROLS**

Transport controls for Sequencer 2. See instructions for Sequencer 1 above.

**31 TEMPO/VALUE section** ▶PERF ▶PERF<sup>Sty</sup> ▶SB

The DIAL and the DOWN/- and UP/+ buttons can be used to control the Tempo, assign a different value to the selected parameter in the display, or scroll a list of files in the Song Select and Disk pages.

**DIAL** Turn the dial clockwise to increase the value or tempo. Turn it counter-clockwise to decrease the value or tempo.

**(SHIFT)** When used while pressing the SHIFT button, this control always acts as a Tempo control.

**DOWN/- and UP/+**

DOWN/- decreases the value or tempo; UP/+ increases the value or tempo.

Press both buttons together to reset the Tempo to the value memorized in the selected Style.

### 32 AUDIO IN LED

This LED shows the level of the audio signal entering the INPUT connectors. Three different colors show the level.

**OFF** No signal entering.

**Green** Low- to mid-level signal entering. If the LED turns off too often, the input gain is too low. Use the GAIN controls and/or the source device's volume to raise the input level.

**Orange** Optimum level. Try to keep the gain at this level.

**Red** Clipping is occurring at the input stage. This is fine if the LED goes to red only occasionally during a signal peak. If it turns red too often, the input level is too high, and you should reduce it by using the GAIN controls and/or the source device's volume control.

See page 14 for more information on the INPUTs and volume control.

### 33 EXIT

Use this button to perform various actions, leaving from the current status:

- exit the edit menu page, without selecting any item
- make the page menu disappear, without selecting any item
- return to the main page of the current operating mode
- exit the Global or Disk edit environment, and return to the current page of the current operating mode
- exit from a Style, Performance or Sound Select window

### 34 MENU

This button opens the edit menu page for the current operating mode or edit mode. After opening an edit menu, you can jump to one of the edit sections by touching the corresponding button in the display.

Otherwise, press EXIT to return to the main page of the current operating mode, or the current page of the underlying operating mode.

See the relevant chapter devoted to each operating mode or edit environment, to see their “maps” in detail.

### 35 TEMPO LOCK

This button turns the Tempo Lock function on or off.

**ON** When you select a different Style or Performance, the tempo does not change. You can still manually change it, by using the DIAL.

**OFF** When you select a different Style or Performance, the memorized tempo is automatically selected.

### 36 DISPLAY HOLD

This button turns the Display Hold function on or off.

**ON** When you open a temporary windows (like the Sound Select window), it remains in the display until you press EXIT or an operating mode button.

**OFF** Any temporary window closes after a certain time, or after selecting an item in the window.

### 37 SONGBOOK

Press this button to recall the SongBook mode. While in this mode, you can browse through the music database.

### 38 ENSEMBLE

►PERF ►STS ►STS<sup>SB</sup>

This button turns the Ensemble function on or off. When on, the right-hand melody is harmonized with the left-hand chords.

*Note: The Ensemble function works only when the keyboard is in SPLIT mode, and the LOWER Chord Scanning mode selected.*

### 39 CHORD SCANNING section

►PERF ►STS ►STS<sup>SB</sup>

In Style Play and Sequencer-Backing Sequence mode, use these buttons to define the way chords are recognized by the arranger.

**LOWER** Chords are detected below the split point. The number of notes you should play to form a chord is defined by the Chord Scanning Mode parameter (see “Chord Recognition Mode” on page 93).

**UPPER** Chords are detected above the split point. You must always play three or more notes to let the arranger recognize a chord.

**FULL (both LEDs on)**

Chords are detected on the full keyboard range. You must always play three or more notes to let the arranger recognize a chord. (You can use this mode even when the Split Keyboard Mode is selected).

**OFF** No chords detected. After pressing START/STOP, only the Drum and Percussion accompaniment tracks can play.

### 40 KEYBOARD MODE section

►PERF ►STS ►STS<sup>SB</sup>

These buttons define how the four Keyboard tracks are positioned on the keyboard.

**SPLIT** The Lower track plays below the split point, while the Upper 1, Upper 2 and Upper 3 tracks play above it. By default, selecting this keyboard mode automatically selects the Lower chord scanning mode (see “Chord Recognition Mode” on page 93).

**FULL UPPER**

The Upper 1, Upper 2 and/or Upper 3 tracks play on the whole keyboard range. The Lower track does not play. By default, selecting this keyboard mode automatically selects the Full chord scanning mode (see “Chord Recognition Mode” on page 93).



**41 STYLE CHANGE**

This button turns the Style Change function on or off.

- ON** When you select a Performance, the Style could change, according to which Style number is memorized onto the Performance.
- OFF** When you select a Performance, the Style and Style track settings remain unchanged. Only Keyboard track settings are changed.

**42 PERFORMANCE SELECT**

Press this button to use the SOUND/PERFORMANCE SELECT section to select a Performance.

**43 SOUND SELECT**

Press this button to use the SOUND/PERFORMANCE SELECT section to select a Sound, and assign it to the selected track.

**44 SOUND/PERFORMANCE SELECT section**

►PERF ►STS ►PERF<sup>Sty</sup> ►STS<sup>SB</sup> ►SB

Use these buttons to open the Sound Select or Performance Select window, and select a Sound or a Performance. See “Sound Select window” on page 72, or “Performance Select window” on page 72. For a list of available Sounds, see “Sounds” on page 285.

The leftmost button selects the upper or lower row of Sound or Performance banks. Press it repeatedly to select one of the rows.

**UPPER LED ON**

Upper row of Sounds or Performances selected.

**LOWER LED ON**

Lower row of Sounds or Performances selected.

**BOTH LEDs ON**

Additional EXB card's Sounds or Performances selected.

On the front panel, **Sound banks** are identified by the instrument names, while **Performance banks** are identified by numbers (1-10; 0=bank 10).

**A note about Sound banks and names.** Sounds from “PIANO” to “SFX” are standard Sounds, the user can't directly modify.

Sounds “USER1” and “USER2” are locations where you can load new Sounds from disk.

“USER DK” is where you can load new Drum Kits.

Each Sound bank contains various pages, each with up to eight Sounds. Repeatedly press a bank button to cycle between the available pages.

**45 ASSIGNABLE SWITCH (1-4)** ►PERF ►STS ►STS<sup>SB</sup>

You can assign any function to these switches. See “Pad/Switch: Assignable Switch” on page 92 for more information.

**46 PAD (1-4, STOP)** ►PERF ►STS ►STS<sup>SB</sup>

Each Pad corresponds to a dedicated Pad track. Use these buttons to trigger up to four sounds or sequences at the same time.

- Press a single PAD button to trigger a single sound or sequence.
- Press more PAD buttons to trigger several sounds or sequences.

The sequences will play up to the end. Then, they will stop or continue repeating, depending on their “One Shot/Loop” status (see “Pad Type” on page 130).

You can stop all sequences, or just some of them, by pressing the STOP button of the PAD section:

- Press STOP to stop all sequences at once.
- Keep STOP pressed and press one (or more) of the PAD buttons to stop the corresponding sequence(s).

**Note:** Pads share polyphony voices with the other tracks, so avoid using too many of them together with a dense Style or Song arrangement.

**About Pad synchronization.** In Style Play mode, Pads are sync'd to the Style's tempo. In Song Play mode, they are sync'd to the last Sequencer you set to play. For example, assume you pressed SEQ2-PLAY; when pressing one of the PAD buttons, it will play in sync with Sequencer 2.

**Note:** There is no synchronization with MP3 files and Audio CD Tracks. Pads can only be synchronized to Standard MIDI Files. Therefore, when an MP3 file or Audio CD Track is assigned to the last select Sequencer, Pads will synchronize to the last Standard MIDI File that has been played back.

**About Pads' and the Sequencers' Play command.** When you press one of the PLAY buttons to start the corresponding Sequencer, all Pads will stop playing.

**47 TRANSPOSE** ►PERF ►PERF<sup>Sty</sup> ►SB

These buttons transpose the whole instrument in semitone steps (Master Transpose). The transposition value is usually shown on the page header in the display.

STYLE PLAY T: 0 <no chord>

Press both buttons together, to reset the Master Transpose to zero.

**Note:** The Master Transpose has no effect on tracks set to Drum mode (and, even if set in a different status, on the Drum and Percussion tracks). See “Track Controls: Mode” on page 86, and “Track Controls: Mode” on page 146.

♭ Lowers the Master Transpose a semitone.

# Raises the Master Transpose a semitone.

**48 OCTAVE** ►PERF ►STS ►STS<sup>SB</sup>

These buttons transpose the selected track in steps of a whole octave (12 semitones; max ±2 octaves). The octave transposition value is always shown (in octaves) next to a track's name.

Grand Piano  
B: Piano

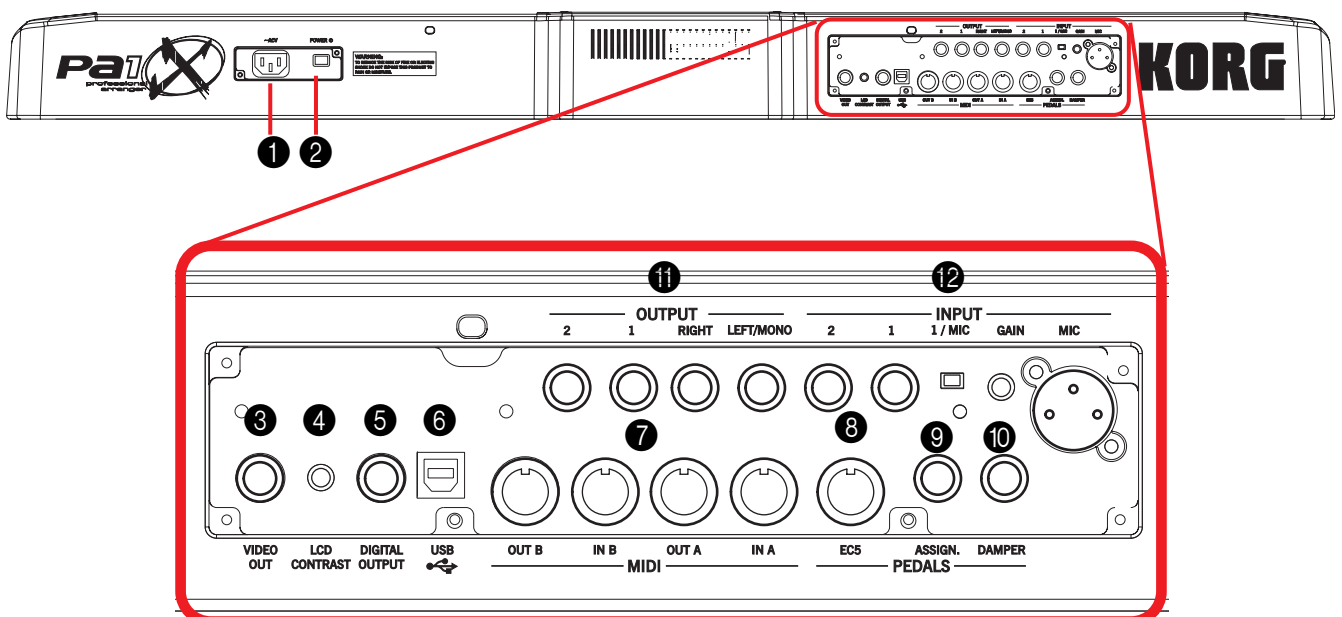
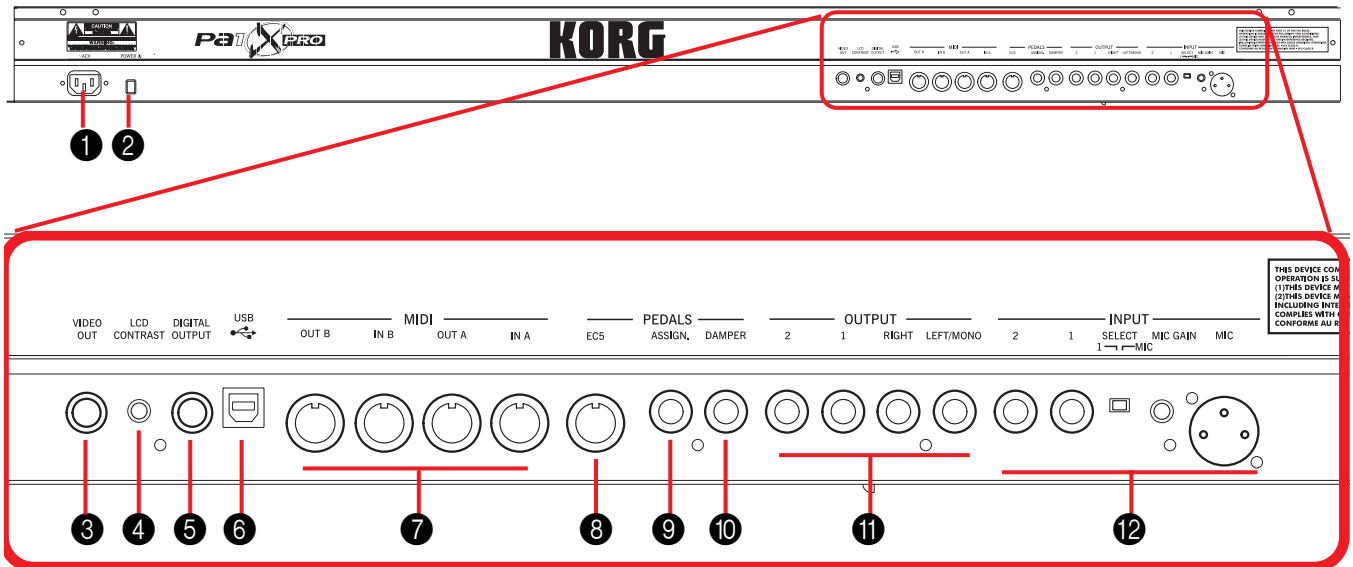
Press both buttons together, to reset the Octave Transpose to zero.

**Note:** The Octave Transpose has no effect on tracks set to Drum mode (and, even if set in a different status, on the Drum and Percussion tracks).

– Lowers the selected track an octave.

+

# Rear panel



**1 AC CABLE CONNECTOR**

Plug the supplied AC cable into this connector.

**2 POWER switch**

Use this switch to turn the instrument on or off.

**3 VIDEO OUT (optional)**

If an optional VIF3 video interface is fitted, you can connect the Pa1X to a TV or video monitor. The RCA connector is already included with the instrument, even if the video interface is not installed. See “Installing the Video Interface (VIF3)” on page 395 for more information.

**4 LCD CONTRAST**

Use this knob to adjust the display contrast.

**5 DIGITAL OUTPUT**

Use this output to connect the Pa1X to the S/PDIF input connector of another digital device, like a digital mixer, audio card, DAT or stand-alone CD recorder. The same signal output from the LEFT/MONO & RIGHT connectors is sent by this connector. See “S/PDIF On/Off” on page 235 for more information.

**6 USB**

This is a USB Type B (slave) connector. Use it to connect the Pa1X to a personal computer, and transfer data to/from its hard disk. See “Hard Disk USB Connection” on page 266 for more information.

**7 MIDI INTERFACE**

The MIDI interface allows your Pa1X to be connected to external controllers (master keyboard, MIDI guitar, wind controller, MIDI accordion...), to a series of expanders, or to a computer running a sequencer or an editor. Two sets of IN and OUT connectors are provided. For more information on how to use the MIDI interface, see the “MIDI” chapter.

**IN A/B** These connectors receive MIDI data from a computer or a controller. Connect them to an external controller's or computer's MIDI OUT.

**OUT A/B** These connectors usually work as MIDI OUTs, but can be configured as MIDI THRU connectors. See “MIDI A Out/Thru Mode” and “MIDI B Out/Thru Mode” on page 231 for information on how to change their settings.

When set to OUT, these connectors send MIDI data generated by Pa1X's keyboard, controllers, and/or the internal sequencer. Connect them to an expander's or computer's MIDI IN.

When set to THRU, these connectors send an exact copy of the data received on the IN connector of the same group (A or B). Use them to cascade the Pa1X with other MIDI instruments.

**8 EC5 MULTISWITCH**

This connects to a Korg EC5 multiswitch, to control many functions in realtime. To program the EC5, see “EC5-A...E” on page 230.

**9 ASSIGN. PEDAL**

Use this port to connect a continuous- or footswitch-type pedal, like the Korg EXP2 or XVP10. To program it, see “Pedal/Foot-switch” on page 229.

**10 DAMPER PEDAL**

Use this to connect a Damper pedal, like the Korg PS1, PS or DS1H. To change its polarity, see “Damper Polarity” on page 229.

**11 OUTPUT**

Use these unbalanced connectors to send the audio signal (sound) to a mixer, a PA system, a set of powered monitors, or your hi-fi system.

To set the output for each track, or the routing for the audio inputs, see the “Audio Output” section, starting from page 233.

**LEFT/MONO, RIGHT**

These are the main stereo outputs. Use them to send the final stereo mix to an external device. Set the output level with the MASTER VOLUME slider.

1, 2

These are the sub outputs. Use them to create a stereo sub-mix of just some tracks, or to output just a single instrument to be mixed alone, or to be processed or amplified externally.

***Note:** The MASTER VOLUME slider has no effect on these outputs. Signal is sent dry, with no effects applied.*

**12 INPUT**

Use these connectors to input a dynamic microphone, another keyboard/synthesizer or a CD player.

1, 2

Only active when the 1/MIC switch is set to 1. Use these unbalanced connectors to connect a line-level input source, such as a CD player or a synthesizer.

1/MIC

Use this switch to select the input. When “1” is selected, both line inputs 1 & 2 are active. When “MIC” is selected, only the microphone input is active. See “Audio Output: Audio In” on page 234 for more information.

GAIN

Use this controls to adjust the input sensitivity of the MIC connector (from 20 to 55dB).

MIC

Only active when the 1/MIC switch is set to MIC. Use this balanced connector to input a dynamic microphone. To connect a condenser microphone, you need an external phantom power supply (refer to your microphone user's manual). The input signal is sent to the Voice Processor.

Use the GAIN knob to adjust the input gain, and see the input level by watching at the AUDIO IN LED on the control panel.



# Welcome!

Welcome to the world of Korg Pa1X and Korg Pa1X Pro Professional Arranger! Pa1X is the most powerful arranger available today, both for professional and home entertainment use.

Here are some of the features of your new instrument:

- RX Technology, the cutting edge engine that drives every aspect of the Pa1X – from the synthesis to the display and how it all works together.
- Powerful HI (Hyper Integrated) Korg sound generation system, as seen in our best professional synthesizers.
- OPOS (Objective Portable Operating System) multitasking operating system, to let you load data while playing your instrument.
- Operating System updates, to load new features from disk. Don't let your instrument get old!
- Optional hardware expansions, to add a video out, more RAM, a CD Player/Writer, up to two sound ROMs, an hardware MP3 encoder/decoder, an internal hard disk (standard on the Pa1X Pro). Get more and more for the money!
- Solid State Disk (SSD), for any system update – a smart way to replace the usual ROM memory.
- Direct Style access from floppy disk and hard disk.
- General MIDI Level 2 Sound-compatible.
- More than 870 Sounds, including more than 47 Drum Kits.
- Four multieffect processor for internal tracks, each with 89 effect types plus a Vocoder available for FX D).
- 320 Performance locations, and more than 1,800 preloaded Single Touch Settings (STS), for fast setting of keyboard sounds and effects.
- More than 450 preloaded Styles.
- Style Record and Edit
- XDS Double Sequencer with Crossfader.
- Full-featured 16-track sequencer
- Fully editable music database, for fast song retrieving, supplied by the SongBook
- Onboard sampling to create and edit new sounds and audio grooves
- Sophisticated Voice Processor, with effects and a 4-voice harmonizer, featuring voice technologies by TC-Helicon™.
- High-quality microphone preamplifier, with 20 ~ 55dB of gain.
- High-quality input (ADC) and output (DAC) audio converters.
- Color TouchView™ Graphical User Interface.
- Eight fully-programmable sliders, to be used also as organ drawbars
- *Pa1X only*: Digital bi-amplification with Auto Loudness and 4-way Bass Reflex system, for realistic sound reproduction.

- *Pa1X Pro only*: Included hard disk, with preloaded Real Drums and Turkish/Arabic World sets.

## Live Performing

Pa1X has been carefully designed to be used live. The “realtime” word has its full meaning in this instrument. **Performances** allow the instant selection of all the tracks on the keyboard and a suitable Style; **STSs** allow an instant selection of the keyboard tracks; **Styles** are the realtime backing companions for your real-time playing; the **SongBook** is the quick way to select a song from a sophisticated music database.

## Useful links

Your preferred Korg dealer not only carries this keyboard, but also a whole bunch of hardware and software accessories. You should ask him for more Sounds, Styles, and other useful music materials.

Each Korg distributor can give you useful information. Just give them a call for additional services. In the English-speaking world, here are the relevant addresses:

USA	KORG USA, 316 South Service Road, Melville, New York, 11747, USA Tel:1-516-333-9100, Fax:1-516-333-9108
Canada	Jam Industries, 620 McCaffrey, St-Laurent, QC, Canada, H4T 1N1 Tel. (514) 738-3000, Fax (514) 737-5069
UK	KORG UK Ltd, 9 Newmarket Court, Kingston, Milton Keynes, Buckinghamshire, MK10, 0AU Tel.: 01908 857100 UK Technical Support Tel: 01908 857122, Fax: 01908 857199 E-mail: info@korg.co.uk

Many Korg distributors also have their own web page on the internet, where you can find infos and software. Useful web pages in English are the following:

[www.korg.com](http://www.korg.com)

[www.korg.co.uk](http://www.korg.co.uk)

[www.jam-industries.com](http://www.jam-industries.com)

A place to find operating system updates and various system files (for example, a full backup of the factory data) is at the following link:

[www.korgpa.com](http://www.korgpa.com)

Other useful information can be found worldwide by accessing to other Korg web sites, like the following:

[www.korg.co.jp](http://www.korg.co.jp)

[www.korgfr.net](http://www.korgfr.net)

[www.korg.de](http://www.korg.de)

[www.korg.it](http://www.korg.it)

[www.letusa.es](http://www.letusa.es)

## What's in the box

After you buy your Pa1X, please check all the following items are included in the package. If some of them are missing, immediately contact your Korg dealer.

- Pa1X or Pa1X Pro
- Music stand
- Power cable
- Owner's Manual
- CD assembling kit, including screws
- *Pa1X only:* HD mounting kit, including two mounting brackets and eight M3x6 screws.

## About this manual

This manual is divided in four sections:

- An **Introduction**, containing an overview of the instrument and of basic operations.
- A **Quick Guide**, containing a series of practical guides.
- A **Reference Guide**, with each page and parameter described in detail.
- An **Appendix**, with a list of data and useful information for the advanced user.

Within the manual, you will find the following abbreviations:

- ▶ **PERF** The parameter can be saved to a Performance by selecting the Write Performance command from the page menu.
- ▶ **PERF<sup>Sty</sup>** The parameter can be saved to the current Style Performance by selecting the Write Style Performance command from the page menu.
- ▶ **STS** The parameter can be saved to one of the Single Touch Settings of the current Style, by selecting the Write STS command from the page menu.
- ▶ **STS<sup>Sb</sup>** The parameter can be saved to one of the Single Touch Settings of a SongBook entry, by checking the Write STS option in the Book Edit page of the SongBook mode.
- ▶ **GBL** The parameter can be saved to the Global, by selecting one of the available Write Global commands from the page menu. Several Global areas are available, and a smaller symbol after the GBL abbreviation will appear for each relevant parameter. More information is given in each Reference chapter.

## Making a backup copy of system files

A backup of all data is already supplied with the hard disk installed on the Pa1X Pro. In case you modify some data, you can make a new backup, to preserve your data from being accidentally lost.

If you own a standard Pa1X, not fitted with a hard disk right at the factory, we suggest you make a backup copy of all data, including Sounds, Performances and Styles, to a set of floppy disks, in case the internal data is changed.

To backup the Operating System, please see "Save OS to Floppy Disk" on page 264.

To backup the Factory Data (Styles, Programs...), see "Backup Resources" on page 264.

## Loading the operating system

Your Pa1X can be constantly updated as new versions of the operating system are released by Korg. You can download the operating system from [www.korgpa.com](http://www.korgpa.com). Please, read the instructions supplied with the operating system on the site.

You can see which version of the operating systems is installed in your Pa1X by going to the "Utility" page of the Disk mode (see "OS Version Number" on page 265).

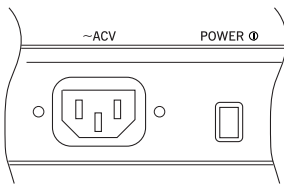
## Reloading the Factory Data

Should you need the original Factory Data, a copy of them is already supplied with the hard disk (on the Pa1X Pro). On the Pa1X, you can create a set of backup disks (see "Backup Resources" on page 264).

To restore data, see "Restore Resources" on page 264.

## Start up

### Connecting the AC power cord



Connect the supplied power cord to the dedicated socket on the rear of the instrument. Then, plug it into a wall socket. You don't need to worry about the local voltage, since the Pa1X uses a universal power adapter.

### Turning the instrument on and off

- Press the POWER switch on the rear panel to turn the instrument on. The display will light up, showing the boot procedure.

**Note:** When turning the instrument on, RAM PCM Samples used by some User Sounds may be automatically loaded, depending on the status of the "PCM Autoload" parameter (see page 265). This may take some time for loading.

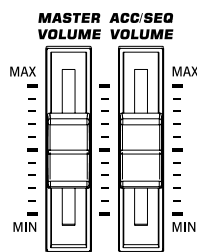
- Press again the POWER switch on the rear panel to turn the instrument off.

**Warning:** When turning the instrument off, all data contained in RAM (Song recorded or edited in Sequencer mode, Samples in edit and not yet saved) will be lost. MIDI Grooves generated by the Time Slice function will be lost, too.

On the contrary, data contained in the SSD memory (Factory data, User Sounds, Performances, Styles and Multisamples) will be preserved. Samples will be preserved, too.

### Controlling the Volume (Master & Acc / Seq)

- Use the MASTER VOLUME slider to control the overall volume of the instrument. This slider controls the volume of the sound going to the internal speakers (Pa1X only), the main (LEFT/MONO & RIGHT) OUTPUTs, and the HEADPHONES connector.



The 1 & 2 OUTPUT connectors are not affected by this slider. So, use the mixer's or speaker's level controls to adjust the volume.

**Note:** Begin with a moderate level, then raise the MASTER VOLUME up. Don't keep the volume at an uncomfortable level for too long.

- Use the ACC/SEQ VOLUME slider to control the volume of Style tracks (drums, percussions, bass...). This slider also

controls both Sequencers tracks, leaving Keyboard tracks untouched.

### The BALANCE slider

The BALANCE slider sets the relative volume of the two onboard sequencers (Sequencer1 and Sequencer 2).

- Move it fully left to set Sequencer 1 to the maximum level and Sequencer 2 to zero.
- Move it fully right to set Sequencer 1 to zero and Sequencer 2 to the maximum level.
- Move it to the center to set both Sequencer at the same level.

**Note:** When turning the instrument on, move this slider to the center, to avoid starting a Song at the minimum level.

### Headphones

Connect a pair of headphones to the HEADPHONES output, under the left part of the keyboard (just under the joystick). You can use headphones with an impedance of 16-200Ω (50Ω suggested). Use a headphone amplification distributor to connect more than one pair of headphones.

### Audio Outputs

Audio outputs allows you to connect the Pa1X to an external amplification system. Apart for headphones, this is the only way to listen to the sound of the Pa1X Pro, since it is not fitted with internal speakers.

**Stereo.** Connect two mono cables to the main (LEFT/MONO, RIGHT) OUTPUTs. Connect the other end of the cables to a stereo channel of your mixer, two mono channels, two powered monitors, or the TAPE/AUX input of your audio system. Don't use the PHONO inputs of your audio system!

**Mono.** Connect a mono cable to the LEFT/MONO OUTPUT. Connect the other end of the cable to a mono channel of your mixer, a powered monitor, or a channel of your TAPE/AUX input of a hi-fi system (you will hear that channel only, unless you can set the amplifier to Mono mode).

**Separate outputs.** You can connect your Pa1X to four channels of a mixer. This is very useful when recording, or if you want to send a sequencer's or backing track to a separate channel. For example, by using the separate outputs, you may send the Drum or Bass track to an external compressor or reverb unit, or mix the separate tracks on an external mixer.

Connect four mono cables to each of the main (LEFT/MONO, RIGHT) and 1, 2 OUTPUTs. To feed the sub-outputs (1, 2) you

must program the track(s) you wish to send them (see the “Audio Output” section in the Global, starting from page 233).

**Note:** When a track is sent to the OUTPUT 1 or 2, it is removed from the main mix going to the internal speakers and the LEFT/MONO & RIGHT OUTPUTS.

**Note:** OUTPUTs 1 & 2 are not effected.

Adjust the volume of the LEFT/MONO & RIGHT OUTPUTs with the MASTER VOLUME slider. Adjust the volume of the 1 & 2 OUTPUTs with the mixer’s or external speaker’s level controls.

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## Audio Inputs

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Connect your microphone, guitar, or any other musical instrument, to the INPUTs on the back of the instrument. The microphone signal may also be sent to the Voice Processor for sophisticated processing.

Depending on the connected device(s), you must choose a suitable signal routing, by using the 1/MIC switch in the INPUT section. Select the “MIC” position to connect a microphone to the MIC input, or the “1” position to connect a mono or stereo line-level source (like a synthesizer or an external CD player) to the 1 & 2 INPUTs.

See the “Singing with a connected microphone” chapter on page 62, and the “Audio Output: Audio In” section on page 234, for more information on connecting and setting the inputs and the audio source.

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## MIDI connections

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You can play the internal sounds of your Pa1X with an external controller, i.e. a master keyboard, a MIDI guitar, a wind controller, a MIDI accordion, or a digital piano.

You can also control other MIDI devices with the Pa1X, or connect it to a computer for use with an external sequencer.

See the “MIDI” chapter for more information on MIDI connections.

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## Damper Pedal

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Connect a Damper (Sustain) pedal to the DAMPER connector on the back panel. Use a Korg PS1, PS2 or DS1H footswitch pedal, or a compatible one. To switch the Damper polarity, see “Damper Polarity” on page 229

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## Demo

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Listen to the built-in Demo Songs to appreciate the power of the Pa1X. There are several Demo Songs to choose from.

1. Press the STYLE PLAY and SONG PLAY buttons together. Their LEDs start blinking.

*At this point, if you don’t press any other button, all the Demo Songs will be played back.*

2. Select one of the available options, to listen to a specified Demo Song.
3. Stop the Demo by pressing the STOP button on the display, or by exiting the Demo mode by pressing any MODE button.

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## The music stand

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A music stand comes standard with your Pa1X. Insert its legs into the two dedicated holes on the rear panel.

# Glossary of Terms

Before you begin, take a few moments to familiarize yourself with the names and terms we will be using to talk about the various elements of the Pa1X.

In this section, you will find a brief description of various key elements of the Pa1X. A professional arranger (Pa) keyboard uses different terminology than a traditional synthesizer or workstation. By familiarizing yourself with the names and functions in this section, you will get a better understanding of how all the different parts of the Pa1X work together to create a realistic musical performance. This will also help you to get the most out of the rest of the User's Manual.

## Sound

A Sound is the most basic unit of an Arranger Keyboard performance. A Sound is basically a playable instrument timbre (piano, bass, sax, guitar...) that can be edited, saved, recalled and assigned to any track. An individual Sound can be played on the keyboard in the Sound mode. In the Style Play mode or Sequencer mode, Sounds may be freely assigned to Sequencer tracks, Style tracks, or Keyboard tracks.

## Style

The Style is the heart of a professional arranger keyboard. At its basic level, a Style will consist of up to eight parts, or "Tracks".

### Drums

The Drum track will provide a repeating rhythmic phrase, played by the standard instruments of a Drum Kit.

### Percussion

An additional rhythmic phrase played by various percussion instruments (conga, shaker, cowbell, etc.) is provided by the Percussion track.

The Drum and Percussion tracks will play the same phrase repeatedly, regardless of the notes and chords being played on the keyboard, although it is possible to assign a different Drum Kit to either part, or to edit the Kit itself.

### Bass & Accompaniment

The Bass track and the (up to) five additional Style tracks will each play musical phrases that are musically related to and in sync with the Drum and Percussion tracks. However, the notes being played by these tracks *will* change to follow the chord progression that you play on the keyboard.

Again, any Sound you choose may be assigned to any track in a Style.

### Variation

For each Style, there are four Variations. In general, each Variation is a slightly different version of the others. As you progress from Variation one to Variation four, the arrangements will become more complex, and more parts (Tracks) may be added. This allows your performance to have a more dynamic arrangement, without losing the original "feel" of the Style.

### Fill-in

During a performance, a drummer may often perform a "fill" - such as when transitioning from a verse to a chorus - adding extra dynamics and keeping the beat from getting too repetitive. The Pa1X offers three Fill-ins specifically programmed for each Style. A Fill-in may be drums alone, drums with instrumentation, or even a silent "break".

### Intro & Ending

Each Style also allows you to embellish your performance with a set of musical introductions and endings. A long and short version of the Intro and Ending are usually provided, with the former more harmonically elaborated, and the latter with a fixed chord. A "count-in" style Intro is also provided.

## Keyboard tracks

In addition to the Style tracks, up to four additional parts can be played on the keyboard in real-time. Each of these Keyboard tracks can be limited to a particular range of keys or velocities, but in general three can be assigned to play above the split point (Upper), and one below (Lower). This allows the Upper Sounds to be layered together. The split point can be set to any note on the keyboard. In addition to performing along with a Style, these same Keyboard tracks will allow you to play along with the Sequencer.

### STS (Single Touch Settings)

Single Touch Settings allow you to instantly change the sounds assigned to each of the Keyboard tracks with a single button press, allowing for wide variation in sounds during a performance. Four STS (Single Touch Settings) can be saved with each Style or SongBook entry.

### Ensemble

By turning the Ensemble feature on, a single note played on one of the Keyboard tracks will be embellished by additional notes to create a complete chord voicing. The Ensemble knows which notes to add by looking at the chord that the Style is playing. In addition, the Ensemble parameters allow you to select the type of voicing that will be added - from a simple one-note harmony to a full "Brass" section - even a marimba-style trill!



## Performance

The Performance is the most encompassing setting on the Pa1X – a single setting that can remember a Style (with all the appropriate sounds), the Keyboard tracks (with all the appropriate sounds) and all their Single Touch Settings, Tempo, transposition, etc... A Performance can be stored in one of the Performance Banks, or it can be saved in a “database” format using the SongBook function.

## Sequencer

The Sequencer acts as a recorder, so you can capture and playback your performances. The Pa1X sequencer can function in different modes. In the Backing Sequence mode, each Style element and each Real-Time (Keyboard and Pads) element can be recorded on a separate track in a single pass. This can be a big help in getting a song recorded quickly. The sequencer can also behave as a traditional 16-track linear sequencer, where each track is recorded individually one at a time.

## The LOGO decoder

On the front panel of your Pa1X you have probably noticed seven logos, and may have even wondered what they stand for. Well, here is a quick explanation of each one.



The SongBook provides a database that allows you to instantly recall all the settings (Style, Performance, Sounds, Tempo, etc...) required to perform a particular song. The SongBook comes with a number of entries,

but you are free to edit and remove any entry, as well as add any of your own. The main advantage of the SongBook is that it allows you to search for a song using title, composer, musical genre, etc...



RX Technology is the cutting edge engine that drives every aspect of the Pa1X – from the synthesis to the display and how it all works together.



A variety of professional vocal effects are provided by the Pa1X – including reverb, delay, compression, and even four-part vocal harmonies! Pitch correction and vocal modeling are available as optional upgrades. All of the vocal effects are provided by TC Helicon, the leader in vocal processing technology.

mances, etc...) intact when the power is off. The SSD also allows for easy updating of the operating system via the floppy drive.



X-fade Dual Sequencer. That's right! The Pa1X actually features TWO sequencers. A DJ-style Cross-fader (X-fader) allows you to perform seamless transitions from one song to another, or to pause one song, switch to another, and then come back and finish the original. Mighty nice for live performances!



Object Portable Operating System allows the Pa1X to perform multi-tasking capabilities, such as loading a file from floppy into one of the sequencers as the other sequencer continues to play.



General MIDI (GM) is a standard that ensures the compatibility of sounds and messages between GM compatible instruments available from different manufacturers. For example, sequenced songs created on any GM equipped product and saved in the GM format will playback correctly on the Pa1X.



The Solid State Disk (SSD) is protected digital memory that keeps the operating system and all the Pa1X resources (Sounds, Styles, Perfor-

# Interface basics

## The Color TouchView™ graphical user interface

Pa1X features an easy-to-use graphical user interface, based on Korg's patented Color TouchView™ interface. Here are the basic elements of the user's interface.

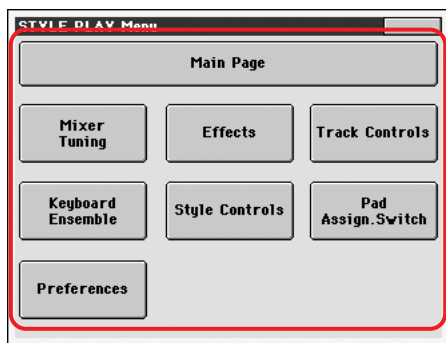
### Pages

Parameters are grouped into separate pages, to be selected by touching the corresponding tabs on the lower part of the display.



### Menus and sections

Pages are grouped in sections, to be selected by touching the corresponding buttons in the Edit menu that opens up when you press the MENU button.



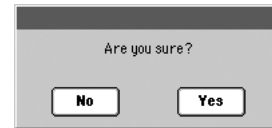
### Overlapping windows

When you press a Sound, Style, or Song name, a selecting window overlaps the current page. After you select an item in the window, or press the EXIT button, the window closes, and the underlying page is shown again.



### Dialog boxes

Similar to selecting windows, dialog boxes overlap the underlying page. Press one of the buttons on the display to give Pa1X an answer, and the dialog box will close.



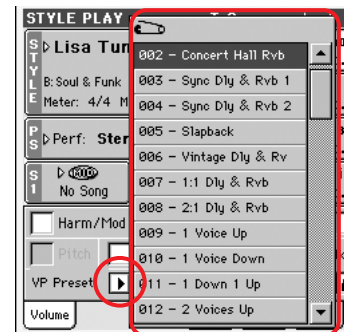
### Page menus

Press the icon on the upper right corner of each page, and a menu with suitable commands for the current page will appear. Touch one of the available commands to select it. (Or, press anywhere else on the screen to make it disappear, with no command selected).



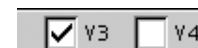
### Pop-up menus

When an arrow appears next to a parameter name, press it to open a pop-up menu. Select any of the available options (or anywhere else on the screen to make the menu disappear).



### Checkboxes

This kind of parameters are on/off switches. Press them to change their status.





## Numeric fields

When a numeric value is underlined, press it a second time to open the Numeric Keypad.

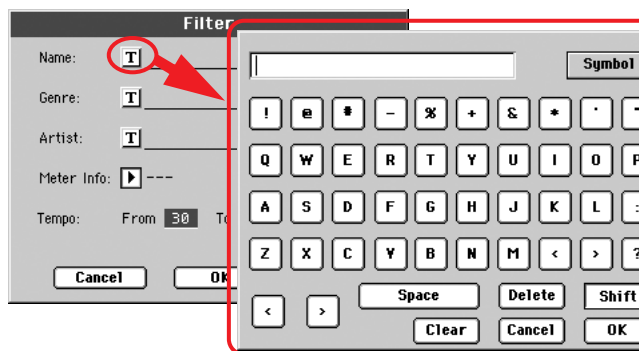


## Alphabetic fields

When a textual option is underlined, press it a second time to open a list of options.

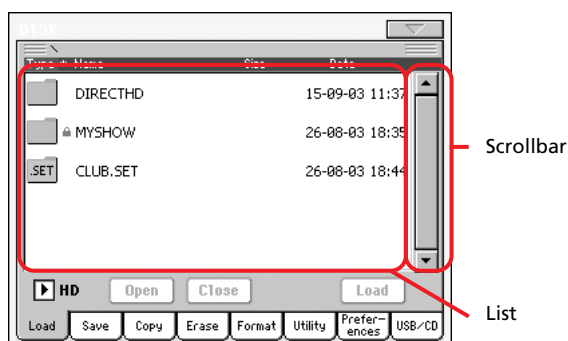
## Editable names

When the **T** (Text Edit) button appears next to a name, press it to open the Text Edit window and edit the name.



## Lists and scrollbars

Files on disk, as well as other kinds of data, are shown as lists. Use the scrollbar to scroll the list content.



## Icons

Various icons help identifying the type of a file, a Song, a folder.

## Operative modes

Pa1X pages are divided into various operating modes. Each mode is accessed by pressing the corresponding button in the MODE section on the control panel.

Each operating mode is marked with a different *color code*, that helps you understand at first sight where you are.

Three special modes (Global, Disk, and SongBook) overlap the current operating mode, that remains active in the background. The SongBook mode can recall the Style Play or Song Play modes.

## Selected, highlighted items

Any operation carried on on parameters, data or list entries, is executed on highlighted items. First select the parameter or item, then execute the operation.

J = 71

## Non-available, grayed-out parameters

When a parameter or command is not currently available, it is shown in grey on the display. This means it cannot be selected, but may become available when a different option is selected, or you switch to a different page.

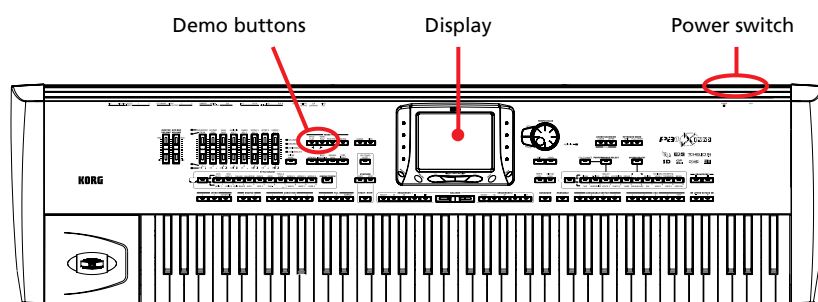




# Quick Guide

## Turning the instrument on and listening to the demos

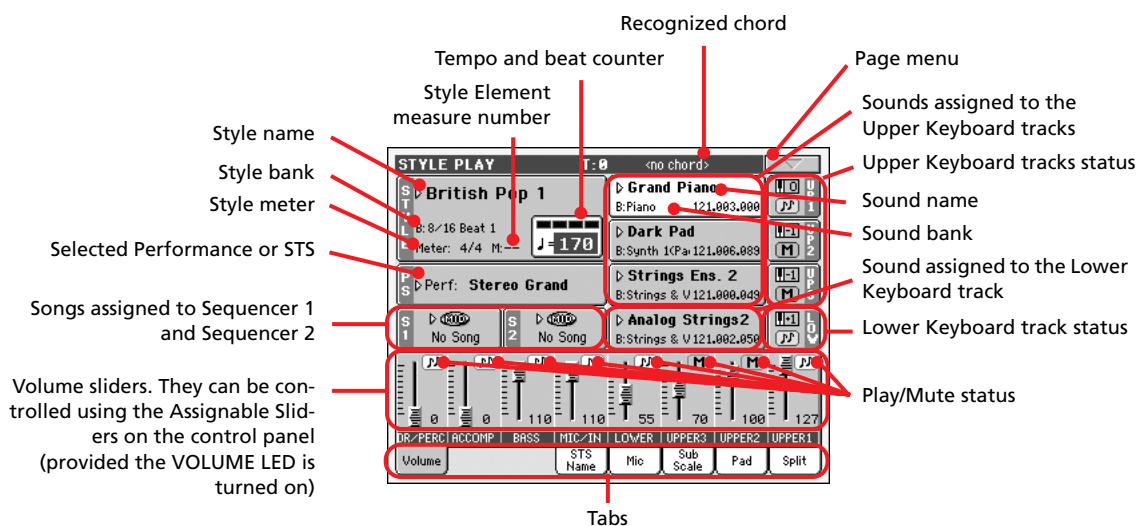
First of all, turn the instrument on and familiarize yourself with the main screen. You can also listen to the demos.



### Turning the instrument on, and viewing the main screen

Turn the Pa1X on by pressing the POWER button, located on the back panel.

After you turn the POWER on, a welcome screen is shown for a few seconds, and then the main display appears.



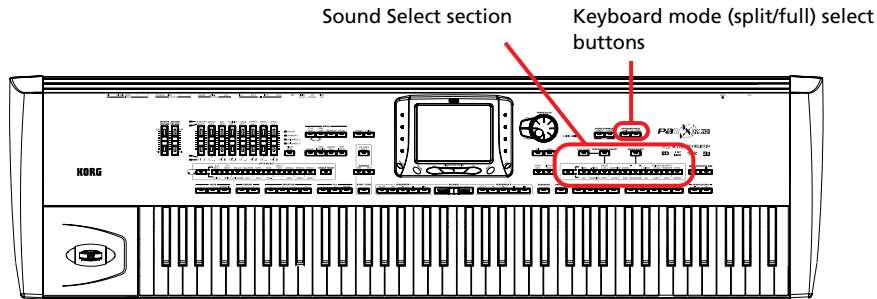
### Playing the demos

A variety of demo songs have been included to demonstrate the sonic power of the Pa1X.

- 1 To open the Demo page, press the **STYLE PLAY** and **SONG PLAY** buttons at the same time.
- 2 Follow the instructions in the display. That's it!

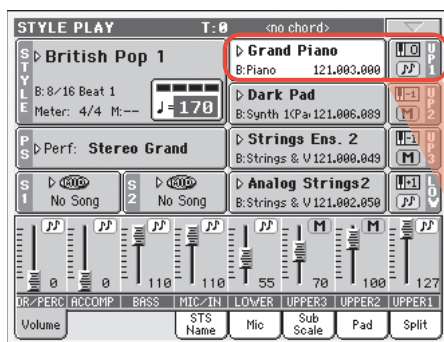
## Playing Sounds

You can play up to three sounds at the same time on the keyboard. You can also split the keyboard into two parts, to play up to three sounds with your right hand (Upper), and one with your left hand (Lower).



## Selecting a Sound and playing it on the keyboard

- 1 Be sure the Upper 1 track is selected and set to play.

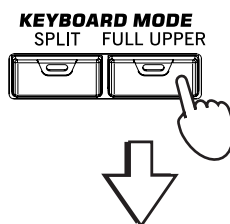


A selected track is shown with a white background. In this example, the Upper 1 track is selected. If it is not selected, press it once to select it.

The status icon shows that the Upper 1 track is set to play. If it is muted, press the status icon to set it to play.

**Note:** Be sure tracks Upper 2 and Upper 3 are muted, and are not playing. If you hear more than one sound, see page 27 for how to mute tracks.

- 2 If you want to play the Sound on the whole keyboard, be sure the keyboard is in Full Upper mode. If it is split in two parts, press the FULL UPPER button in the KEYBOARD MODE section on the control panel.



## 3 Press the Upper 1 track's area in the display, to open the Sound Select window.

The triangle means you can touch this name to open a Select window

Sound's name

The currently selected Sound also appears on the page header.

Target track for the selected Sound



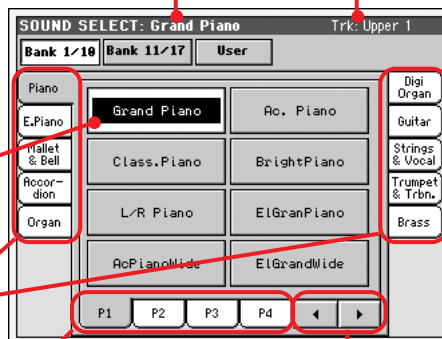
Sound bank

The selected Sound is highlighted. Press a Sound's name to select it.

Press one of the side tabs to select a different Sound bank.

Press one of the lower tabs to select a different Sound page.

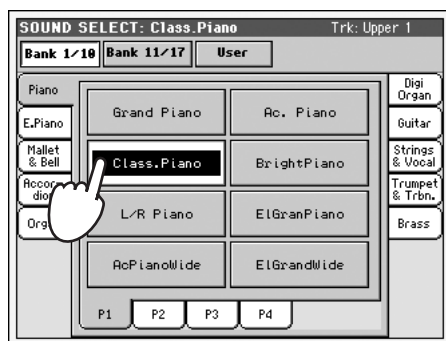
A Previous and Next Page pair of button may appear in this area, when more than four pages are available.



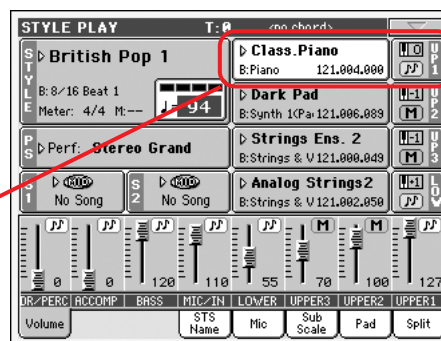
**Note:** You can also open the Sound Select window by pressing one of the buttons in the PERFORMANCE/SOUND SELECT section – provided the LED on the SOUND SELECT button is on. This will let you jump directly to the desired Sound bank.



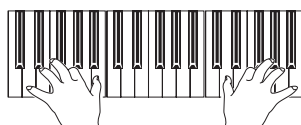
## 4 Select a Sound from the Sound Select window.



The Sound Select window closes, and the main screen appears again, with the selected Sound assigned to the Upper 1 track.



## 5 Play the Sound on the keyboard.

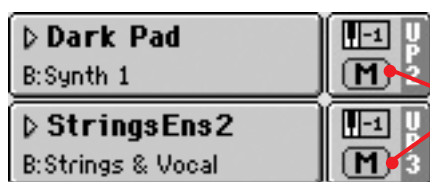


**Note:** You can leave the Sound Select window open in the display, even after selecting a Sound. Just press the DISPLAY HOLD button to turn its LED on.



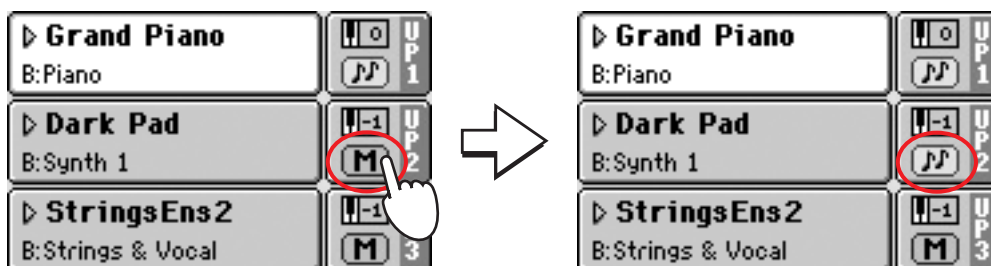
## Playing two or three Sounds at the same time

You can layer all three Upper tracks and play them on the keyboard.

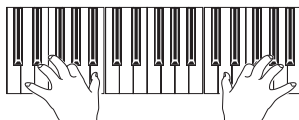


Please note how the 'M' (Mute) icon appears in the Upper 2 and Upper 3 status boxes. These tracks will not be heard.

- 1 Press the **M** (Mute) icon in the Upper 2 status box, to set the Upper 2 track to play.

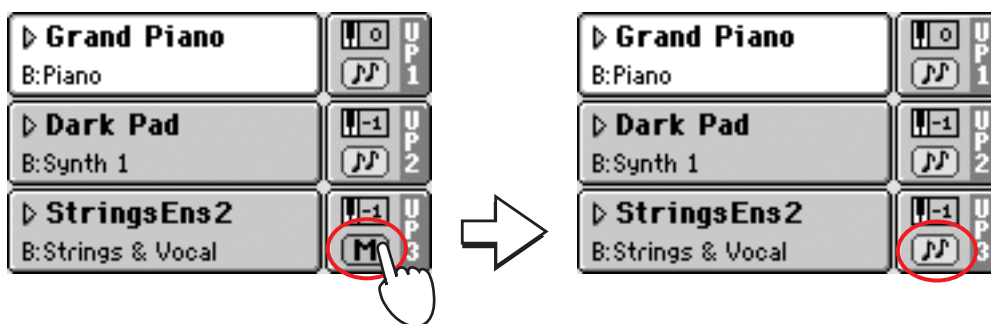


- 2 Play the keyboard.

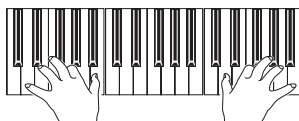


Note how the 'Dark Pad' sound (assigned to the Upper 2 track) has been layered with the 'Grand Piano' (assigned to the Upper 1 track).

- 3 Press the **M** (Mute) icon in the Upper 3 status box, to set the Upper 3 track to play.

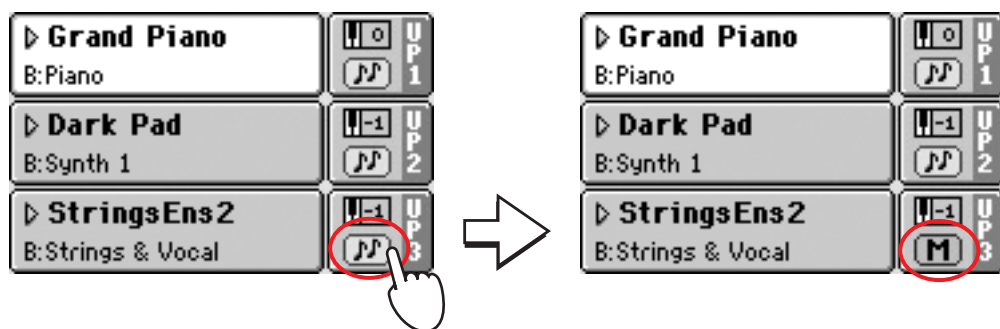


- 4 Play the keyboard.

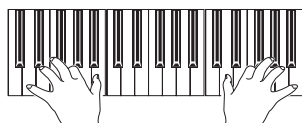


Note how the 'StringEns2' sound (assigned to the Upper 3 track) has been added to the 'Dark Pad' (assigned to the Upper 2 track) and the 'Grand Piano' (assigned to the Upper 1 track).

- 5 Press the  (Play) icon in the Upper 3 status box, to mute the Upper 3 track again.

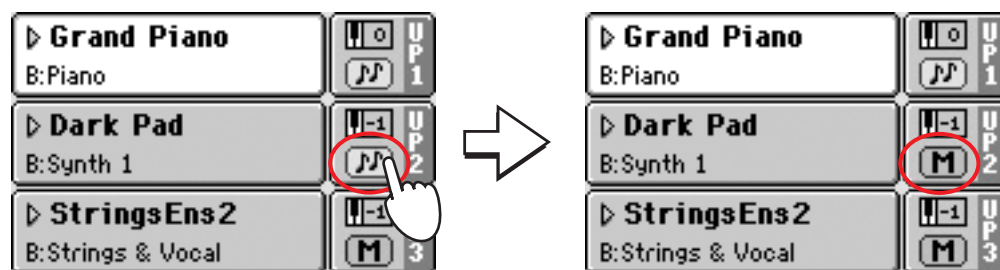


- 6 Play the keyboard.

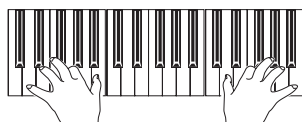


Note how the 'StringEns2' sound (assigned to the Upper 3 track) has been muted again. Only tracks Upper 1 and Upper 2 can be heard at this time.

- 7 Press the  (Play) icon in the Upper 2 status box, to mute the Upper 2 track again.



- 8 Play the keyboard.



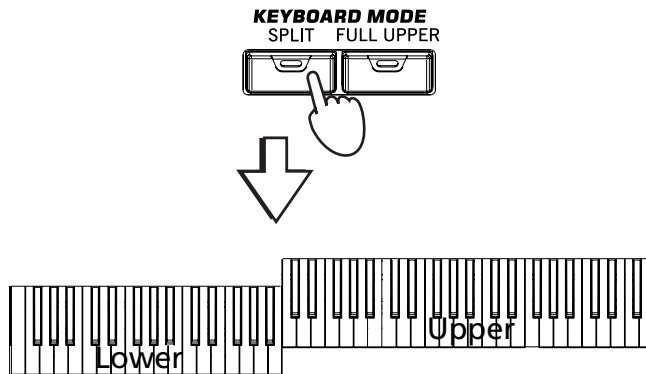
Note how the 'Dark Pad' sound (assigned to the Upper 2 track) has been muted again. Only track Upper 1 can be heard at this time.



## Playing different Sounds with your left and your right hand

You can play a single Sound with your left hand, in addition to playing up to three Sounds with your right hand.

- 1 Press the **SPLIT** button in the **KEYBOARD MODE** section on the control panel, to split the keyboard into Lower (left hand) and Upper (right hand) parts.

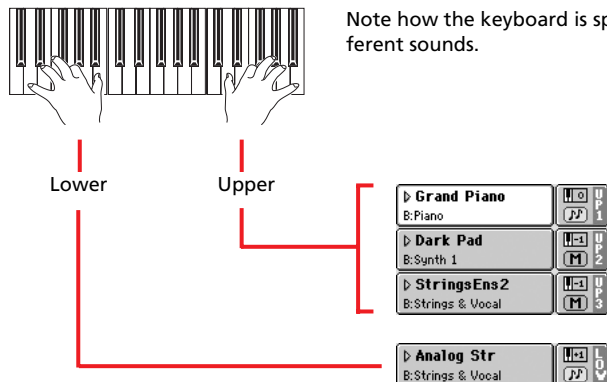


- 2 Be sure the Lower track is set to play.



If the Lower track is muted, press its icon status, and the play status icon will appear.

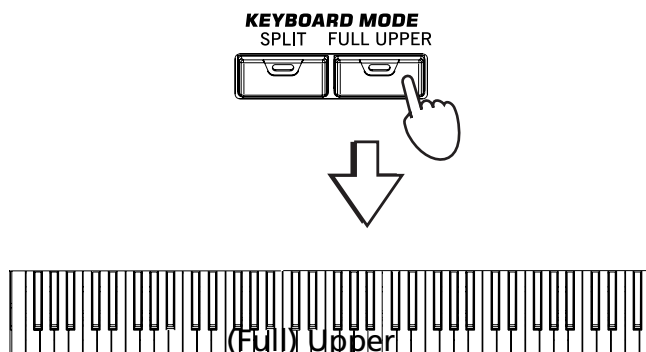
- 3 Play the keyboard.



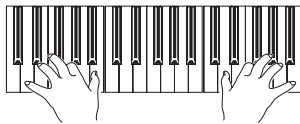
Note how the keyboard is split into two parts, each playing different sounds.

**i Hint:** You can select a different Sound for the Lower part, by following the same procedure used for the Upper 1 track. See page 25.

- 4 Return to the full keyboard playing mode by pressing the **FULL UPPER** button in the **KEYBOARD MODE** section on the control panel.

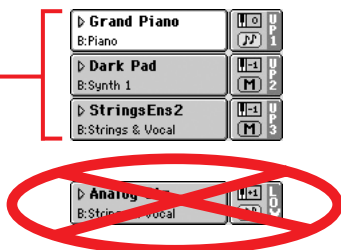


## 5 Play the keyboard.



Upper

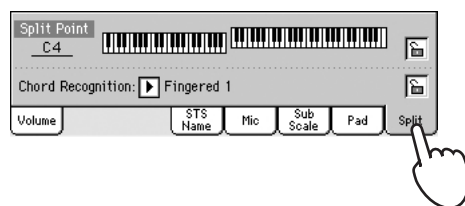
Note how the keyboard once again plays the Upper tracks for the entire length of the keyboard.



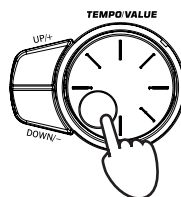
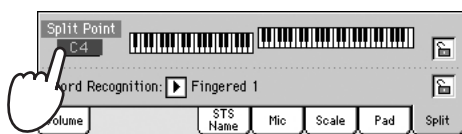
## Changing the split point

If you are not comfortable with the selected split point, you may set the split point to any key.

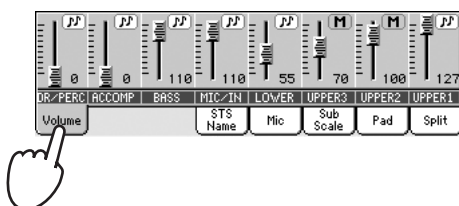
### 1 Press the Split tab to see the Split Point panel.



### 2 Touch the keyboard in the display, then play a note on the keyboard. Or, press the Split Point parameter to select it, and use the DIAL to select the new split point.



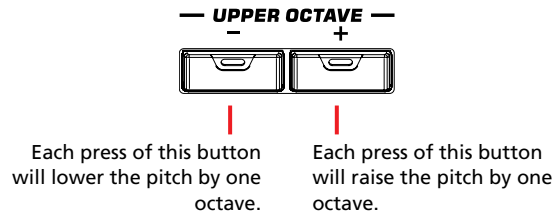
### 3 Press the Volume tab to go back to the Volume panel.



## Raising or lowering the Upper octave

If all Upper tracks sound too high or too low, you can quickly change which octave they are playing in.

- 1 Use the UPPER OCTAVE buttons on the control panel, to transpose all Upper tracks at the same time.



**Note:** the Octave Transpose value for each Upper track is shown in the corresponding track's status box.

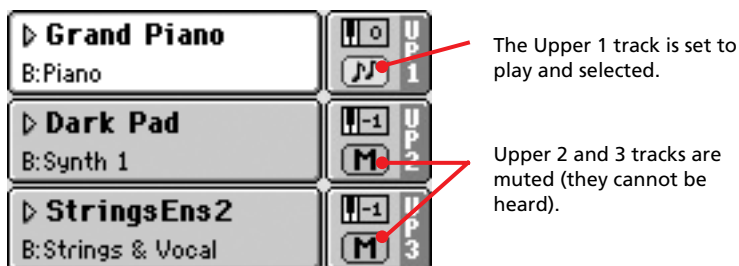


- 2 Press both UPPER OCTAVE buttons together to reset the octave.

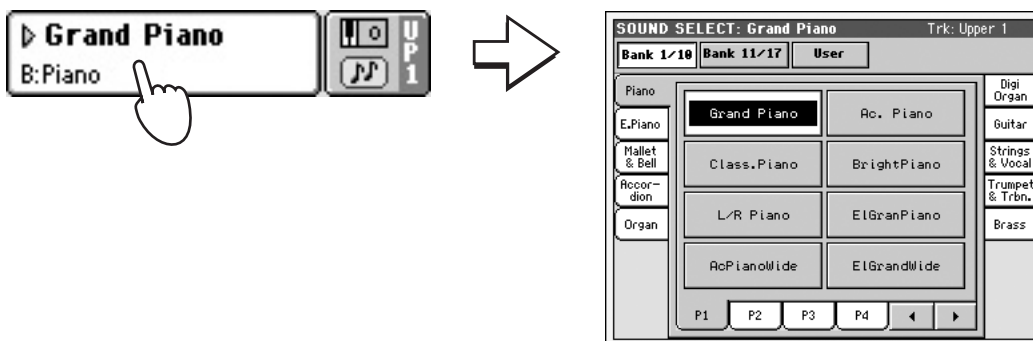
## Digital Drawbars

A special sound in the Pa1X is the "Digital Drawbars". This sound simulates the classic tonewheel organs of the past. You can use the Assignable Sliders of the Pa1X to adjust each drawbar, and then save these settings to a Performance (see "Saving your settings to a Performance" on page 35).

- 1 Mute all Upper tracks, apart for the Upper 1 track. Select the Upper 1 track.



- 2 Press the Sound name to open the Sound Select window.

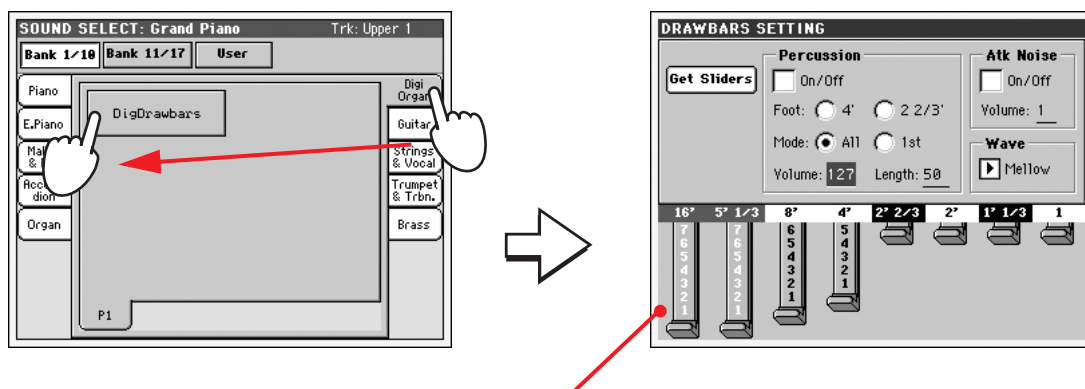


**Note:** You can select a Digital Drawbar Sound also by pressing the DIGITAL DRAWBAR button in the PERFORMANCE/ SOUND SELECT section.



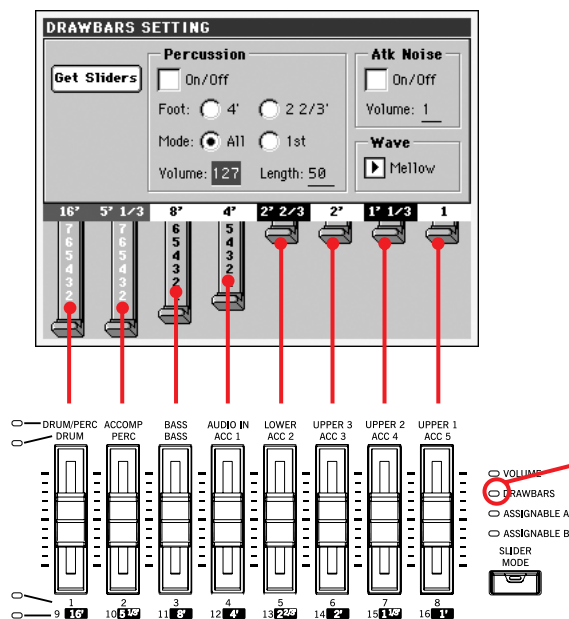
### 3 Select the Digi Organ bank, then choose the DigDrawbars Sound.

Due to the nature of these Sounds, there is only one Digital Drawbar Organ Sound. Different drawbar settings may be stored with each Performance. So, selecting a different Performance will select different settings for the Digital Drawbar Organ.



After you select the Digital Drawbar Organ Sound, the Drawbar Setting page appears.

### 4 As soon as the Drawbar Setting page appears in the display, the Assignable Sliders will function as organ drawbars (the slider's DRAWBAR LED will be lit). Move the Assignable Sliders to change the various drawbar settings.



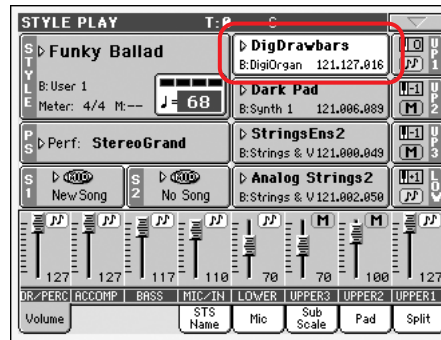
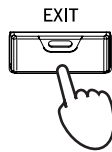
**i Note:** You don't need to be in the Digital Drawbars page to use the Assignable Sliders to change the sound. When a Drawbar Organ is assigned to a Keyboard track, the sound can be changed also while in the main page, provided that the DRAWBARS LED is turned on.

### 5 Select different parameters in this page, and change their settings to see how each setting affects the sound.

### 6 When you have found some settings that you like, you can save them to a Performance, as described later in this section.

**i Hint:** As an alternative to using Assignable Sliders to change drawbar values, you can touch a drawbar in the display, and use the TEMPO/VALUE controls to change it.

- 7 Press the EXIT button to go back to the main page.



## Selecting and saving Performances

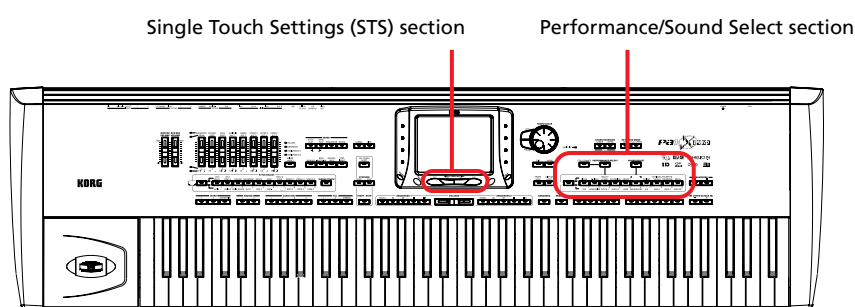
The Performance is the musical heart of the Pa1X. Unlike selecting single Sounds, selecting a Performance will recall several Sounds at the same time, the needed effects and transpositions, a suitable Voice Processor preset, plus many more parameters useful for playing in a musical situation.

You can save all control panel settings in a Performance (including your Digital Drawbar Organ settings). While many Performances are already supplied with the instrument, you can customize each of them to your own taste, and then save them in their customized form.

Similar to Performances, you can also save your settings to a Single Touch Setting (STS), which will store all the settings for the Keyboard tracks. Four STSs are supplied with each Style and SongBook entry, and can be selected with the four dedicated buttons under the display.

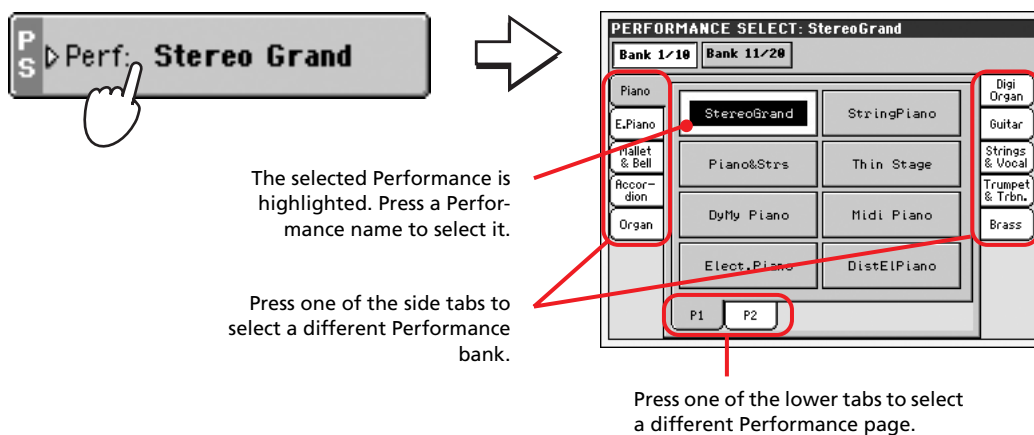
As far as Style tracks are concerned, you can save settings in a third object called the Style Performance.

Please note that settings saved in Performance 1 are automatically selected when the instrument is turned on. This means you can save your preferred startup settings to Performance 1.

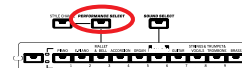


### Selecting a Performance

- 1 Press the Performance area in the display, to open the Performance Select window.

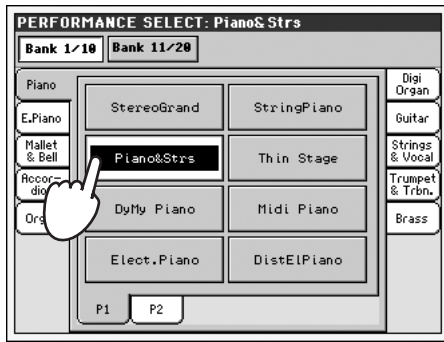


**Note:** You can open the Performance Select window also by pressing one of the buttons in the PERFORMANCE/SOUND SELECT section – provided the LED on the PERFORMANCE SELECT button is on. This will let you jump directly to the desired Performance bank.

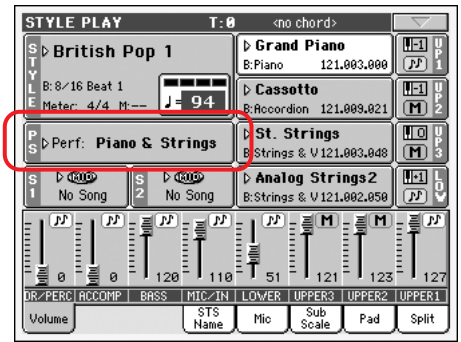




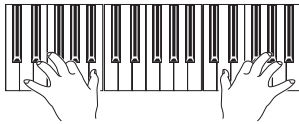
## 2 Select one of the Performances in the Performance Select window.



The Performance Select window closes, and the main screen appears again (provided the DISPLAY HOLD LED is turned off). Sounds, effects, and other settings, change according to the setting memorized in the selected Performance.



## 3 Play the keyboard.



Settings memorized in the selected Performance have been selected. Sounds, effects and other settings have been recalled.

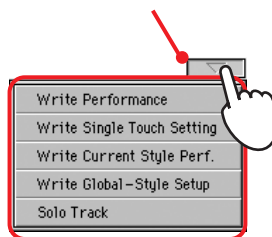
**Note:** If the LED of the STYLE CHANGE button is turned on, selecting a Performance may automatically select a different Style and its settings (Sounds, effects, Drawbar settings for the Style tracks...)

## Saving your settings to a Performance

All the control panel settings, plus the Keyboard track settings, selected effects and Voice Processor Preset, can be saved to a single Performance, to be quickly recalled at a later time.

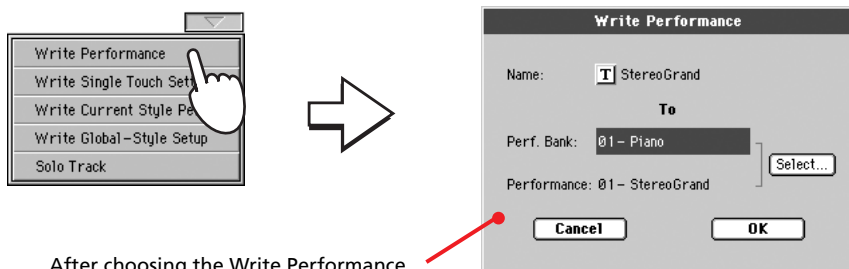
### 1 Press the page menu icon to open the page menu.

Page menu icon



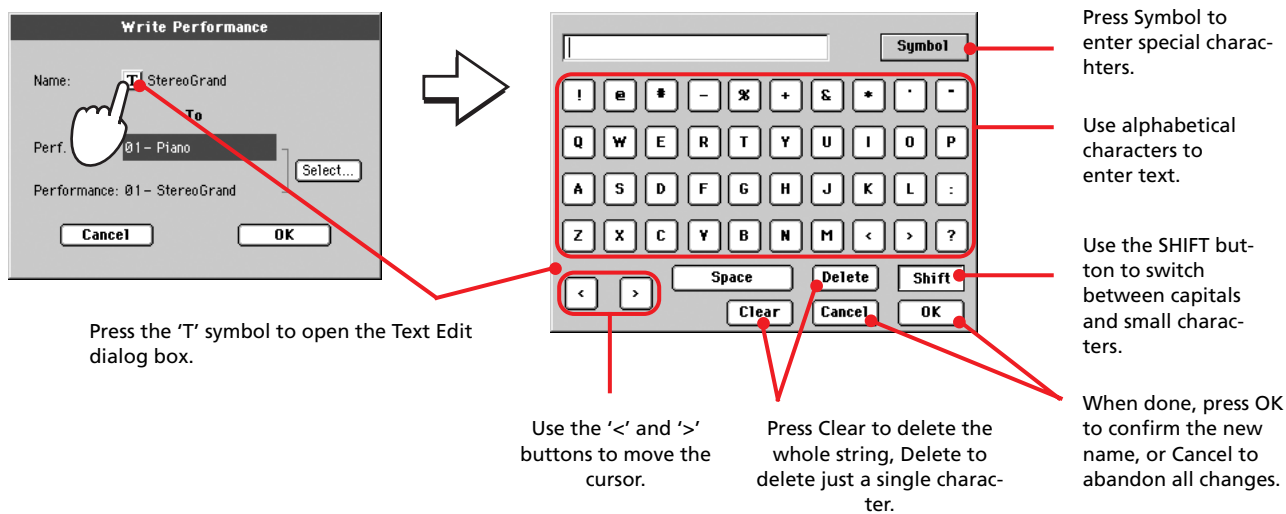
Page menu

## 2 Select the 'Write Performance' command to open the Write Performance dialog box.

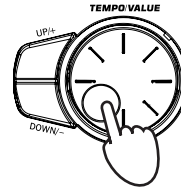
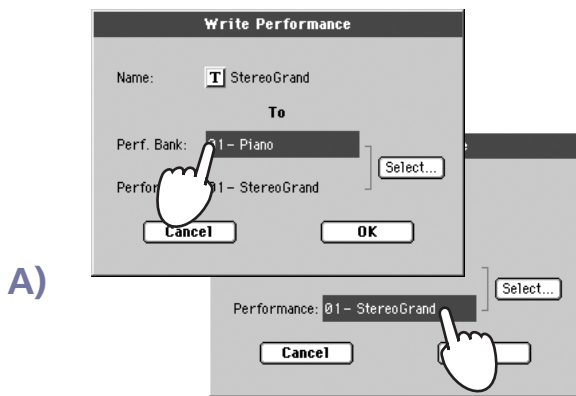


After choosing the Write Performance menu item, the Write Performance dialog box appears.

## 3 If you like, you may assign a new name to the Performance.

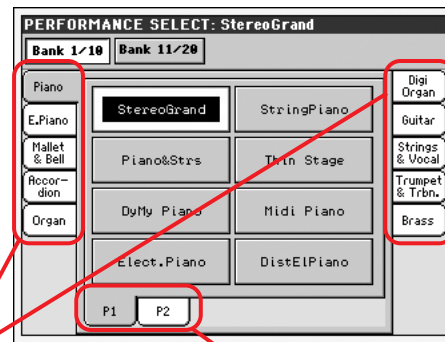
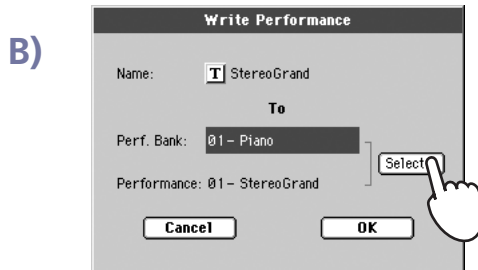


- 4 Select a Bank and Performance location in memory, where you would like to save the Performance.



To select the target Bank and Performance location, select the Bank and Performance parameters, and use the TEMPO/VALUE section.

or...



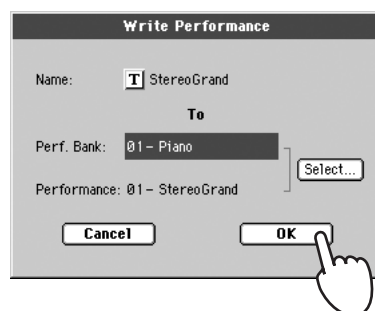
The selected Performance location is highlighted. Press a Performance's name to select it.

**Note:** A Performance can be saved to an 'Empty' location. An 'Empty' location currently contains no data.

Press one of the side tabs to select a different Performance bank.

Press one of the lower tabs to select a different Performance page.

- 5 When you have changed the name to the Performance, and selected the target location, press OK to save the Performance to memory (or cancel to stop the operation).



**Warning:** Saving a Performance to an already used location overwrites any existing data at that location.

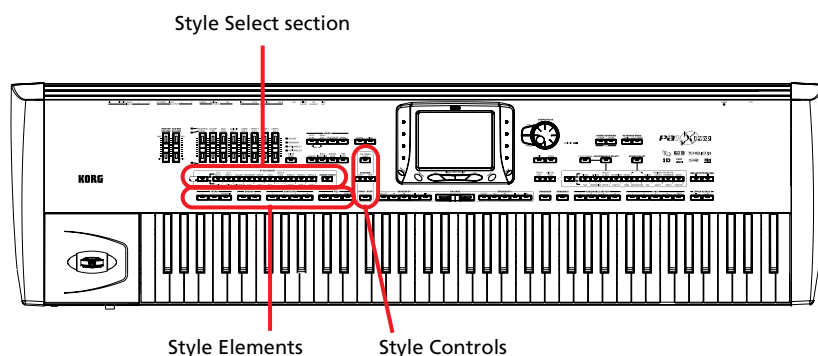
## Selecting and playing Styles

Pa1X is an *arranger*, i.e. a musical instrument providing automatic accompaniments, or *arrangements*. Each arrangement style is called, as a consequence, “Style”.

A Style is made of several Style Elements (Intro, Variation, Fill, Ending), corresponding to the various sections of a song. By selecting Style Elements, you can make your playing more varied and musical.

When selecting a Style, a Style Performance, with settings for the Style tracks, is also selected. If the SINGLE TOUCH LED is turned on, the first of the four Single Touch Settings (STS) associated with the Style is selected, too, and Keyboard tracks, pads, effects and some other useful parameters are automatically configured.

Use the Style controls to start or stop the Style.



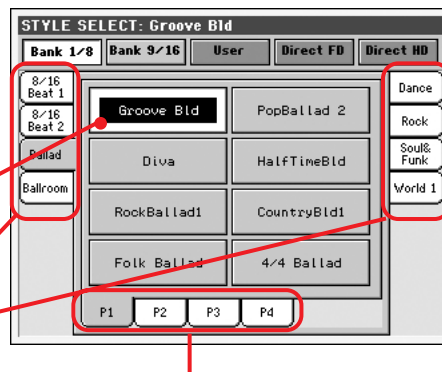
## Selecting and playing a Style

- 1 Press the Style area in the display. The Style Select window appears.



The selected Style is highlighted. Press a Style's name to select it.

Press one of the side tabs to select a different Style bank.



Press one of the lower tabs to select a different Style page.

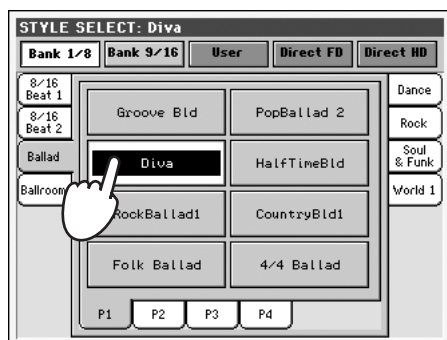
**i Note:** You can open the Style Select window also by pressing one of the buttons in the STYLE SELECT section. This will let you jump directly to the desired Style bank.



**i Note:** You can leave the Style Select window open in the display, even after selecting a Style. Just press the DISPLAY HOLD button to turn its LED on.



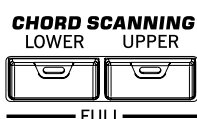
## 2 Select a Style from the Style Select window.



The Style Select window closes, and the main screen appears again, with the selected Style ready to go.

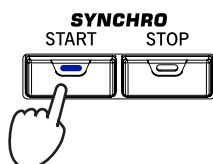


## 3 Be sure one of the Chord Scanning modes is selected.

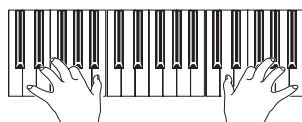


For chord scanning to work, either of both LEDs must be turned on. Lower: chords are recognized on the left of the split point; Upper: chords are recognized on the right of the split point; Full: chords are recognized on the whole keyboard. Off: only the Drum track can be heard.

## 4 Press the SYNCHRO-START button to turn its LED on.



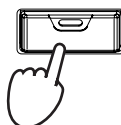
## 5 Play the keyboard.



When the Syncho-Start function is turned on, the Style starts playing as soon as you play a note or chord in the chord recognition area. Play chords with your left hand, and the melody with your right hand. The arranger will follow your playing.

## 6 Press START/STOP to stop the Style.

START / STOP

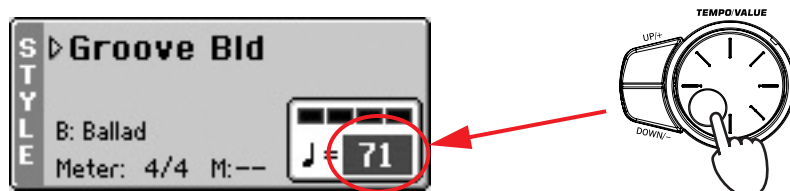


**i** Note: You could simply press START/STOP to start the Style, but the Syncho-Start function allows you to make the Style start in sync with your playing on the keyboard. Therefore, it may be considered a "more musical" way of starting a Style.

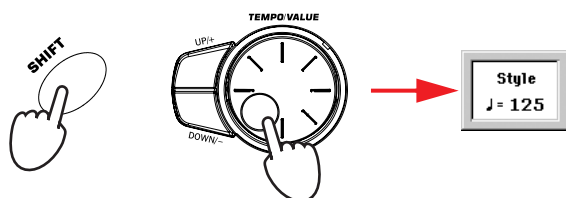
## Tempo

While a Tempo setting is saved with each Style or Performance, you can change it to be whatever you like. You can use either of the following two methods.

- While the Tempo parameter is selected, use the TEMPO/VALUE controls to change its value.



- When the Tempo parameter is not selected, keep the SHIFT button pressed, and use the DIAL to change the Tempo. The selected tempo will be shown in a small window.

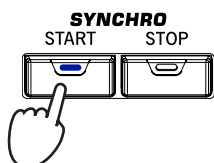


- Press the UP and DOWN buttons at the same time to recall the saved Tempo.

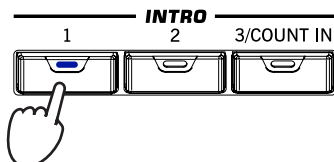
## Intro, Fill, Variation, Ending

When playing Styles, you can select various “Style Elements” to make your playing richer. A Style is made of up to four basic patterns (Variations), three Intros (or two Intros and a Count-In), three Fills (or two Fills and a Break), and two Endings.

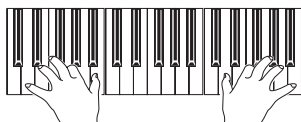
- 1 Make sure the SYNCHRO-START LED is turned on (otherwise, press the button to turn it on).



- 2 Press one of the INTRO buttons to set the corresponding Intro to play.



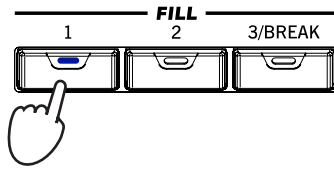
- 3 Play the keyboard.



The Style starts with the selected Intro. When the Intro is completed, the basic pattern (selected Variation) starts to play.

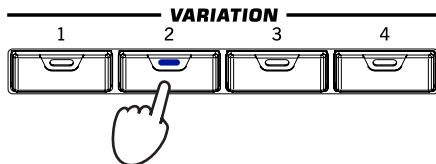


- 4 While playing, press one of the FILL buttons to select a Fill.



**i** Note: You do not need to select a Fill before selecting a different Variation, but selecting a Fill makes the transition “smoother” and more musical.

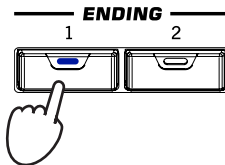
- 5 Before the Fill ends, press one of the VARIATION buttons, to select a different variation of the basic pattern.



When the Fill ends, the selected Variation will start playing.

**i** Note: You do not need to select a Variation during a Fill, since a Variation may already be automatically recalled at the end of the Fill. See “Fill Mode (1...3)” on page 91.

- 6 When you like to stop playing, press one of the ENDING buttons to stop the Style with an Ending.



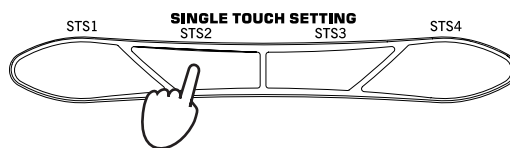
When the Ending is finished, the Style automatically stops.

## Single Touch Settings (STS)

Each Style or SongBook entry may come with up to four Keyboard track settings, called STS (short for “Single Touch Settings”). STS #1 is automatically selected when choosing a Style, provided the SINGLE TOUCH LED is turned on. STS#1 is also recalled when a SongBook entry is selected.

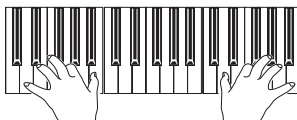
STSs are still available when switching to Song Play mode from Style play mode, to let you select a different configuration of Keyboard tracks and a different Voice Processor Preset, while listening to the Songs.

- 1 Press one of the four STS buttons under the display.



**i** Note: STSs are very similar to Performances, but they are fine-tuned to the Style they are associated to.

- 2 Play the keyboard.



Settings memorized in the selected STS have been selected. Sounds, effects and other settings have been recalled.

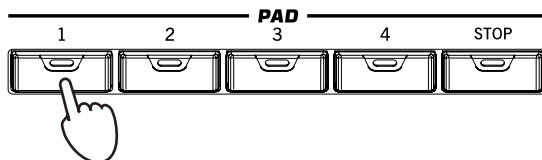
- 3 Try all the other STSs, and see how settings change with each of them.

**i** Hint: You may see the name of the four available STSs for the current Style, by pressing the STS Name tab.

## The Pads

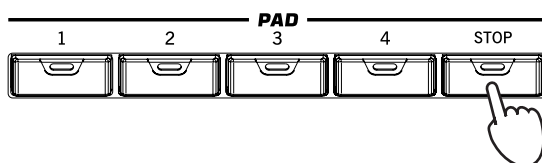
Each Performance and STS can assign different sounds or patterns to the four PADS. These sounds or patterns can be played along with the Keyboard and Style tracks.

### 1 Press one of the four PADS.



**i** *Hint: You can see which sounds or patterns are associated to the four Pads for the current Performance or STS, by pressing the Pad tab.*

### 2 If the selected PAD triggers an endless sound or pattern (i.e. the Applause), pressing STOP will cancel that sound.



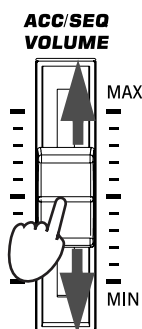
### 3 Select a different Performance, and see how the sounds or patterns assigned to the PADS change.

You can even press more Pads at once, and play two or more sounds or patterns at the same time. Pressing STOP stops them all at the same time. Keeping STOP pressed and pressing one of the PAD buttons only stops that sound or pattern.

## Adjusting volume balance between the Style and the keyboard

Adjusting the volume of the Style tracks may be useful, to gently fade them while Keyboard tracks can still be played at the normal volume.

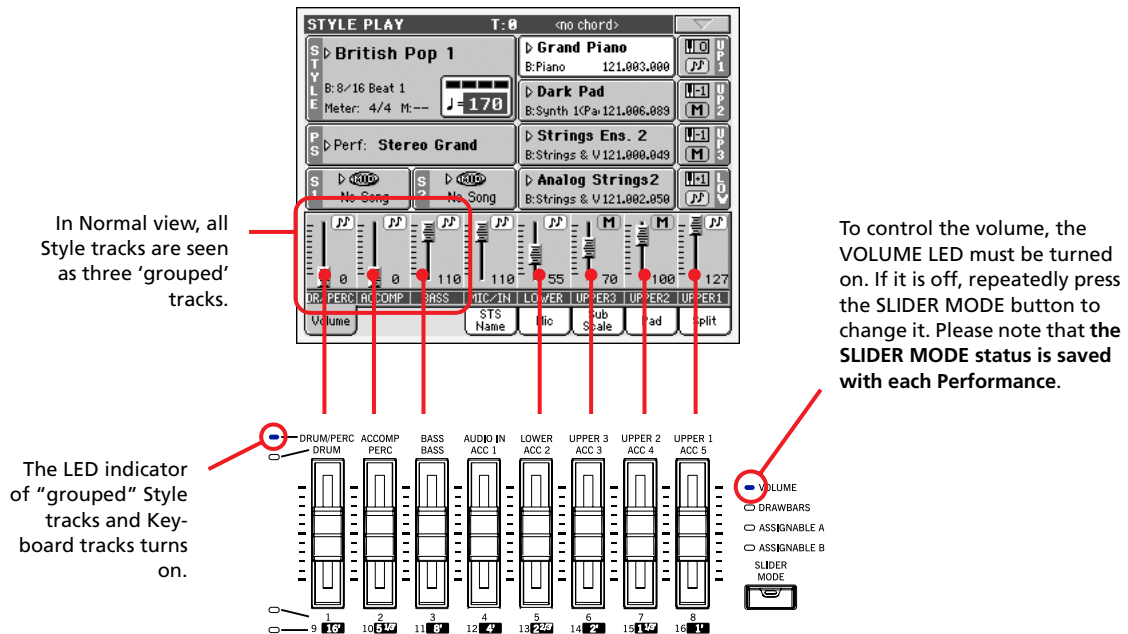
- While the Style is playing, use the ACC/SEQ VOLUME slider to adjust the Style volume. Keyboard track's volume does not change when moving the slider.



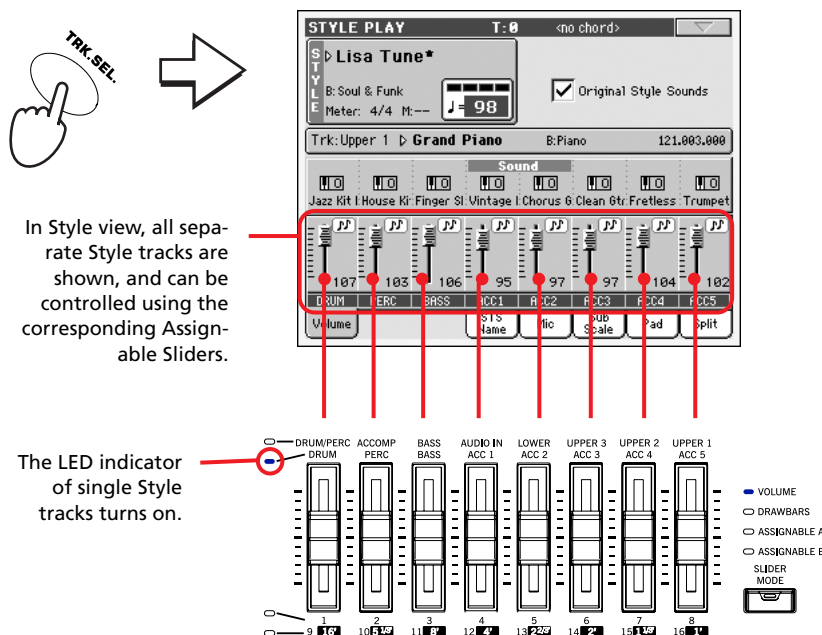
## Adjusting volume of each single track

You can adjust the volume of each of the Style and Keyboard tracks, for example to soften the bass a little, or to make the keyboard solo louder.

- 1 Use the Assignable Sliders (be sure the **VOLUME LED** is turned on) to adjust each Keyboard track's volume, as well as 'grouped' Style tracks.



- 2 To separately adjust each Style track, press the **TRK. SEL. (TRACK SELECT)** button to change track's view.



**i Hint:** As an alternative, you can change each track's volume, by touching a track's area to select it, then using the **TEMPO/VALUE** controls to change the volume.

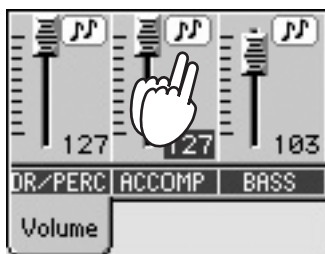
- 3 To return to Normal view, press the **TRK. SEL.** button again.

The LED on the **TRK. SEL.** button will turn off.

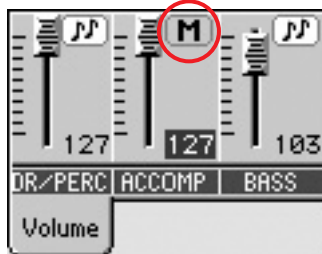
## Turning Style tracks on/off

You may easily turn on or off any Style track while you are playing. For example, try muting all accompaniment tracks, while drum and bass continue to play.

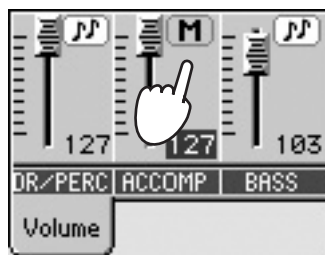
- 1 While the Style is playing, touch anywhere in the ACCOMP track's channel strip (volume value highlighted), then touch it again to set the track to Mute.



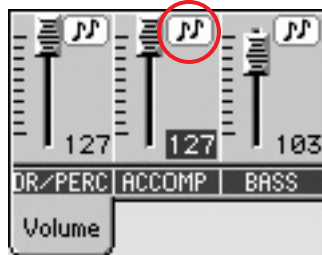
Mute the ACCOMP track. All accompaniment tracks will go silent (apart from Drum, Percussion and Bass).



- 2 To set tracks back to the Play status, press the Mute icon on the ACCOMP track.



Set the ACCOMP track to Play. All accompaniment tracks will return to their original volumes.

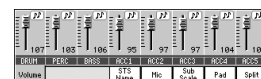
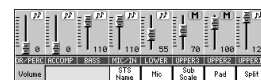


- 3 To mute/unmute each single Style track, press TRK. SEL. to switch to the Style Tracks view.

- 4 Press the TRK. SEL. button again to go back to the Normal view.

The LED on the TRK. SEL. button will turn off.

**Note:** While in the Normal view of the Style Play mode, you can see Style tracks grouped in just three "complex" tracks. To see each Style track as individual tracks, just press the TRK. SEL. button.

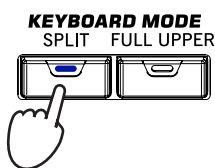


## Adding chords to your right-hand melody (ENSEMBLE function)

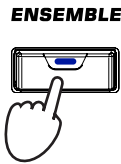
Chords played with your left hand may be applied to the right-hand melody.

- 1 Press the SPLIT button in the KEYBOARD MODE section to split the keyboard.

The Ensemble function only works in Split mode.



- 2 Press the ENSEMBLE button to turn its LED on.



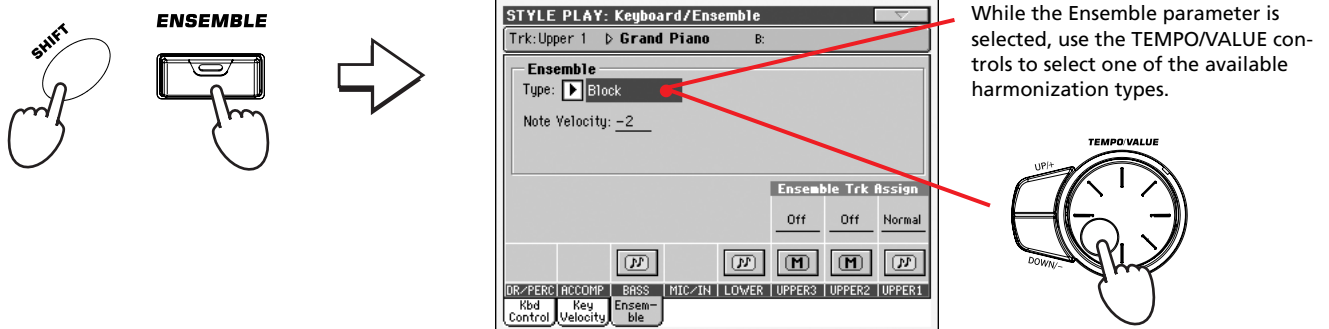
- 3 Play chords with the left hand and single notes in the right hand.



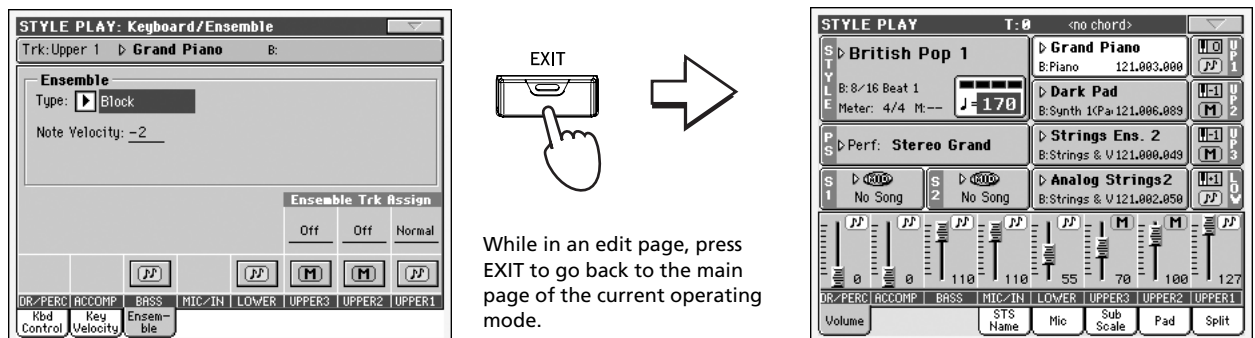
Notice how the right hand is automatically harmonized, according to the chords composed with your left hand.

- 4 To select a different harmonization style, keep the SHIFT button pressed, and press the ENSEMBLE button to open the Ensemble page.

This is a fast 'shortcut' to recall this page. The longer would have been entering the Edit mode by pressing the MENU button, then going to the Ensemble page.



- 5 When the right harmonization type has been selected, press the EXIT button to go back to the main page.



- 6 Press the ENSEMBLE button again to turn its LED off. The automatic harmonization will be turned off.



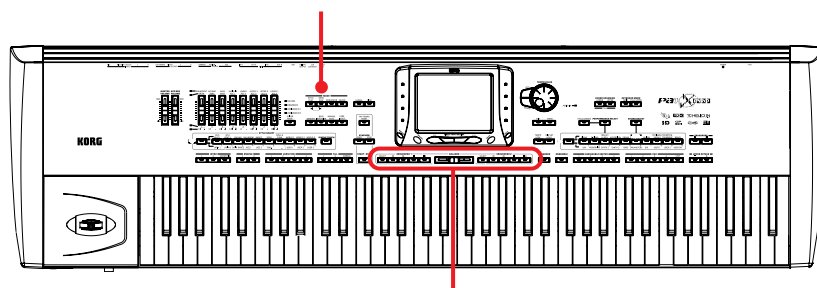
## Song Play

Pa1X is equipped with two onboard sequencers that can be run at the same time to mix between different Songs. Songs are read directly from disk, so there is no need to load them to memory before playing them back.

Pa1X can read Songs of various kinds: Standard MIDI Files (SMF), KAR, MP3 and Audio CD (MP3 and Audio CD playback only available as options). Please remember that the Double Sequencer (XDS) function is not available with two MP3s or two CD tracks at the same time. You can, however, run a CD track on one sequencer, and an MP3 on the other one.

It may be of great interest to singers and guitar players to know that if a midifile contains lyrics and chords, they can be seen in the display. Lyrics can also be seen on an external video monitor, provided you have the (optional) Video Interface installed.

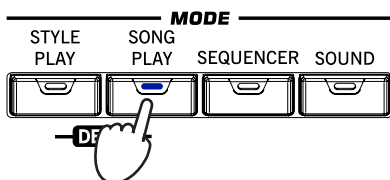
The SONG PLAY button



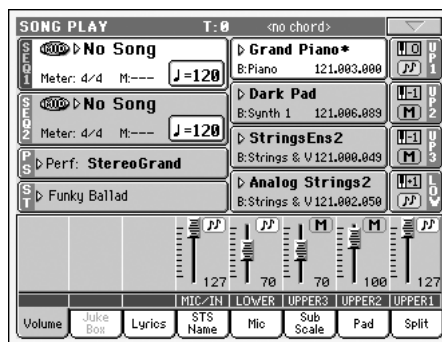
Sequencers controls

## Selecting a Song to play

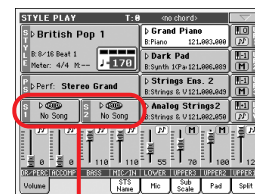
- 1 Press the SONG PLAY button to switch to the Song Play mode.



After pressing the SONG PLAY button, the main page of the Song Play mode appears.



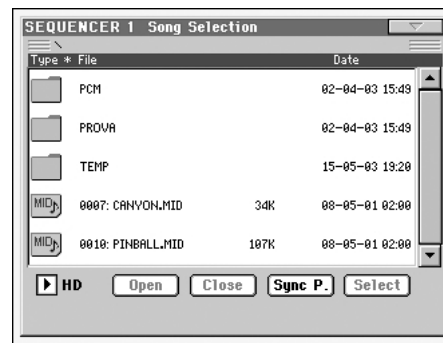
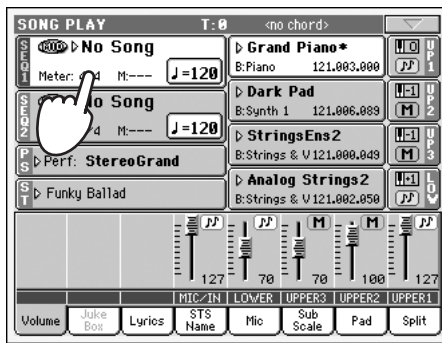
**i Hint:** In Style Play mode, you can pre-select the Songs to be assigned to both sequencers. This way, you will be ready to start them, as soon as you switch to Song Play mode.



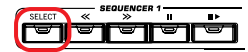
The Songs area of the Style Play main page.



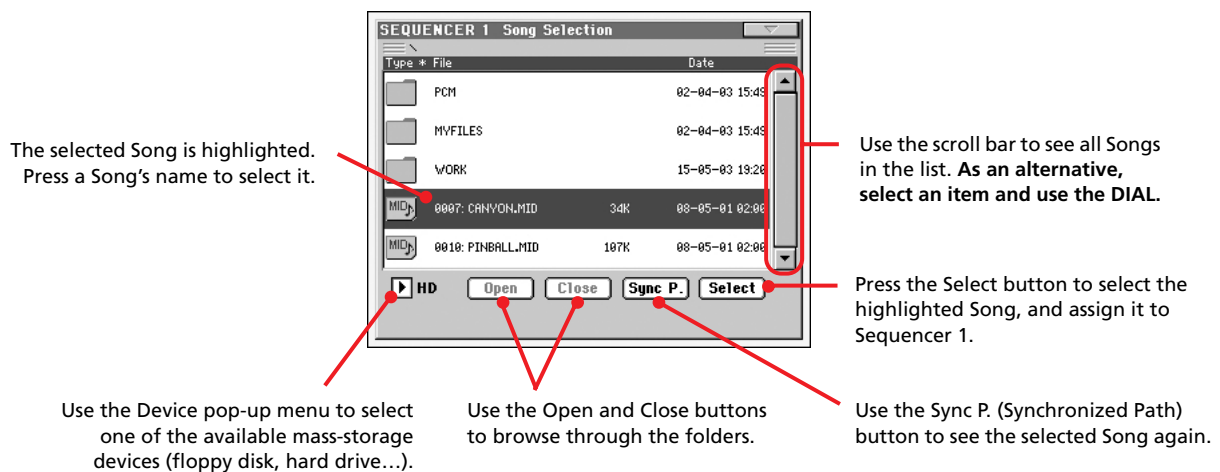
- 2 Press the Sequencer 1 area to open the Song Select window (or press the SELECT button of the Sequencer 1 section on the control panel).



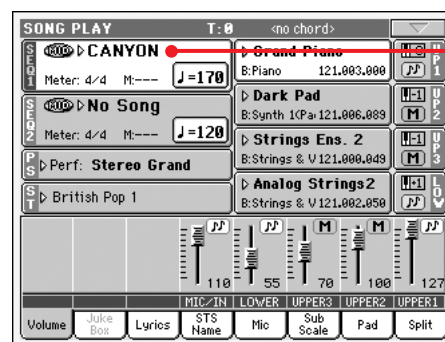
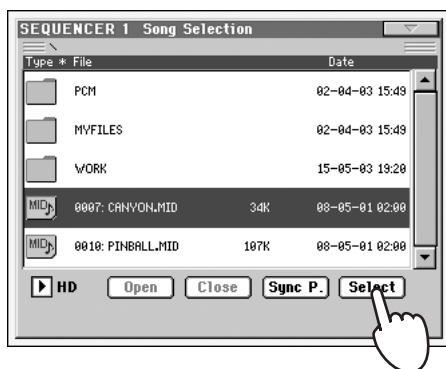
**i** *Hint: As an alternative, you can open the Song Select window by pressing the SELECT button in the SEQUENCER 1 section on the control panel.*



- 3 Scroll through the list and select the Song to play.



- 4 When the Song is selected, press the Select button to confirm your selection, and close the Song Select window.



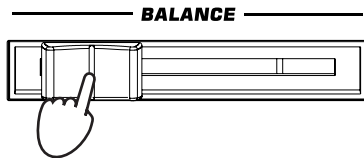
Selected Song

After pressing the Select button in the display, the main page of the Song Play mode appears again.

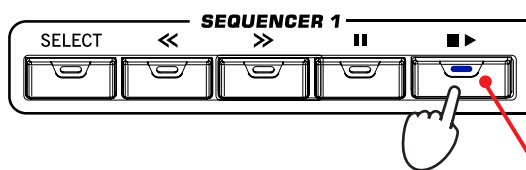
## Playing back a Song

Once a Song has been selected, it may be played back by the sequencer.

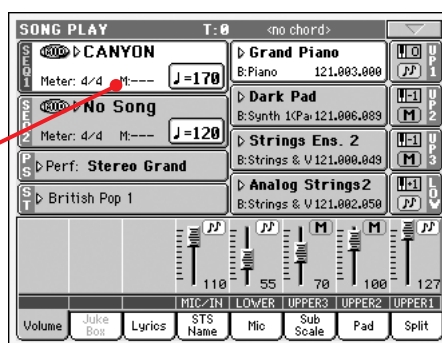
- 1 Be sure the **BALANCE** slider is completely moved to the left (toward Sequencer 1).



- 2 Press the **■▶** (PLAY/STOP) button in the **SEQUENCER 1** section to start playback.

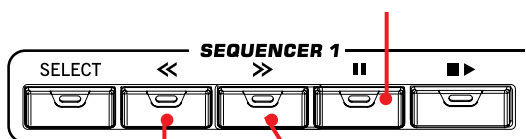


After pressing the **■▶** (PLAY/STOP) button, the button's LED turns on, and the measure counter begins to show the current measure number.



- 3 Use the **SEQUENCER 1** control section to control the Song's playback.

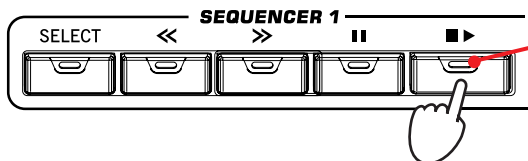
Press the **PAUSE** button to stop the Song at the current position. Press it again (or press **PLAY/STOP**) to resume playback.



Press the **REWIND** button once to go to the beginning of the current measure. Keep it pressed to go back several measures.

Press the **FAST FORWARD** button once to go to the beginning of the next measure. Keep it pressed to go forward several measures.

- 4 When you want to stop the song and go back to the first measure, press the **■▶** (PLAY/STOP) button again.



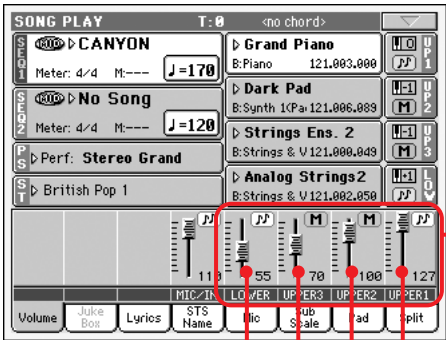
When the Song is stopped, the LED on the **PLAY/STOP** button goes dark.

**i Note:** In any case, the sequencer will automatically stop when the end of the Song is reached.

## Changing tracks volume

During playback, you may wish to change each track's volume, to create a mix "on the fly".

- 1 In Normal view, use the Assignable Sliders to adjust each Keyboard track's volume (provided the VOLUME LED is turned on).



Keyboard tracks

In Normal view (Keyboard tracks shown) this LED is turned on.

In Normal view (Keyboard tracks shown) both LEDs are turned off.

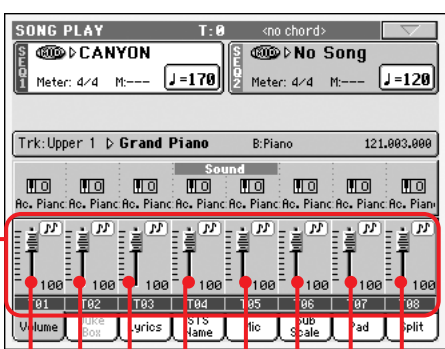
VOLUME LED. Its status depends on the last selected Performance. If needed, repeatedly press the SLIDER MODE button to turn it on.

DRUM/PERC DRUM  
ACCOMP PERC  
BASS BASS  
AUDIO IN ACC 1  
LOWER ACC 2  
UPPER 3 ACC 3  
UPPER 2 ACC 4  
UPPER 1 ACC 5

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

VOLUME  
DRAWBARS  
ASSIGNABLE A  
ASSIGNABLE B  
SLIDER MODE

- 2 Press the TRK. SEL. (TRACK SELECT) button once to see tracks 1-8 (Track 1-8 view).



TRK.SEL.

In Track 1-8 view, the first 8 tracks of the selected Song are shown, and can be controlled using the corresponding Assignable Sliders.

VOLUME LED turned on.

DRUM/PERC DRUM  
ACCOMP PERC  
BASS BASS  
AUDIO IN ACC 1  
LOWER ACC 2  
UPPER 3 ACC 3  
UPPER 2 ACC 4  
UPPER 1 ACC 5

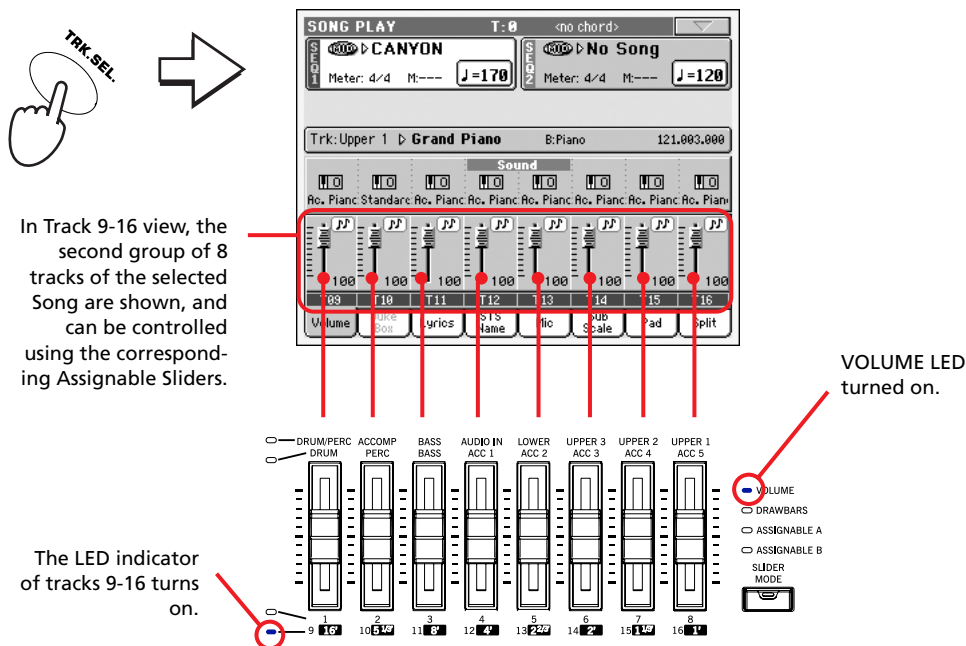
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

VOLUME  
DRAWBARS  
ASSIGNABLE A  
ASSIGNABLE B  
SLIDER MODE

The LED indicator of tracks 1-8 turns on.

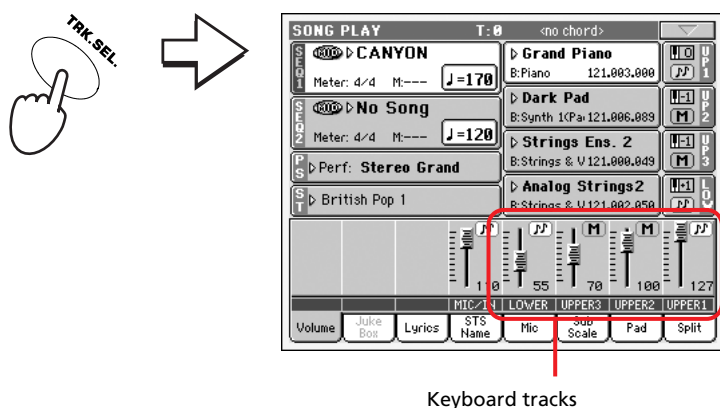
**Note:** Changes to Song tracks will not be saved, and will be reset each time you press the **PLAY/STOP** button. To save changes, you must edit the Song in Sequencer mode.

3 Press TRK. SEL. once again to see tracks 9-16 (Track 9-16 view).

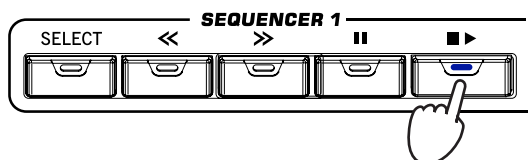


**i** Hint: As an alternative, you can change each track's volume, by touching a track's area to select it, then using the TEMPO/VALUE controls to change the volume.

4 Press TRK. SEL. again, to return to the Normal view (Keyboard tracks).



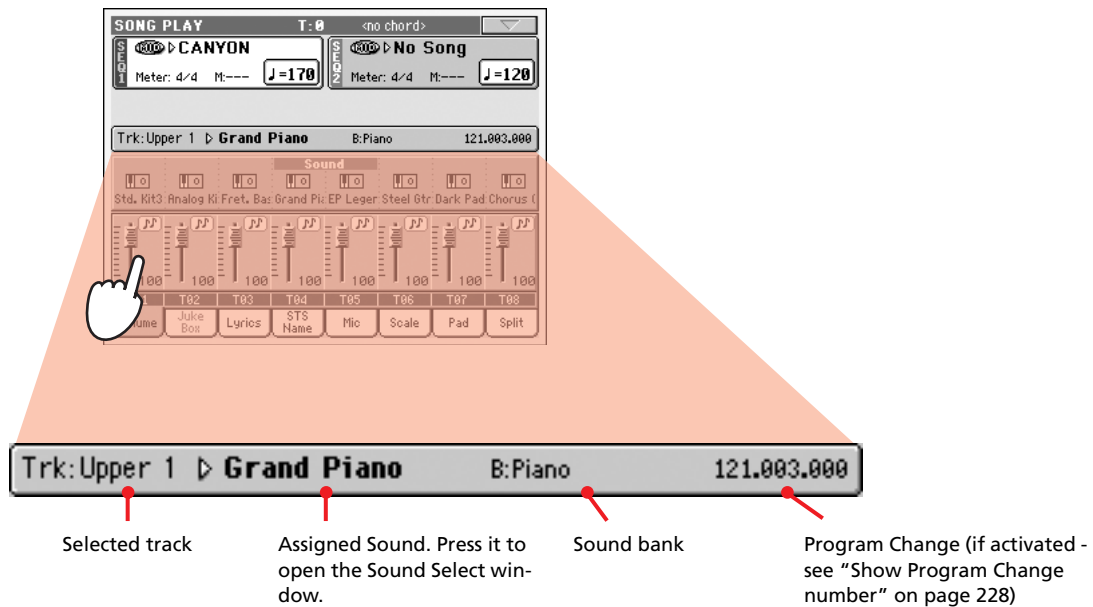
5 Press the ► (PLAY/STOP) button to start the Song.



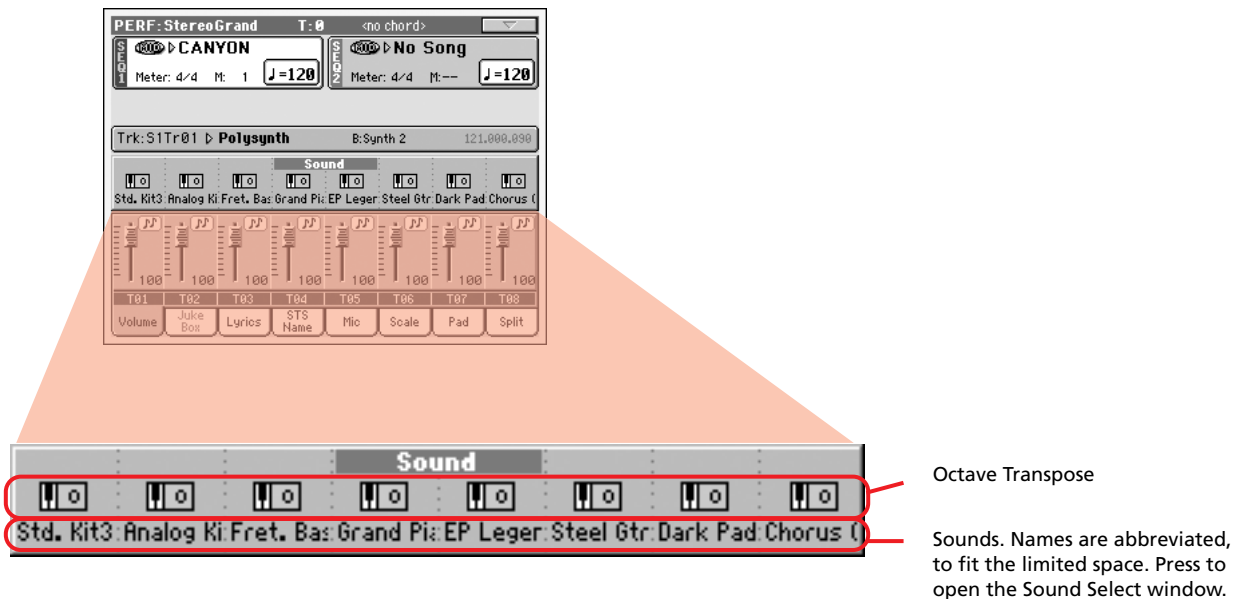
6 While listening to the Song, switch from Normal view to Track 1-8 and Track 9-16 view, to see which tracks are playing.

Each track has a sound assigned to it, so look for the name of the Sounds you are listening to.

- Touch each track's channel strip, to see each track's detail in the Track Info line.



- Alternatively, you can see the Sound assigned to each track in the Sound area of the Track 1-8 and Track 9-16 views.



## Turning Song tracks on/off

During playback, you may wish to mute one or more tracks, for example to sing along with the Song, or play an instrumental part live on the keyboard.

Muting/unmuting Song tracks works exactly as with Style tracks. See "Turning Style tracks on/off" on page 44 for more information.

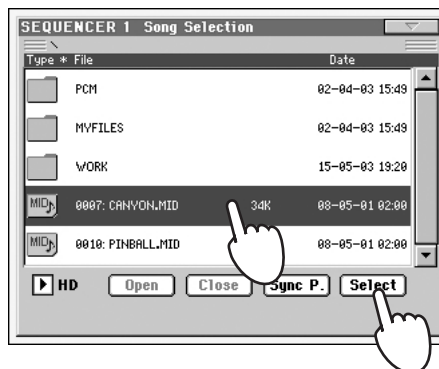
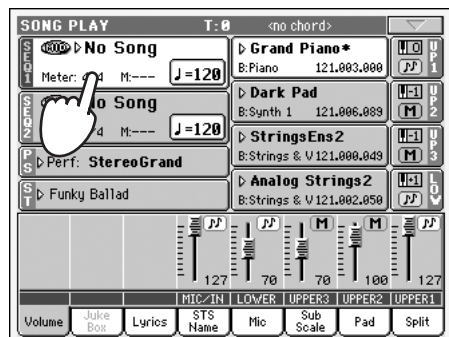
**Note:** These changes will not be saved to the Song. To save changes, edit the Song in Sequencer mode.

## Mixing two Songs

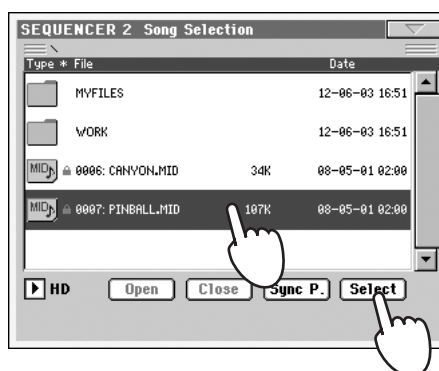
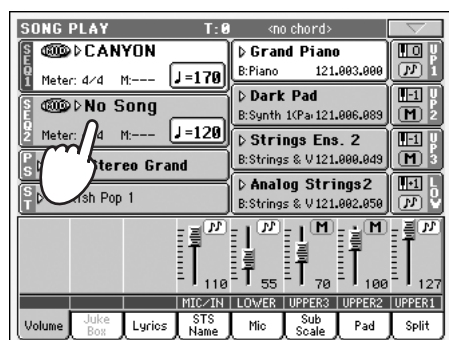


You can select two Songs at the same time, and mix between them using the BALANCE slider.

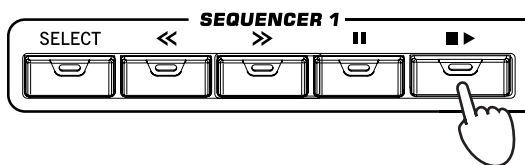
- 1 Press the Sequencer 1 area to open the Song Select window and select the Song to be played by Sequencer 1. Press Select to confirm.



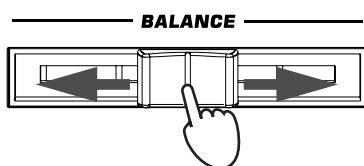
- 2 Once a song is assigned to Sequencer 1, press the Sequencer 2 area once to select it, and a second time to open the Song Select window. Select a Song to be assigned to Sequencer 2, and press Select to confirm.



- 3 Keep the SHIFT button pressed, and press any of the two ■▶ (PLAY/STOP) buttons, to start both Sequencers at the same time.



- 4 During playback, move the BALANCE slider, to mix between the two Songs.



- 5 During playback, you may control each Sequencer separately, by using the dedicated Sequencer controls.
- 6 Press the relevant ■▶ (PLAY/STOP) button to stop the corresponding Sequencer.

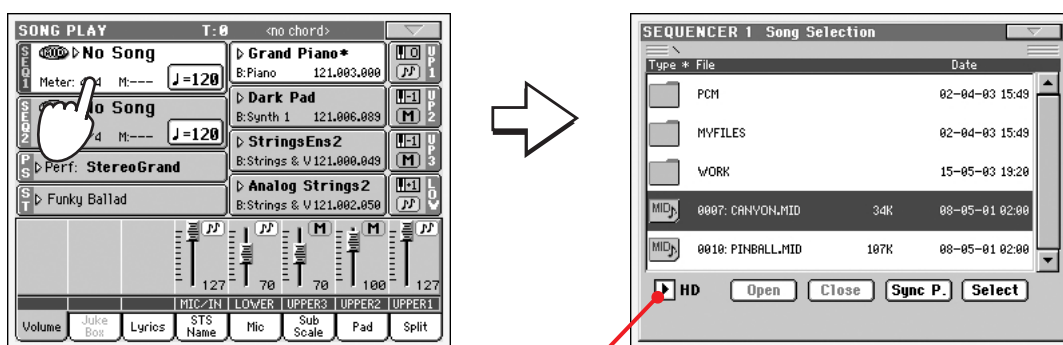
**i** Hint: You don't need to start both sequencers at the same time. You can start the first Song – then start the second one when the first one is near to the end. This way, you can use the BALANCE slider to gently crossfade between the end of one Song and the beginning of the following one.



## Listening to a CD

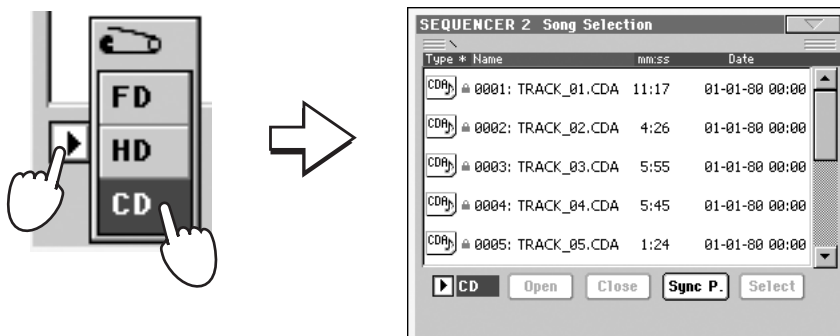
If your Pa1X is fitted with the (optional) CDRW-1 CD Player, you can listen to songs from any Audio CD. Please note that, while you can assign a single CD track to either sequencers, you can mix it with a midfile assigned to the other sequencer.

- 1 Insert the CD into the CD Player.
- 2 Press a Sequencer area to open the Song Select window.



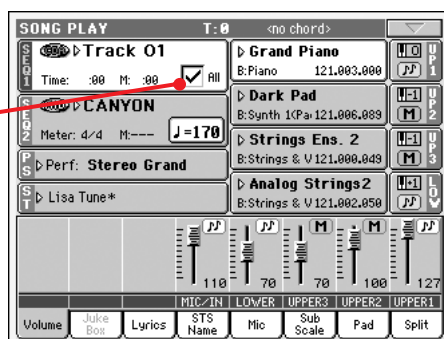
Device pop-up menu

- 3 Use the Device pop-up menu to select the CD Player.



- 4 Select any of the tracks contained in the CD, and press Select to assign it to the selected Sequencer.

Check the All option to listen to all the tracks on the CD, starting from the selected one. Press **■▶** (PLAY/STOP) to start listening.



- 5 Use the Sequencer's transport controls to play/stop the selected CD track.

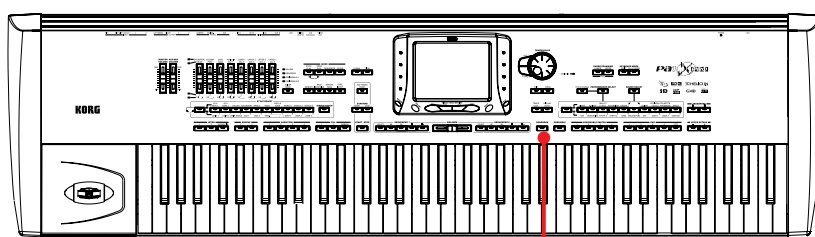
You can jump to the following CD track by keeping the SHIFT button pressed, while pressing the >> button. Keep SHIFT pressed and press << to jump to the previous CD track.

## The SongBook

One of the most powerful features of the Pa1X is the onboard music database, that allows you to organize your Styles and Songs (in SMF, KAR and – optionally – MP3 format) for easy retrieving. Each entry of this database may include the artist, title, genre, number, key, tempo, and meter of a specified song. When selecting one of the entries, the associated Style, MP3 or Standard MIDI File is automatically recalled.

In addition to helping you organizing your shows, the SongBook allows you to associate up to four STSs to each Standard MIDI File or MP3. This way, it is easy to recall a complete setup for Keyboard tracks, effects, and the Voice Processor, for realtime playing over a Standard MIDI File or MP3.

You can add your own entries to the SongBook, as well as edit the existing ones. Korg has already supplied some hundred entries as standard. Furthermore, the SongBook allows you to create various custom lists, that may suit your different shows.



The SONGBOOK button

## Selecting the desired entry from the Main List

A large database is already included with the instrument, and you can later customize it. You may browse through this database in a variety of ways.

- 1 While you are in Style Play or Song Play mode, press the SONGBOOK button to open the SongBook window.

Style or Standard MIDI Files(s) currently assigned to the arranger or sequencer(s)

**SONGBOOK**

SongBook Main List

Press this checkbox to turn the view filter on.

Press this button to edit the view filter.

Adds the selected entry to the Custom List (if activated – see page 59).

Press this button to select the current entry to play.

Use the scroll bar to see all entries in the list. As an alternative, select an item and use the DIAL.

Type	Name	Genre	Key	Tempo	Meter
2much	afterworld	Ballad	-----	8d	4/4
A day in	paradise	Pop	-----	100	4/4
A gigolo		Pop	-----	130	4/4
A groovy	love	Ballad	-----	73	4/4
A hard	day/night	Pop	-----	138	4/4
A whiter	shade	Ballad	-----	74	4/4

- 2 Browse through the entries.

Icons in the Type column will help you identify the type of the entry. The Genre column is shown by default, but you can switch to the Artist column (see “Displaying Artist or Genre” below).

- 3 When the entry is visible in the display, select it and press the Select button in the display.

After selecting an entry, the corresponding Style, SMF, KAR file, or MP3 (optional) will be recalled, together with the relevant operating mode (Style Play or Song Play). Up to four STSs will also be recalled.

The selected Style, SMF, KAR file, or MP3 is shown in the higher part of the screen.

## Displaying Artist or Genre

For space matter, either the Genre or Artist column can be seen in the display. You cannot see both at the same time.

- 1 Press the page menu icon to open the page menu.

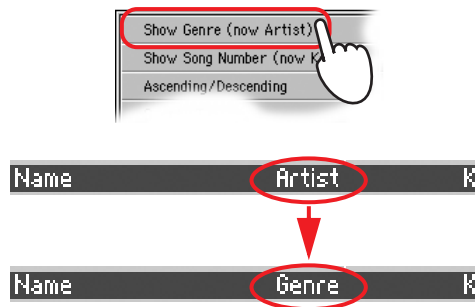


**i Note:** The Artist and Key fields of all supplied entries have been intentionally left empty.

- 2 Choose Show Artist (now Genre) to switch from Genre to Artist in the List view. The Artist column will be shown.



- 3 Open the page menu again, and choose the Show Genre (now Artist) item. The Genre column will be shown again.



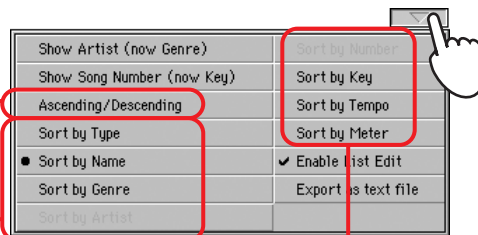
## Sorting entries

You can change the order entries are shown in the display.

### 1 Press the page menu icon to open the page menu.

Choose whether the list must be seen in ascending or descending order

Choose one of the sorting options to change the list view order. The selected option will be shown in red over the list of file.



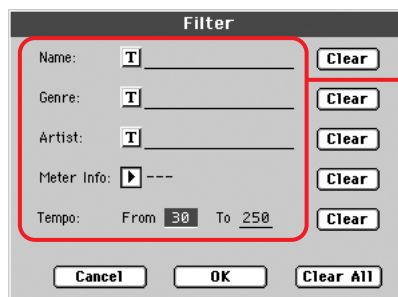
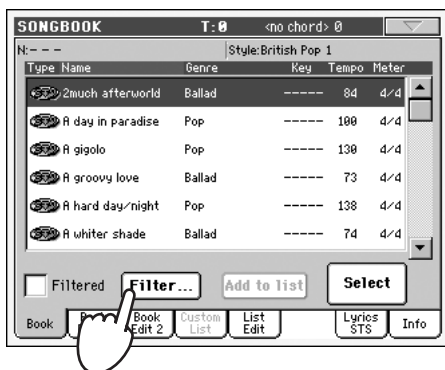
### 2 Select one of the available sorting options.

The order of entries in the display changes, reflecting the selected sorting option.

## Searching entries

The SongBook database may be really huge. You can, however, look for (say) specific artists or song titles, using the filtering functions.

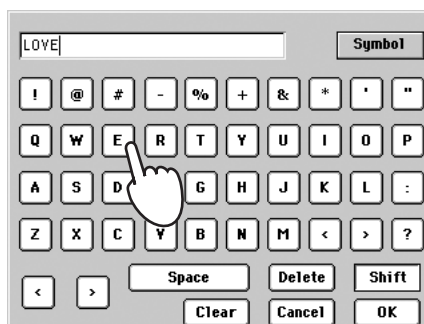
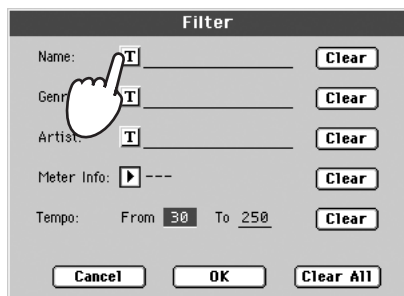
### 1 Press the Filter button in the display, to open the Filter dialog box.



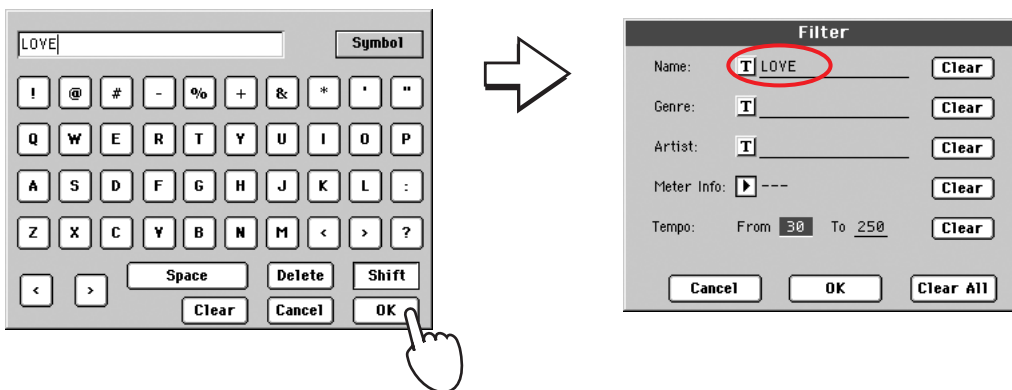
Available search criteria. "Genre" and "Artist" are both considered, even though only one of them may be shown in the List

### 2 Press the **T** (Text Edit) button next to the search criteria (even more than one) you want to enter.

For example, you may want to find all songs containing the word "love" in the title. If so, select the 'Name' criterion, and enter the word 'love'. Capitals are not relevant for the search.

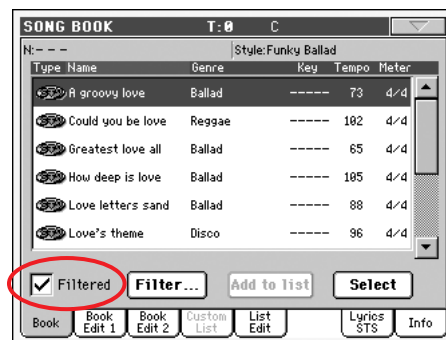


- Press OK in the display, and close the Text Edit dialog box. The entered text is now the search criteria.



- Press OK to close the Filter dialog box and return to the SongBook page.

Once the Filter dialog box has been closed by pressing OK, the Filtered check box is automatically checked, and the filter is activated. Only entries matching the entered criterion are seen in the Main List.



- To see the whole SongBook database again, press the Filtered check box again, to make the check mark disappear.

## Adding entries

You can add your own entries to the SongBook database.

- Go to the Style Play or Song Play mode, depending on the type of entry you want to add to the SongBook database.
- Select the Style, Standard MIDI File or MP3 file (optional) to be added to the SongBook.  
Assign the selected Song to Sequencer 1. Songs assigned to Sequencer 2 will not be saved in the SongBook entry.
- Edit Keyboard and Style tracks as you prefer, by selecting different Sounds and Effects, or editing any other parameter.  
Please note that changes to a Standard MIDI File's tracks will not be saved as SongBook data. Data included in the Standard MIDI File will always be considered.
- Select a different Voice Processor Preset, if you like.

- 5 When your entry is ready, press the **SONGBOOK** button, then the **Book Edit 1** tab to see the **Book Edit 1** page.

When checked, current settings for Style tracks, or the path for the SMF, KAR or MP3 file, are saved with the entry. If unchecked, original Style track settings are saved with the entry.

This parameter is mandatory when creating a new entry by pressing the New Song button.

When checked, current Keyboard track and Voice Processor settings are saved to one of the four STSs available for each entry. You can also exit the SongBook, edit Keyboard tracks, then return to the SongBook and save the new settings to a different STS. Press the Text Edit icon to edit the STS name.

Name of the Style, SMF, KAR or MP3 file, memorized with the entry (provided "Write Current Resource" is selected when saving it).

Entry's parameters

Currently selected resource. If a different Style, SMF, KAR or MP3 file has been selected, it may differ from the saved resource (shown on top of the page).

One of the four STS available for each entry, where you can save the current settings for Keyboard tracks and the Voice Processor.

Press New Song to create a new entry.

- 6 Press the **New Song** button in the display to add a new item to the SongBook list.

- 7 Press the **T** (Text Edit) button next to the field(s) you want to edit, and write the name. Set all other parameters.

You can write the genre, artist name, and name of the associated STS. Select a Tempo matching the song's tempo, and select the Meter and Key of the song. You can also specify a Master Transpose value, to be automatically selected when selecting the entry.

- 8 After having filled up all the desired fields (be as comprehensive as you can), press the **Write** button in the display to open the Write dialog box.

**Write Song**

New Song Name: **T** NEWSONG

☐ Rename/Overwrite: NEWSONG

☒ New Song

**Cancel** **OK**

- Press the **T** (Text Edit) button to assign a name to the new entry, then press OK to save the entry to the SongBook database.

Entry's name. A good idea may be to assign the entry the same name of the associated Standard MIDI File or MP3 file, or a name suitable for the use of the associated Style.

Select Rename/Overwrite to overwrite an existing entry. **Warning: the older entry will be deleted!**

Select New Song to add a new entry to the SongBook database. This option is automatically selected when a new entry has been created (by pressing the New Song button).

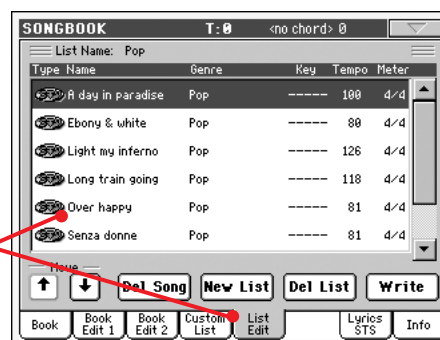
## Creating a Custom List

You can create several Custom Lists in the SongBook, to make a set of entries suitable for your various shows. Before starting a new Custom List, be sure you have added all needed entries to the SongBook main database (see "Adding entries" above).

- While in SongBook mode, open the page menu and check the 'Enable List Edit' item.



After you check the 'Enable List Edit' item, the List Edit page becomes available.



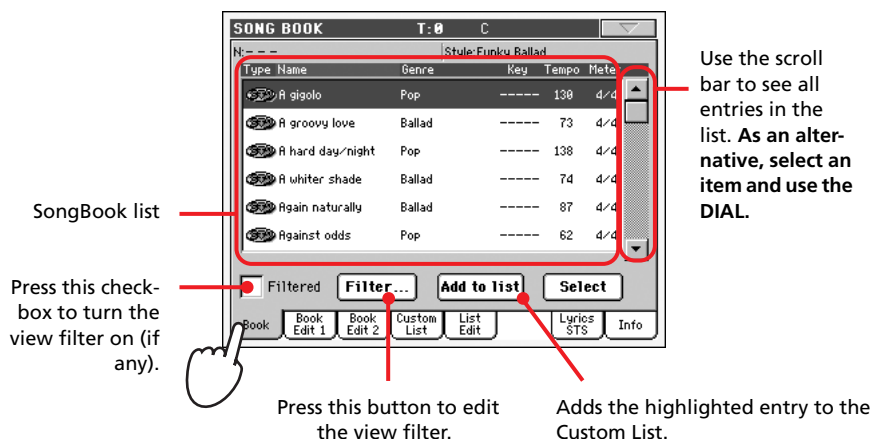
- Select a Custom List to be edited.

To edit an existing list, press the Custom List tab to open the Custom List page, and select one of the available Custom Lists. To create a new list, press the List Edit tab to open the List Edit page, and press the New List button to create a new, blank list.

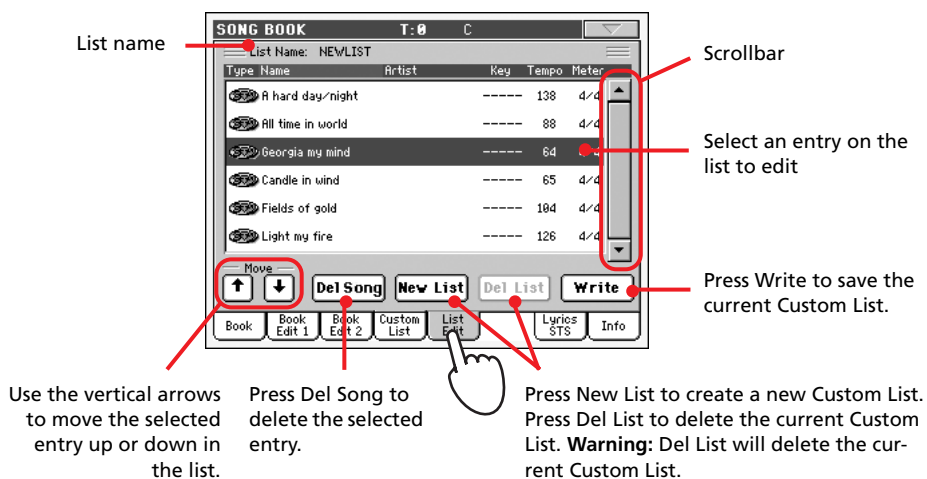
- Press the Book tab to open the Book page and see the full database. Use the various sorting, searching and filtering options (seen above) to find



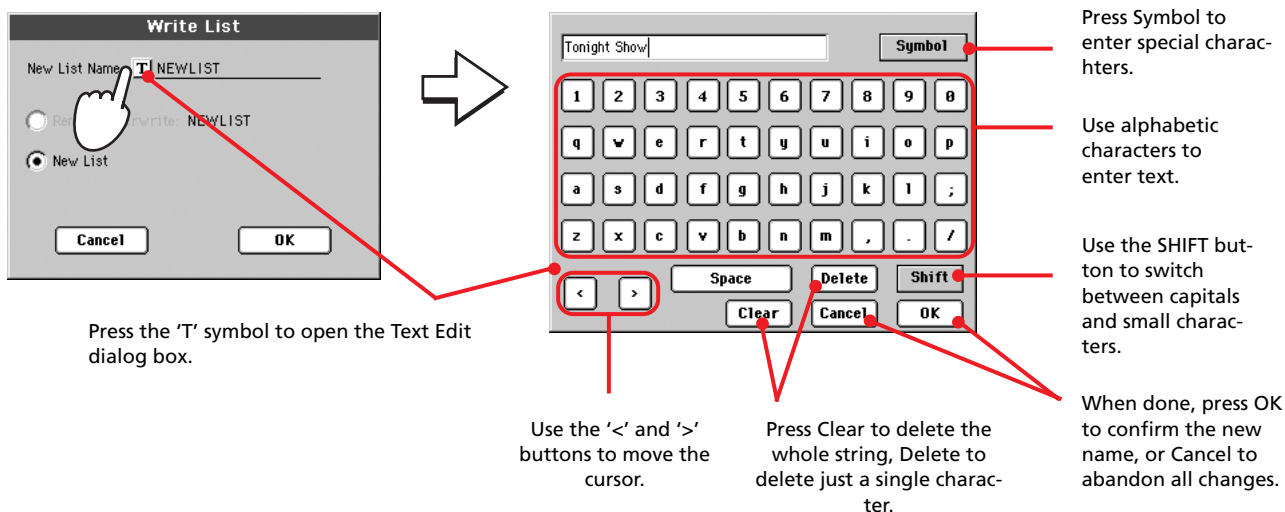
the entries you are looking for. Press the **Add to List** button when the desired entry has been selected.



- 4 When finished adding entries to the Custom List, press the **List Edit** tab to go to the List Edit page, and use the various commands to edit the list.



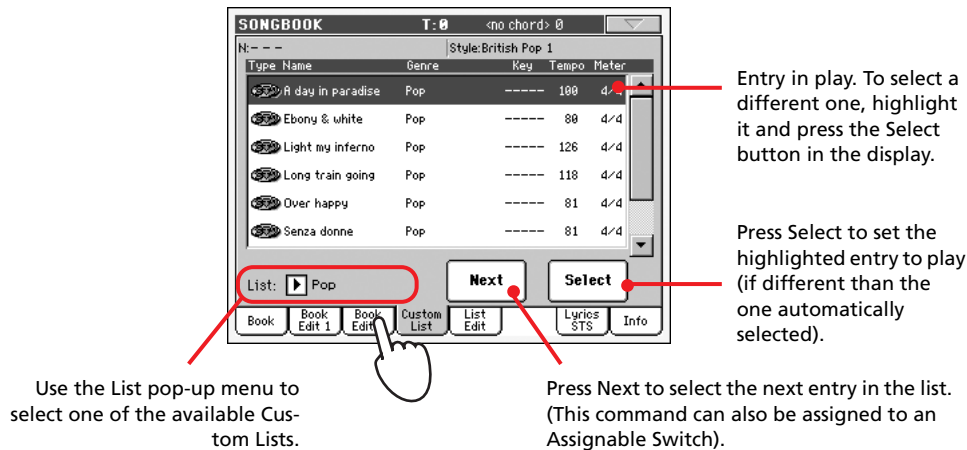
- 5 When the Custom List is ready, press the **Write** button in the display to save it to memory. If you like, assign a new name to the Custom List.



## Selecting and using a Custom List

After creating one or more Custom Lists, you can select one and use it for your show.

- 1 Press the Custom List tab to select the Custom List page.
- 2 Use the List pop-up menu to select one of the available Custom Lists.

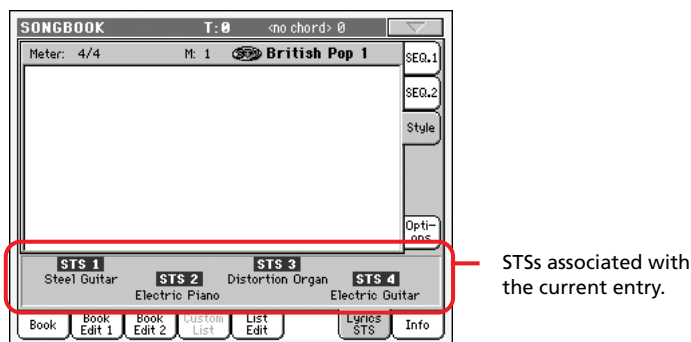


- 3 Select one of the entries in the list (it turns blue), then press the Select button in the display (the selected entry turns green) to start playing back from there.

## Selecting a SongBook STS

Up to four STSs can be associated to an entry based on a Standard MIDI File or an MP3 file.

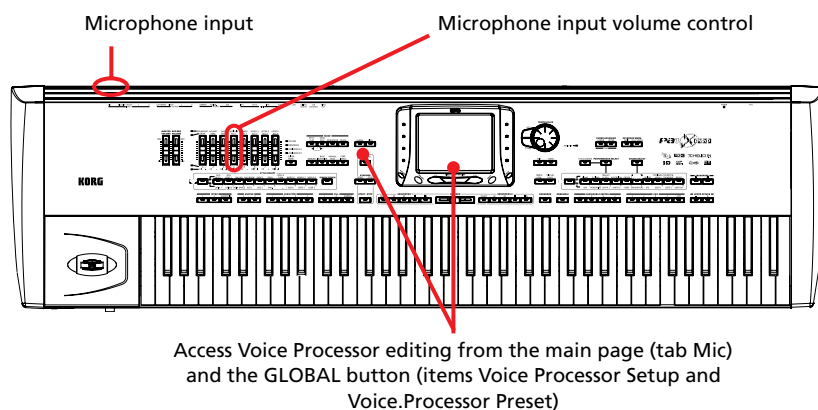
- 1 Press the Lyrics/STS tab to open the Lyrics/STS page and see the four STSs associated to the current SongBook entry.



- 2 Select the desired STS by touching its name in the display. As an alternative, press the SINGLE TOUCH BUTTON corresponding to the desired STS.  
The STS is selected. Keyboard tracks and Voice Processor settings may change.

## Singing with a connected microphone

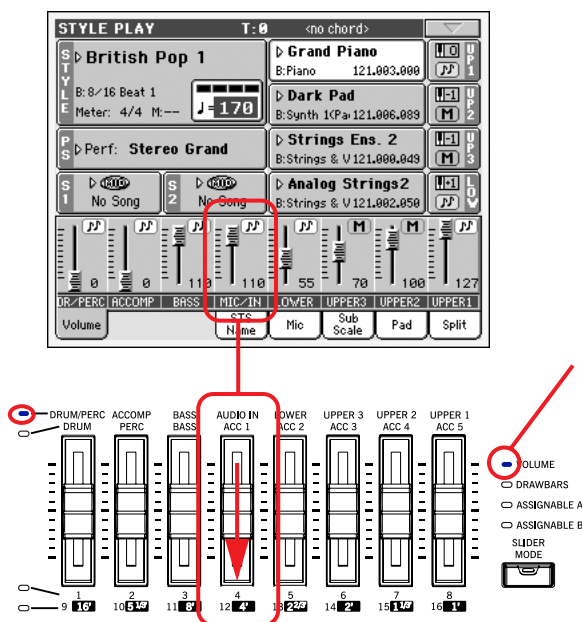
Pa1X is fitted with a powerful digital voice processor, based on technologies developed by TC Helicon, including effects, four-part harmonization, and (optional) pitch correction and voice modeling.



## Connecting a microphone

To sing along with the Pa1X, you must first connect a suitable microphone to its MIC input. Any dynamic microphone is directly supported. To connect a phantom-powered condenser microphone, you need an external phantom power supply. You can also connect the microphone through an external mixer, and connect one of the mixer's line outputs to the line input IN1 of the Pa1X.

- 1 Lower the Audio In track volume by using the corresponding slider.



To control the volume, the VOLUME LED must be turned on. If it is off, repeatedly press the SLIDER MODE button to change it. Please note that the SLIDER MODE status is saved with each Performance.

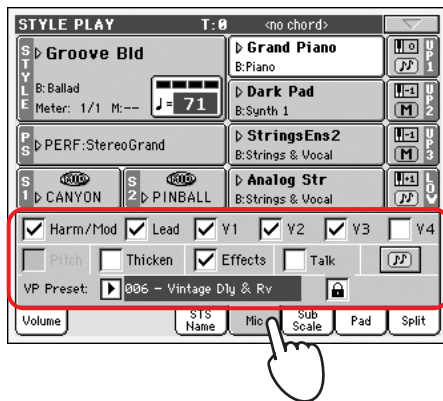
**i Note:** Lowering the Audio In track volume helps avoiding feedback. Feedback is caused by the audio generated by the Pa1X, returning to the audio circuitry via the microphone.

- 2 Connect a microphone.

If you connect a microphone to the MIC input, move the MIC/IN1 switch to the MIC position. This allows the microphone signal to pass through the built-in high-quality preamp of the Pa1X.

If you connect a microphone to the IN1 input, passing through a mixer or a preamp, move the MIC/IN1 switch to the IN1 position. This will allow you to use the Pa1X as a powerful outboard effect processor.

- 3 Go to the main page of the Style Play or Song Play mode, and select the Mic tab. Uncheck all the “master” switches.



Voice Processor “master” switches. To test the microphone level, uncheck Harm/Model, Pitch, Thicken, Effects, Talk, Mic Mute.

- 4 Sing into the microphone, and adjust the input gain and the Audio In track’s volume, until you achieve the correct settings.

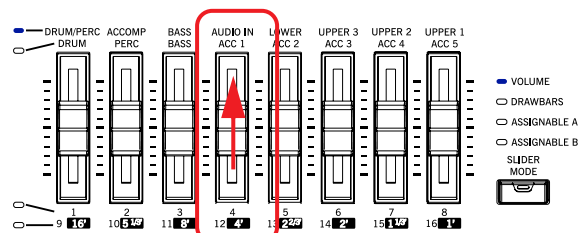
MIC GAIN



AUDIO IN

Adjust the input level by using the MIC GAIN knob. Sing into the microphone, and watch at the AUDIO IN LED on the control panel. If it goes red too often, turn down the input gain; if it turns on green too often, increase the input gain. No hint of distortion should be heard in the audio system when you sing.

While you adjust the gain, gradually increase the Audio In track volume, by using the corresponding slider.



**Note:** You have a correct microphone volume setting when the AUDIO IN LED turns red very often, and just during the signal peaks. The AUDIO IN slider must be set accordingly, to compensate a too loud or weak incoming signal.

- 5 Turn on again all desired “master” switches.



- 6 Try the Play/Mute button of the Microphone panel, to mute/unmute the whole microphone section.



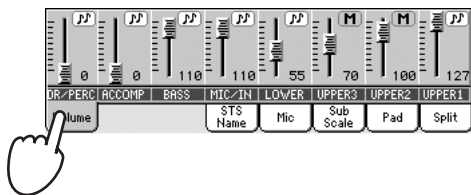
Microphone muted



Microphone set to play

**Note:** This is the same play/mute control you can find in the “Mic In” channel strip of the Volume panel.

7 Press the Volume tab to select the Volume panel.



8 If you like, start a Style or Song. Adjust the microphone final volume using the AUDIO IN Assignable Slider.

9 Adjust the other settings, balancing the Style/Song and microphone with the ACC/SEQ VOLUME slider and the AUDIO IN Assignable Slider.

The settings for the ACC/SEQ VOLUME and AUDIO IN sliders are not saved in memory, so they stay consistent when selecting different Styles, Performances, Songs or Voice Processor settings.

## Applying harmony to your voice

1 Be sure you are in Style Play mode, and select a Style you especially like.

2 Press the Mic tab to show the Microphone panel, and select one of the available Voice Processor Presets.

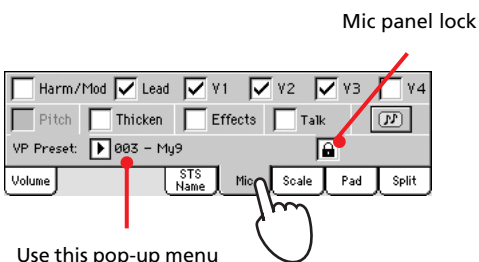
Voice Processor Presets are settings for the various Voice Processor modules (Effects, Harmony, Voice Modeling, Pitch Correction, Thickening). By selecting a Preset, all processing parameters may change.

A Voice Processor Preset is assigned to each Performance or STS. When selecting a different Performance or STS, the Voice Processor Preset may change (depending on the Mic panel lock status), changing the type of processing applied to your voice.

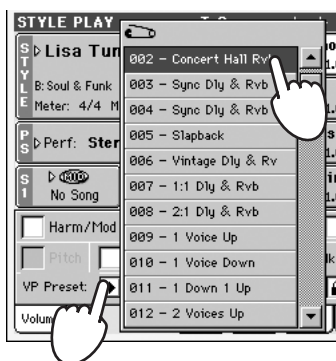
**Note:** Pitch Correction and Voice Modeling are available as options.

**Note:** By default, the first Performance and STS does not include any harmony effect, to avoid any unwanted processing from being applied to the microphone. When you select a Preset you like, you can save it to a Performance or STS (see "Saving your settings to a Performance" on page 35)

**Note:** By default, you can turn the Harmony section on/off by pressing the ASSIGNABLE SWITCH 2, whichever the shown page is.



Use this pop-up menu to select a Voice Processor Preset.



3 If you like, start the Style.

4 Check the Harm/Model checkbox, to turn Harmony on.

5 Play the keyboard, to send chords to the Voice Processor.

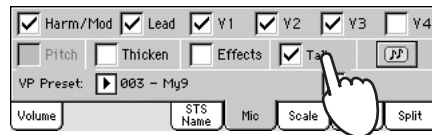
6 Sing along with the chords and melody you play on the keyboard.

7 If it is playing, stop the Style.

## Soloing your voice (TalkBack)

Sometimes, during a live show, you might like to talk to your audience. Use the TalkBack function to attenuate the music, and let your voice pass through clean and clear.

- 1 While in the main page of the Style Play or Song Play mode, press the Mic tab to see Voice Processor's "master" switches.
- 2 During playback, press the Talk checkbox, making the check mark appear.



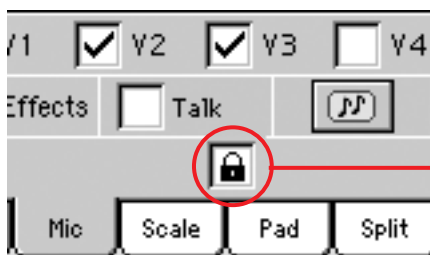
- 3 Sing or talk into the microphone.  
You'll hear background music has been made softer, while your voice will be heard *loud and proud*.
- 4 To turn the TalkBack function off, press the Talk checkbox again, making the check mark disappear.  
The background music returns to the original volume.

**i Note:** By default, you can turn the TalkBack function on/off by pressing the ASSIGNABLE SWITCH 4, whichever the shown page is.

## Locking Voice Processor settings

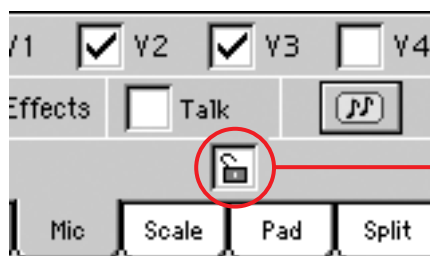
If you like the selected Voice Processor Preset, and other settings you have made in the Microphone panel, you can "lock" them, to prevent them from changing each time you select a Performance, Style or STS that may be saved using different settings.

- 1 While the Microphone panel is shown in the display, press the lock icon to freeze it.



Lock on. Voice Processor settings will not change when selecting a different Performance or STS.

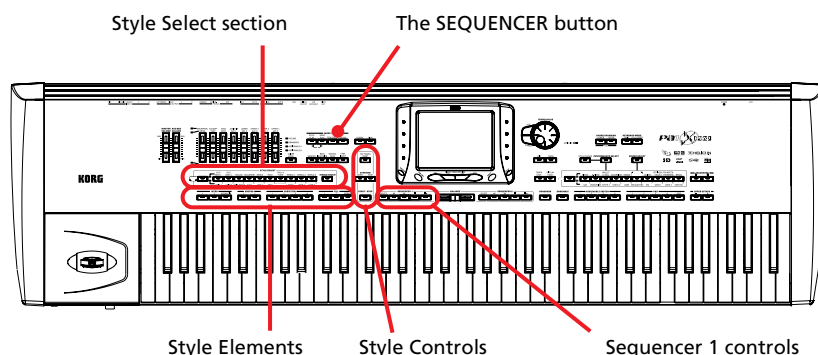
- 2 To unlock the settings, press the lock icon again.



Lock off. Voice Processor settings will change when selecting a new Performance or STS.

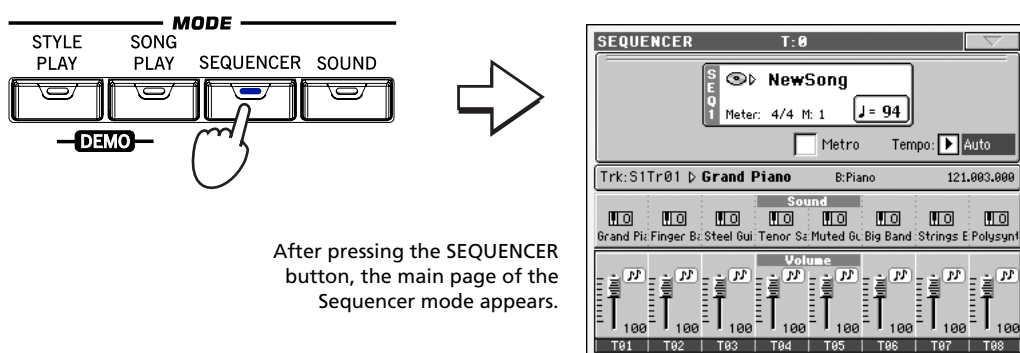
## Recording a new Song

There are several ways to create a Song on the Pa1X. The easiest and fastest is to use the Styles to record what you are playing in realtime on the keyboard, while the arranger gives you the accompaniment tracks.

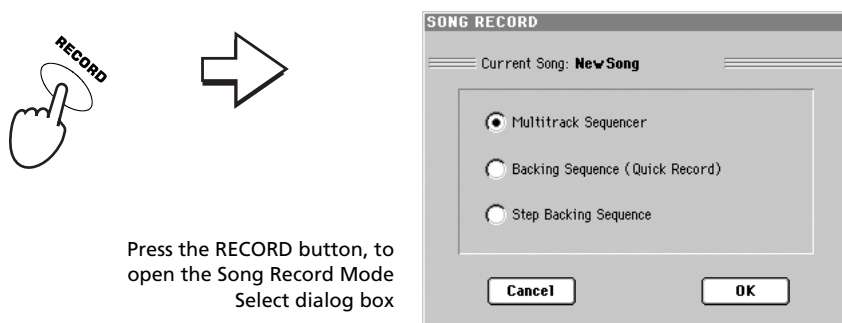


## Entering Backing Sequence (Quick Record) mode

- 1 Press the **SEQUENCER** button to switch to the Sequencer mode.

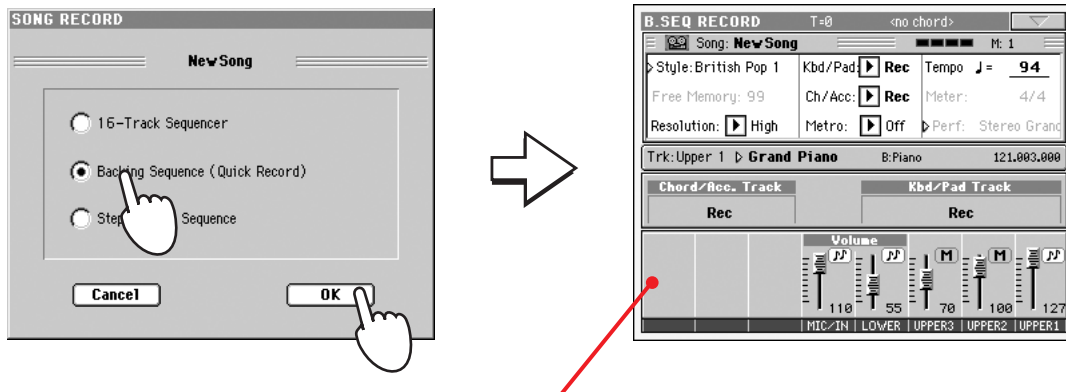


- 2 Press the **RECORD** button to open the Song Record Mode Select dialog box.





- 3 Select the **Backing Sequence (Quick Record)** option and press **OK** to enter the **Backing Sequence Record** mode.



After choosing the **Backing Sequence (Quick Record)** option, the **Backing Sequence Record** page appears.

## Preparing to record

When you enter **Backing Sequence Record**, the most recently used **Style** is already selected, and all tracks are ready to record. You could simply start recording as if you were playing in realtime with the **Styles**. However, there are some settings that you may wish to edit.

- If you like, adjust any editable parameter in the display.

Press the **Style** parameter (or one the **STYLE** buttons) to open the **Style Select** window, and select a different **Style** (as seen on page 38).

Track(s) status. 'Rec' means they are ready to record. 'Play' means they are recorded and you can hear them. 'Mute' means they cannot be heard.

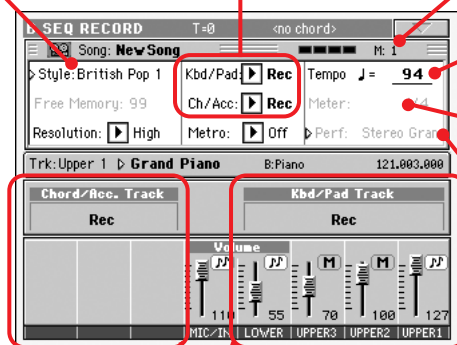
Measure counter. Negative numbers (-2, -1) are the precount, after which you can start recording.

**Style's Tempo**. Change it, if you like.

**Style's Meter**. You cannot change it.

Press the **Perf/STS** parameter to open the **Performance Select** window, and select a different **Performance** (as seen on page 34). As an alternative, you use the **PERFORMANCE/SOUND** or **STS** buttons.

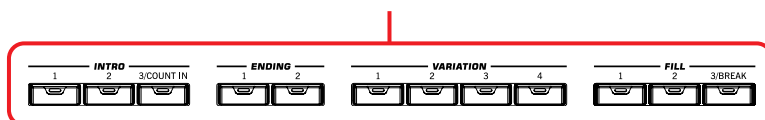
Grouped tracks. During **Quick Record**, you cannot access each separate **Song** track. For ease of use, just two 'master' tracks are provided: **Kbd/Pad** (Keyboard/Pads) and **Ch/Acc** (Chord/Accompaniment).



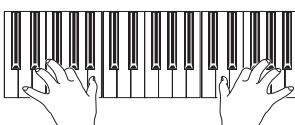
## Recording

### 1 Select the Style Element you wish to use before starting to play.

Select one of the Intros to start with an introduction. Select any of the Variations before starting to record.



### 2 Start recording, by pressing the START/STOP button.



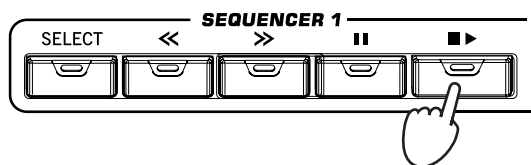
**i Note:** If you do not wish to start the Song with the Style playing, you can simply start recording by pressing the **PLAY/STOP** button in the **SEQUENCER 1** section, and start the Style only later. The Style will start at the next strong beat

### 3 Play as if you were performing live with the Styles.

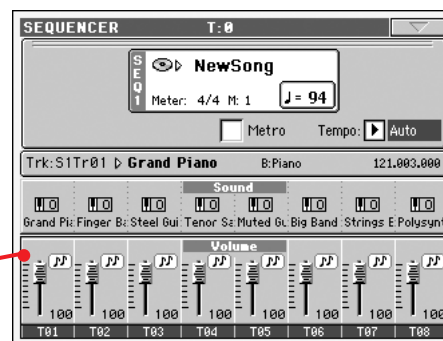
During recording, select any Style Element (Intro, Variation, Fill, Ending...) you like. You can also press START/STOP to stop the Style, and press it again to start the Style up again!

Please remember that, while recording in Backing Sequence Record mode, you cannot use the SYNCHRO, TAP TEMPO/RESET, ACC/SEQ VOLUME controls.

### 4 When finished recording your Song, press the **PLAY/STOP** button in the **SEQUENCER 1** section to exit recording, and return to the main page of the Sequencer mode.



After pressing the PLAY/STOP button, the main page of the Sequencer mode appears again.



### 5 While in the main page of the Sequencer mode, press the **PLAY/STOP** button in the **SEQUENCER 1** section to listen to the recorded Song.

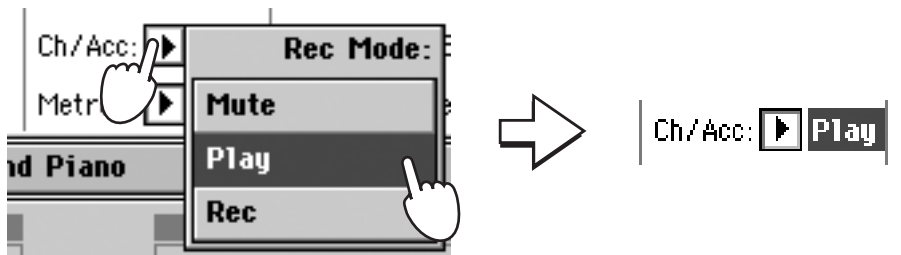
The Backing Sequence Song has been converted to an ordinary Song. If you like it, you can save it to disk, and read it in Song Play mode, or with any external sequencer.

### 6 To edit the Song, press MENU to enter the Edit mode (see instructions starting from page 173).

## Second-take recording (Overdubbing)

You may wish to re-record, and add one of the two “grouped” tracks, or overwrite a bad recording with a new one. Usually, you will record all chord and Style Element changes during the first take, and record Keyboard tracks and Pads during the second take.

- 1 Press the REC button to enter Record again. When the Song Record Mode Select dialog box appears, select Backing Sequence (Quick Record) again.
- 2 If you are recording just one of the “grouped” tracks, set the track to be preserved to the Play mode.



- 3 Repeat the recording process, and press the ■► (PLAY/STOP) button in the SEQUENCER 1 section to stop recording and to return to the main page of the Sequencer mode.
- 4 While in the main page of the Sequencer mode, press the ■► (PLAY/STOP) button in the SEQUENCER 1 section to listen to the recorded Song.

Again, the Backing Sequence Song has been converted to an ordinary Song.

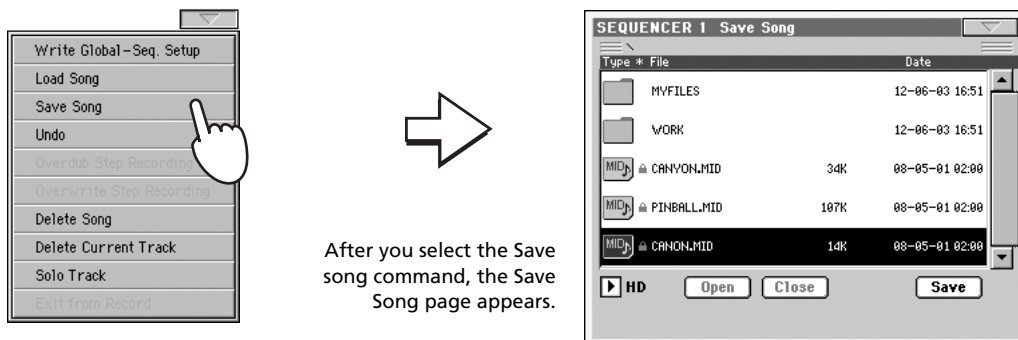
## Saving a Song to disk

After recording a Song that you like, it is a good idea to save it to disk, to avoid losing it when the instrument is turned off.

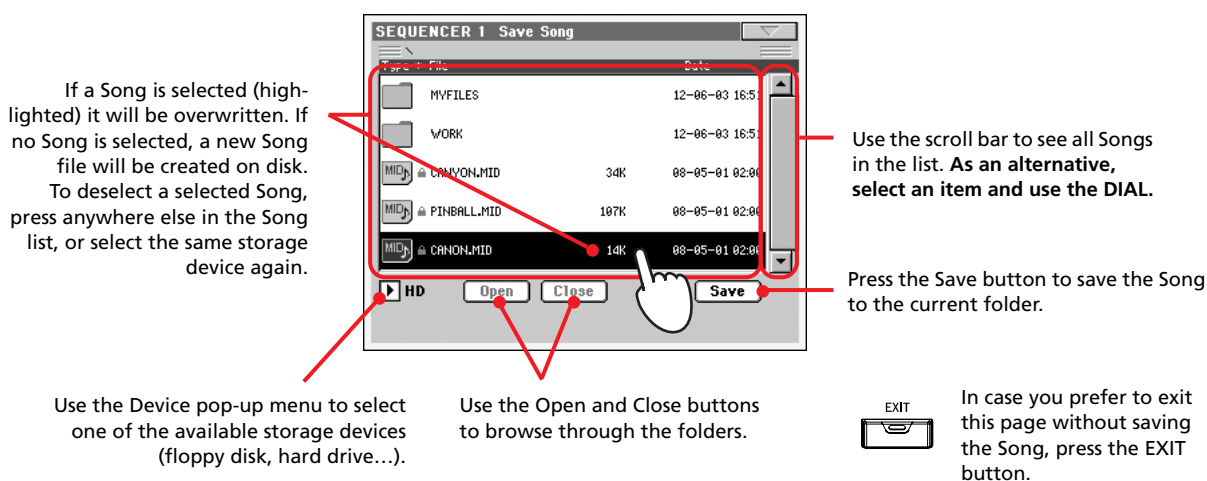
- 1 While in the main page of the Sequencer mode, press the page menu icon to open the page menu.



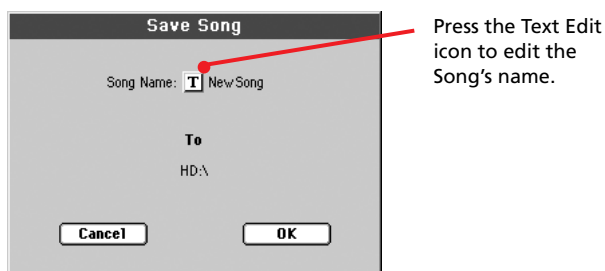
## 2 Select the Save song command to open the Save Song window.



## 3 Select a device and folder where you want to save your Song.



## 4 Press the Save button in the display to open the Save Song dialog box.



## 5 Press OK in the display to save the Song to disk, or Cancel to stop the Save operation.



# Reference

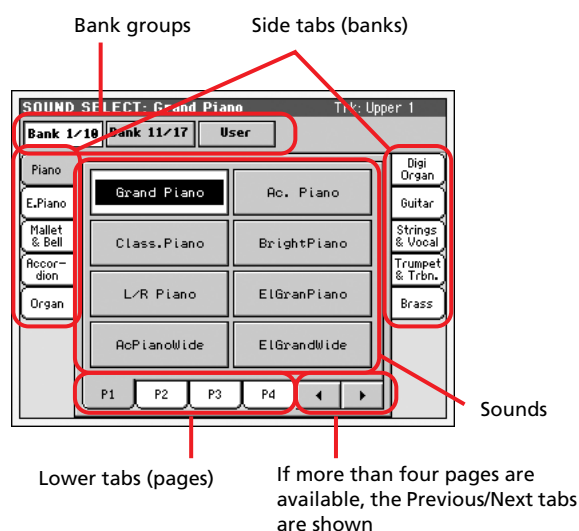
## Selecting elements

The following windows are shown in the various operating modes, whenever you try to select a Sound, Performance, Style or Song.

### Sound Select window

Press the Sound area whereas it appears in the display, or one of the SOUND SELECT buttons on the control panel (provided the SOUND SELECT LED is lit), to open the Sound Select window. Use the SOUND SELECT buttons to go directly to the selected bank.

Press EXIT to exit from this page and go back to the previous page without selecting any Sound.



**Note:** Depending on the status of the “Auto Performance/Sound Select” parameter (see page 229), a Sound may be immediately selected when pressing one of the SOUND SELECT buttons. The latest selected Sound for that bank will be selected.

#### Bank groups

Selected group of banks.

#### Side tabs (banks)

Use these tabs to select a bank of Sounds. Each tab corresponds to one of the SOUND SELECT buttons on the control panel.

#### Lower tabs (pages)

Use these tabs to select one of the available pages in the selected bank.

If you press again the same SOUND/PERFORMANCE SELECT button on the control panel, the next page in the same bank is selected. This way, you do not need to press one of the corresponding tabs in the display in order to select a different page.

#### Previous/Next tabs

Scroll the lower tabs to the left or the right, when additional tabs are available but cannot be seen in the display.

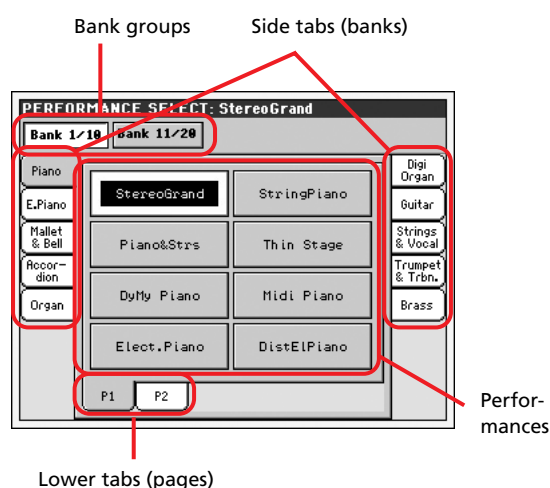
### Sounds

Press one of these buttons in the display to select a Sound. Unless the DISPLAY HOLD LED is turned on, the window automatically closes short after you select a Sound.

### Performance Select window

Press the Performance area whereas it appears in the display, or one of the PERFORMANCE SELECT buttons on the control panel (provided the PERFORMANCE SELECT LED is lit), to open the Performance Select window. Use the PERFORMANCE SELECT buttons to go directly to the selected bank.

Press EXIT to exit from this page and go back to the previous page without selecting any Performance.



**Note:** Depending on the status of the “Auto Performance/Sound Select” parameter (see page 229), a Performance may be immediately selected when pressing one of the PERFORMANCE SELECT buttons. The latest selected Performance for that bank will be selected.

#### Bank groups

Selected group of banks.

#### Side tabs (banks)

Use these tabs to select a bank of Performance. Each tab corresponds to one of the PERFORMANCE SELECT buttons on the control panel.

#### Lower tabs (pages)

Use these tabs to select one of the available pages in the selected bank.

If you press again the same SOUND/PERFORMANCE SELECT button on the control panel, the next page in the same bank is selected. This way, you do not need to press one of the corresponding tabs in the display in order to select a different page.

## Previous/Next tabs

Scroll the lower tabs to the left or the right, when additional tabs are available but cannot be seen in the display.

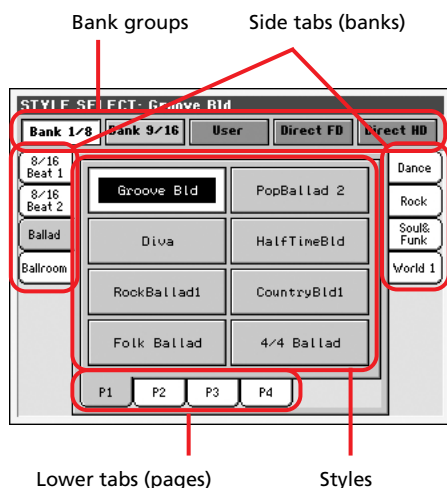
## Performances

Press one of these buttons in the display to select a Performance. Unless the DISPLAY HOLD LED is turned on, the window automatically closes short after you select a Performance.

## Style Select window

Press the Style area whereas it appears in the display, or one of the STYLE buttons on the control panel, to open the Style Select window. Use the STYLE buttons to go directly to the selected bank.

Press EXIT to exit from this page and go back to the previous page without selecting any Style.



**Note:** Depending on the status of the “Auto Style Select” parameter (see page 229), a Style may be immediately selected when pressing one of the STYLE SELECT buttons. The latest selected Style for that bank will be selected.

### Bank groups

Selected group of banks.

### Side tabs (banks)

Use these tabs to select a bank of Styles. Each tab corresponds to one of the STYLE buttons on the control panel.

### Lower tabs (pages)

Use these tabs to select one of the available pages in the selected bank.

If you press again the same STYLE SELECT button on the control panel, the next page in the same bank is selected. This way, you do not need to press one of the corresponding tabs in the display in order to select a different page.

### Styles

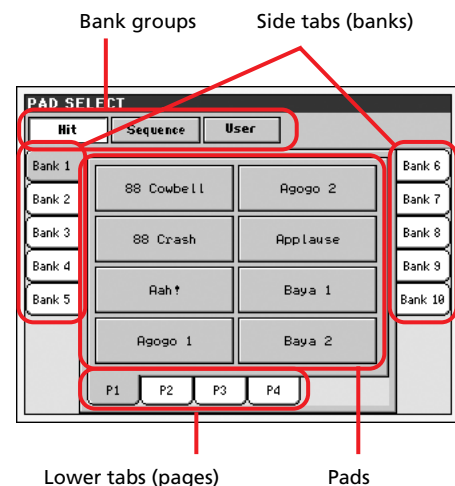
Press one of these buttons in the display to select a Style. Unless the DISPLAY HOLD LED is turned on, the window automatically closes short after you select a Style.

After selecting a Style from this window, its name begins to flash, meaning it is ready to start playing at the beginning of the next measure.

## Pad Select window

Press the Pad area whereas it appears in the display, to open the Pad Select window.

Press EXIT to exit from this page and go back to the previous page without selecting any Pad.



### Bank groups

Selected group of banks, corresponding to different types of Pads. **Hit** are single-note, pre-programmed factory Pads. **Sequence** are sequence-based, pre-programmed factory Pads. **User** can be either single-note or sequence-based Pads, and can be user-recorded or modified.

### Side tabs (banks)

Use these tabs to select a bank of Pads.

### Lower tabs (pages)

Use these tabs to select one of the available pages in the selected bank.

### Pad

Press one of these buttons in the display to select a Pad. Unless the DISPLAY HOLD LED is turned on, the window automatically closes short after you select a Pad.

## STS Select

Use the four SINGLE TOUCH SETTING button on the control panel, to select one of the four STS associated with the current Style or the selected SongBook entry.

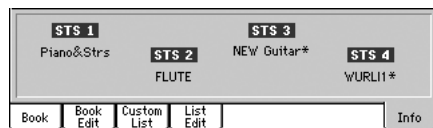
Press the STS tab on the main page of the Style Play and Song Play mode, or the Info tab on the SongBook mode, to see the name of the available STSs.



- In Style Play and Song Play mode:



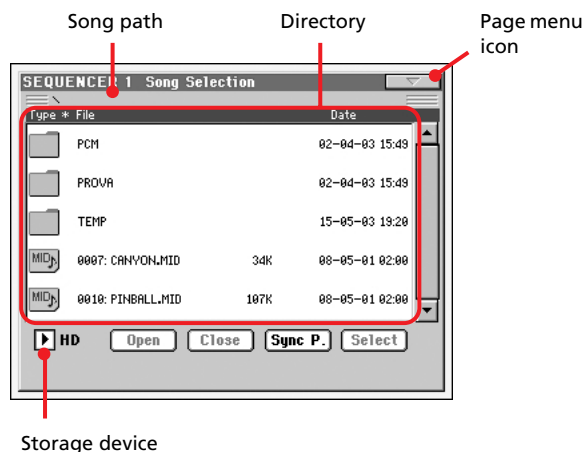
- In SongBook mode:



## Song Select window

This page appears when you press one of the Song areas in the display, or one of the SELECT buttons in one of the SEQUENCER sections on the control panel.

Press EXIT to exit from this page and go back to the main page of the Song Play operating mode without selecting a Song.



While in this page, select a Standard MIDI File, Karaoke, or MP3 file (optional) for the selected Sequencer. A Jukebox file may only be assigned to Sequencer 1.

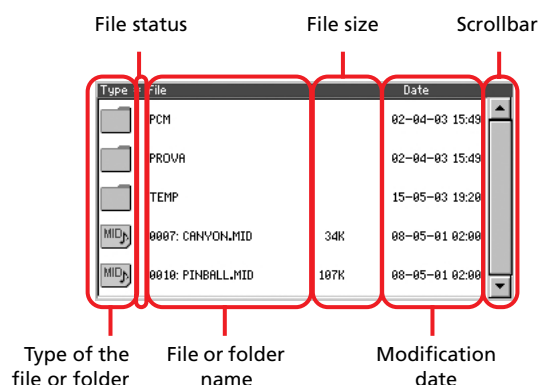
**Note:** There is a separate working directory for each onboard sequencer.

### Song path

This line shows the current device path.

### Directory

This is the list of the selected device's content.



Use the scrollbar to scroll the list items.

As an alternative, you can select one of the items, and use the TEMPO/VALUE controls to scroll.

Keep the SHIFT button pressed, and press DOWN or UP, to jump to the previous or next alphabetical section.

A list can contain several different types of files or folders.

Type icon	File/folder type
	Standard MIDI File (SMF)
	Karaoke file (KAR)
	MPEG Layer 3 (MP3)
	Audio CD track
	Jukebox file (JBX)
	Folder

A file or folder may be in one of the following status. (See "Protect" and "Unprotect" on page 270 for information on how to change the file status).

Status icon	File/folder status
	Protected
-	Unprotected

### Page menu icon


Press the page menu icon to open the menu. See "Song Select page menu" on page 75 for more information.

## Storage device

Use this pop-up menu to select one of the available storage devices.

Device	Type
FD	Floppy disk
HD	Hard disk (optional of the Pa1X)
CD	CD (optional)

## Open

Opens the selected folder (item whose icon looks like this one: ).

## Close

Closes the current folder, returning to the parent ("upper") folder.

## Sync P. (Synchronized Path)

Press this button to see the Song assigned to the selected Sequencer. This is useful to quickly return to it, after you have browsed through long directories and dug into different folders.

## Select

Selects the highlighted item in the display. If a Song is already playing, it stops, and the new Song is ready to play. You are returned to the main page.

## Selecting a Song by its ID number

Each Song in a folder on disk (up to 9,999) has a progressive ID number assigned. You can see this number before the Song's name in the Song Select window. You can use this number to select the Song by composing the corresponding number, speeding up the Song retrieval when you are using an hard disk filled with midifiles.

**0007: CANYON.MID** 34K

While in the Song Select window, press the SELECT button to open the keypad, and enter the number corresponding to the Song to be selected.

While in any page of the Song Play mode, press the SELECT button twice to open the keypad.

**Note:** If no Song corresponds to the dialed number, the "Song not available" message will appear.

**Warning:** While the directory may contain more than 9999 files, you can't select Songs outside the 0001-9999 range when using the numeric keypad.

## Song Select page menu

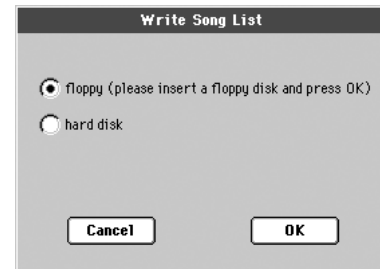
Press the page menu icon to open the menu. Press a command to select it. Press anywhere in the display to close the menu without selecting a command.



## Export Song List

Select this command to save the current list as a text file to a floppy disk. This way, you will be able to print a list of Songs, to see which number matches each Song.

1. While in the Song Select window, select the folder whose Song list you wish to save as a text file.
2. Select the Export Song List command from the page menu.
3. A dialog box will appear, asking you to select either a floppy disk or the hard disk.



4. Select an option.
  - If you select the floppy disk, insert a floppy disk in the disk drive, and press OK to confirm.
  - If you select the hard disk, just press OK to confirm.

**Note:** The text file will contain a list of "\*.mid", "\*.kar", ".mp3" and "\*.jbx" files only. Folders and different kinds of files will not be included.

When saved, the text file will be named after the selected folder. For example, a folder named "Dummy" will generate a "Dummy.txt" file. If a file with the same name already exists on the floppy disk, it will be overwritten without waiting for any confirmation. A file containing the list of all valid files contained into the root of the disk will generate a "Root.txt" file.

The list will include the progressive number assigned to each Song, file names in MS-DOS format (8.3), the total number of files in the list.

For the correct display and printing of the list on a personal computer, use a fixed size (i.e., non-proportional) character in your text editor.

## Style Play operating mode

The Style Play mode is the boot-up operating mode. When in this mode, you can play with Styles (i.e. automatic accompaniments), while playing with one to four tracks (Upper 1-3 and Lower) on the keyboard. You can select different Sounds and Effects by selecting Performances and STSs. A different Voice Processor Preset may be selected by a Performance or STS. You can also use the SongBook to automatically select Styles for a desired music genre.

### Start-up settings

Since Performance 1 of Bank 1 (Performance 1-1) is automatically selected when turning the instrument on, you can save to it your preferred start-up settings.

Just select the Sounds, Effects, MIDI channels, Voice Processor Preset, and other settings you would like to have automatically selected when turning the instrument on, and select the “Write Performance” from the page menu. When the Write Performance window appears, save the settings to Performance 1 of Bank 1. (See “Write Performance dialog box” on page 95).

**Note:** If you like some settings are preserved even when selecting different Performances, STSs and Styles, turn on the desired “locks” to avoid changes to the selected parameters (see “General Controls: Lock” on page 227). Save these locks to the Global (see “Write Global - Global Setup dialog box” on page 251).

### How Styles, Performances and STSs are linked together

Styles, Performances and STSs are linked in many ways.

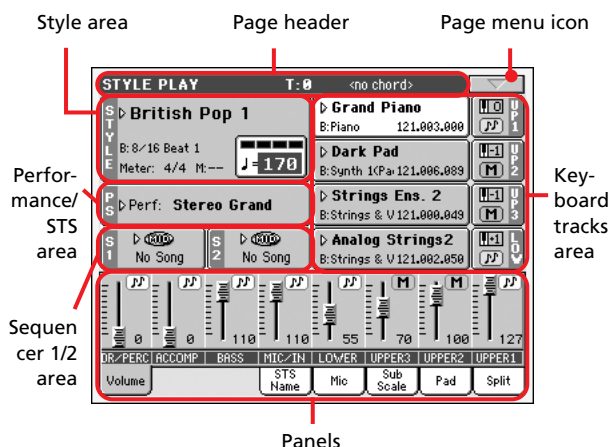
- When the SINGLE TOUCH LED is on, selecting a Style also changes Keyboard tracks (STS 1 is automatically selected). Performance settings are overridden.
- When the STYLE CHANGE LED is on, selecting a Performance also selects a Style (the one whose number is memorized with the Performance).
- Current track settings can be saved either in a Performance, an STS, or a Style Performance, depending on the page menu command you select.

### Main page (Normal view)

This is the page you see after you turn the instrument on.

To access this page from another operating mode, press the STYLE PLAY button.

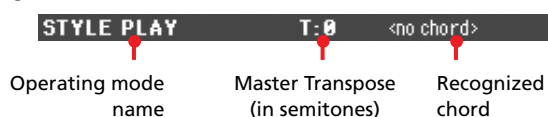
To return to this page from one of the Style Play edit pages, press the EXIT button.



To switch between Normal view (Keyboard tracks, grouped Style tracks and Mic/In controls) and Style view (individual Style tracks), use the TRK. SEL. (TRACK SELECT) button. (See “Style Tracks view page” and “Volume panel” starting from page 78).

### Page header

This line shows the current operating mode, transposition and recognized chord.



#### Operating mode name

Name of the current operating mode.

#### Master transpose



Master transpose value in semitones. This value can be changed using the TRANPOSE buttons on the control panel.

**Note:** Transpose may be automatically changed when selecting a different Performance or Style. It may also be changed when loading a Standard MIDI File generated with an instrument of the Korg Pa series.

To avoid transposing, “lock” the Master Transpose parameter in the Global (see “General Controls: Lock” on page 227), then write the Global to memory (see “Write Global - Global Setup dialog box” on page 251).

## Recognized chord

Displays the recognized chord, when you play a chord on the keyboard. If no chord abbreviation is shown, no chord recognition mode has been selected by using the CHORD SCANNING buttons (see page 11).

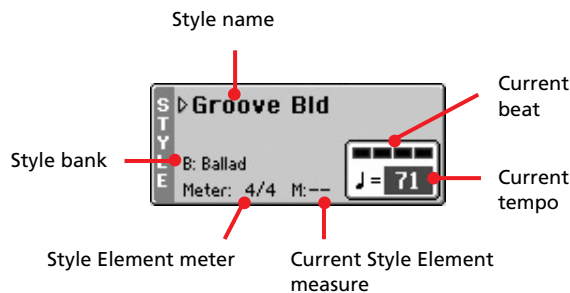
## Page menu icon

Press the page menu icon to open the menu. See “Page menu” on page 95 for more information.



## Style area

This is where the Style name is shown, together with its tempo and meter parameters.



### Style name

►PERF

Currently selected Style. Press the Style name to open the Style Select window. As an alternative, use the STYLE SELECT section on the control panel.

### Style bank

►PERF

Bank the current Style belongs to.

### Style Element meter

Meter of the current Style Element.

### Current measure

Measure number of the current Style Element, that is currently playing.

### Current beat

Beat number of the current measure, that is currently playing.

### Current tempo

►PERF ►PERF<sup>Sty</sup>

Metronome tempo (from 30 to 250). Select this parameter and use the TEMPO/VALUE controls to change the tempo.

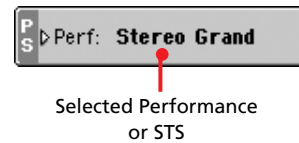
*As an alternative, you don't need to select this parameter; just keep the SHIFT button pressed and use the DIAL to change the tempo.*

To recall the Tempo stored in the current Style, press the DOWN/- and UP/+ buttons at the same time.

**Note:** Tempo may change while a Style Element is playing. Each Style Element may contain Tempo Change data.

## Performance/STS area

This is where the latest selected Performance or STS name is shown.



### Selected Performance or STS

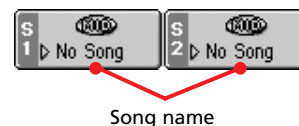
This is the last selected Performance (PERF) or Single Touch Setting (STS).

Press the name to open the Performance Select window. As an alternative, use the PERFORMANCE/SOUND SELECT section to select a different Performance.

To select a different STS, use the four SINGLE TOUCH SETTING buttons under the display.

## Sequencer 1/2 area

This is where Songs assigned to the two onboard sequencers are shown.



### Song name

Name of Songs assigned to Sequencer 1 (S1) and Sequencer 2 (S2). You can select Songs while playing Styles, to have them ready when switching to Song Play mode.

The icon shows the type of the selected Song.



Standard MIDI File, often abbreviated as SMF (file extension: \*.MID or \*.KAR).



MP3 – available with the EXBP-MP3 option installed (file extension: \*.MP3).



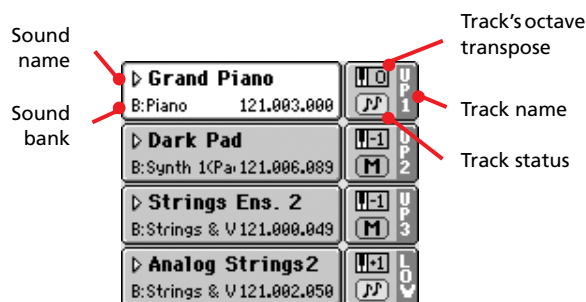
Audio CD Track – available with the CDRW-1 option installed.



*Only assignable to Sequencer 1.* A Jukebox file (file extension: \*.JBX) can be assigned to Sequencer 1, but its name is not shown in this area. The JBX icon appears, together with the name of the currently selected Song in the Jukebox list.

## Keyboard tracks area

This is where Keyboard tracks are shown.



### Sound name

►PERF ►STS

Name of the Sound assigned to the corresponding Keyboard track.

- If the track is already selected (white background), press the Sound name to open the Sound Select window.
- If the track is not selected (dark background), first select it, then press the Sound name to open the Sound Select window.

### Sound bank

►PERF ►STS

Bank the current Sound belongs to.

### Program Change

►PERF ►STS

Program Change number. Shown only when the “Show Program Change number” parameter is turned on in Global mode. (See page 228).

### Keyboard track name

*Non editable.* Name of the corresponding track:

UP1	Upper 1
UP2	Upper 2
UP3	Upper 3
LOW	Lower

### Keyboard track octave transpose

►PERF ►STS

*Non editable.* Octave transpose of the corresponding track. To individually edit the octave transpose for each track, go to the “Mixer/Tuning: Tuning” edit page (see page 84).

You can also transpose all Upper tracks by using the UPPER OCTAVE buttons on the control panel.

### Keyboard track status

►PERF ►STS

Play/mute status of the current track. Select the track, then press this area to change the track status.



Play status. The track can be heard.



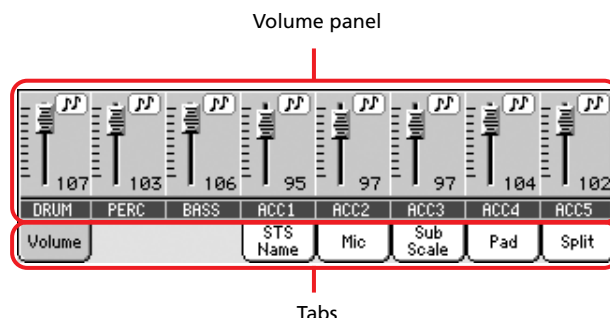
Mute status. The track cannot be heard.



When the icon of the Lower track is framed in yellow, the Bass & Lower Backing function is active (see page 94).

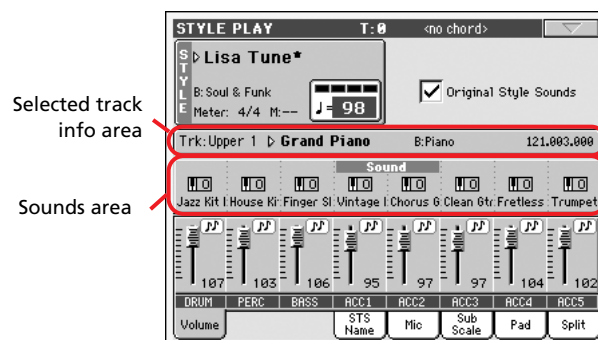
## Panels

The lower half of the main page contains the various panels, you can select by pressing the corresponding tabs. See more information in the relevant sections, starting from page 79.



## Style Tracks view page

Press the TRK. SEL. button to switch from the Normal view to the Style Tracks view. In this view, individual Style tracks are shown in the lower half of the display, while the upper half of the main page changes, to show parameters for the Style tracks.



Press TRK. SEL. again to return to the Normal view (Keyboard tracks, grouped Style tracks, Mic/In controls).

### Original Style Sounds

►PERF ►PERF<sup>Sty</sup>

This parameter lets you select different Sounds for the Style tracks, other than those recorded in each Style Element pattern. Sounds assigned when this parameter is checked are shown in the Sounds area of this page.

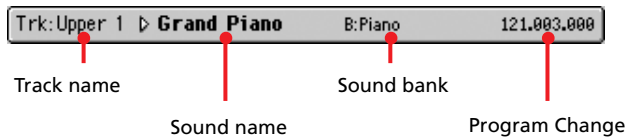
**Note:** This parameter can be saved with the Performance or Style Performance, and is automatically set to On or Off when you select a different Performance or Style, depending on its saved status.

**On** Style tracks always use the original Sounds recorded in each Style Element. If you assign a different Sound to a Style track, this parameter is automatically set to Off.

**Off** You can assign different Sounds to each Style track, and save them in a Performance or Style Performance. This becomes the only track's Sound for all Style Elements.

## Selected Track Info area

This line lets you see the Sound assigned to the selected track. Not only it is shown on the main page, but also in several edit pages.



### Track name

Name of the selected track.

### Sound name

▶PERF ▶PERF<sup>Sty</sup>

Sound assigned to the selected track. Press anywhere in this area to open the Sound Select window, and select a different Sound.

### Sound bank

▶PERF ▶PERF<sup>Sty</sup>

Bank the selected Sound belongs to.

### Program Change

▶PERF ▶PERF<sup>Sty</sup>

Program Change number. Shown only when the “Show Program Change number” parameter is turned on. (See page 228).

## Sounds area

This area lets you see Sounds and octave transposition for the eight Style tracks.



### Style tracks octave transpose

▶PERF ▶PERF<sup>Sty</sup>

*Non editable.* Octave transpose of the corresponding track. To edit the octave transpose, go to the “Mixer/Tuning: Tuning” edit page (see page 84).

### Sound name

▶PERF

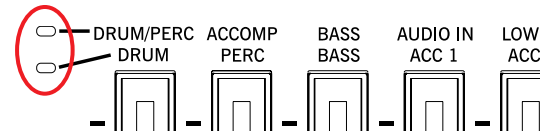
Name of the Sound assigned to the track. Touch a name a first time to select the corresponding track (detailed information are shown on the Selected Track Info area, see above). Touch it a second time to open the Sound Select window.

## Volume panel

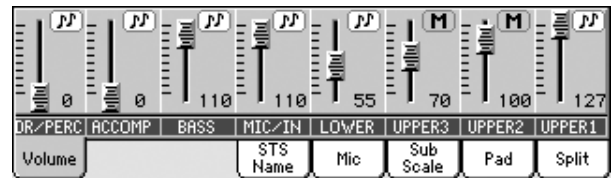
Press the Volume tab to select this panel. This is where you can set the volume of each track, and mute/unmute tracks.

Use the TRK. SEL. (TRACK SELECT) button to switch from Normal view (Keyboard and grouped Style tracks, Mic/In controls) to Style Tracks view (Style tracks).

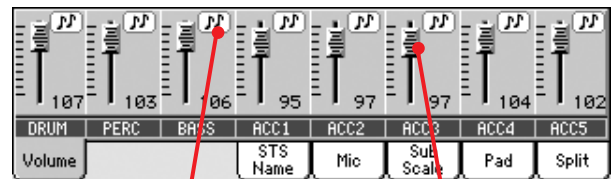
If the VOLUME LED over the SLIDER MODE button is turned on, the Assignable Sliders LEDs show which view is currently selected.



The *Normal view* shows grouped Style tracks, Mic/In controls, Keyboard tracks (upper sliders LED turned on):



The *Style Tracks view* shows individual Style tracks (lower sliders LED turned on):



Track status icon

Virtual slider

### Virtual sliders (track volume)

▶PERF ▶PERF<sup>Sty</sup> ▶STS

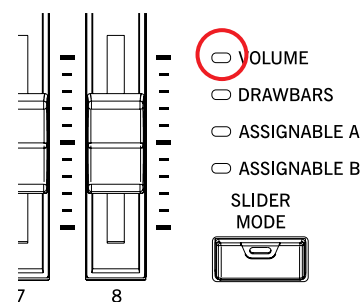
Virtual sliders are a graphical display of each track's volume. Use the Assignable Sliders to change this value (provided the VOLUME LED is turned on above the SLIDER MODE button, see below).

As an alternative, press the track's area to select a track, and use TEMPO/VALUE controls to change the value.

### Assignable Sliders function

▶PERF ▶STS 🔒

Use the SLIDER MODE button to select the function assigned to the Assignable Sliders. When the VOLUME LED is turned on, each Assignable Slider controls the volume of the corresponding track.





The assigned function may be saved to a Performance or STS. Therefore, when selecting a Performance or STS, the assigned function may change.

### Track status icons

►PERF ►PERF<sup>Sty</sup> ►STS

Play/mute status of the current track. Select the track, then press the track area again to change its status.



Play status. The track can be heard.



Mute status. The track cannot be heard.

### Track names

Under the sliders, a label for each track is shown. Use the TRK.SEL button to switch between the various track views.

MIC/IN	Audio inputs. [*]
UPPER1...3	Upper tracks.
LOWER	Lower track.
ACCOMP	Grouped Accompaniment tracks. [*]
DR/PERC	Grouped Drum and Percussion tracks. [*]
BASS	Bass Style track.
DRUM	Drum Style track.
PERC	Percussion Style track.
ACC1...5	Accompaniment Style tracks.

[\*] Volume for these tracks is not memorized.

## STS Name panel

Press the STS Name tab to select this panel. While in this panel, you can see the name of the four Single Touch Settings (STS) belonging to the latest selected Style or SongBook entry. Touch one of the names to select the corresponding STS.



**Note:** You cannot edit STS names with this panel. To edit a name, select the STS to be renamed, then select the Write Single Touch Setting command from the page menu (see “Write Single Touch Setting dialog box” on page 96).

## Mic panel

Press the Mic tab to select this panel. This is where you can turn on/off the various Voice Processor sections.



### Harm/Mod (Harmony/Modeling)

►GBL<sup>Vpp</sup>

Turns the Harmony or Modeling module on/off. (*The Modeling module is optional*).

### Lead

►GBL<sup>Vpp</sup>

Turns the Lead (singer's) voice on/off. This switch only works when the Harmony module is turned on. If it is turned off, the Lead voice will be always heard, whichever the status of this switch.

### V1...V4

►GBL<sup>Vpp</sup>

Turns each of the four Harmony voices on/off.

### Pitch

►GBL<sup>Vpp</sup>

Turns the Pitch Correct module on/off. (*The Pitch Correction module is optional*).

### Thicken

►GBL<sup>Vpp</sup>

Turns the Thicken module on/off.

### Effects

►GBL<sup>Vpp</sup>

Turns the Effects module on/off.

### Talk

►GBL<sup>Tik</sup>

Check this switch to soften all music generated by the PaIX, and speak on the microphone at normal level. This is useful to speak with your audience, while automatically lowering the background music volume.

While this switch is checked, all Voice Processor modules are momentarily turned off, except for Thicken and Reverb, whose level is simply reduced to avoid losing clarity on the voice. Setting for the Talk function can be programmed on the Talk page (see “Voice Processor Setup: Talk” on page 238).

Uncheck this switch to return to the original settings.

### Mic Mute

Check this switch to completely mute the microphone input. This is the same as the MIC/IN Play/Mute icon in the Main page (see “Track status icons” on page 80).

### VP Preset

►PERF ►STS

Use this pop-up menu to select one of the available Voice processor Presets. Selecting a Preset may change all the above parameters, as well as other Voice Processor parameters. Presets can be freely edited (see “Voice Processor Preset: Preset” on page 239).



## VP lock icon

►GBL Gbl

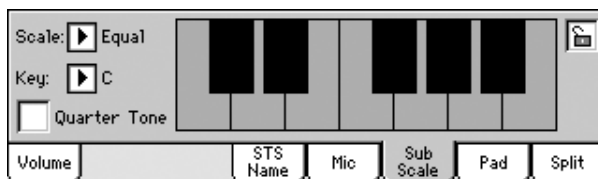
This lock avoids changing the Voice Processor Preset when selecting a different Performance, STS or SongBook entry. This is useful if you want to use the same Preset while selecting different Performances, STSs or SongBook entries.

This lock is reset when turning the instrument off, unless you write Global settings to memory (see “Write Global - Global Setup dialog box” on page 251).

For more information on parameter locks, see “General Controls: Lock” on page 227.

## Sub-Scale panel

Press the Sub-Scale tab to select this panel. This panel replicates the “Mixer/Tuning: Sub Scale” edit page (see page 84).



## Pad panel

Press the Pad tab to select this panel. This is where you can assign a different Hit or Sequence Pad to each of the four pads, and see at a glance how pads are programmed. For more options, go to the “Pad/Switch: Pad” page (see page 92).



### Pad assignment

►PERF ►STS ►STS<sup>SB</sup> 🔒

Name of the Hit or Sequence assigned to each Pad. Press the box to make the Pad Select window appear (see “Pad Select window” on page 73).

### Older sounds

►PERF ►STS ►STS<sup>SB</sup> 🔒

To warrant compatibility with data generated prior to OS version 2.0, the name of the older sounds assigned to the Pads is shown under each Pad assignment box. As soon as you select a new Hit or Sequence, the name of the older sound disappears.

### Volume ... D Send

►PERF ►STS ►STS<sup>SB</sup> 🔒

Volume, Pan, Send to the FX C and D values for each of the four Pads.

### Pads lock icon

►GBL Gbl

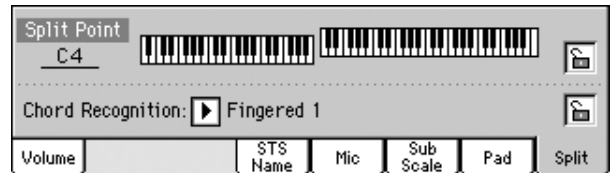
When locked, assignments to the pads remain unchanged when selecting a different Performance or STS.

This lock is reset when turning the instrument off, unless you write Global settings to memory (see “Write Global - Global Setup dialog box” on page 251).

For more information on parameter locks, see “General Controls: Lock” on page 227.

## Split panel

Press the Split tab to select this panel. This is where you can set the split point and Chord Recognition mode.



### Split Point

►PERF ►STS 🔒

Use this parameter to select a different split point. A full-range piano keyboard is shown in the display, divided at the selected split point. Upper tracks play on the right of this point, while the Lower track plays on the left.

### Keyboard diagram

Touch anywhere on the keyboard diagram. A message will appear, asking you to press the new split point on the keyboard of your Pa1X (or to press the EXIT button to close the message with no changes).

### Chord Recognition Mode

►PERF ►STS 🔒

This parameter allows you to decide how chords are recognized by the auto-accompaniment engine. Please note that when in Full or Upper Chord Scanning mode, the Fingered 3 mode is always selected, and you must always play at least three notes, to let a chord be recognized.

For more information on the various options, see “Chord Recognition Mode” on page 93.

**Note:** This parameter is the same you can find in the “Preferences: Style Preferences” page (see page 93).

### Split Point and Chord Recognition lock icons

►GBL Gbl

When locked, Split Point and Chord Recognition mode remain unchanged when selecting a different Performance or STS.

These locks are reset when turning the instrument off, unless you write Global settings to memory (see “Write Global - Global Setup dialog box” on page 251).

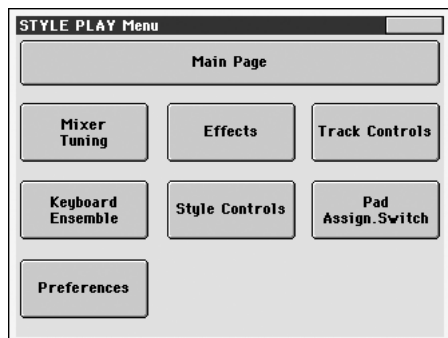
For more information on parameter locks, see “General Controls: Lock” on page 227.

## Edit menu

From any page, press the MENU button to open the Style Play edit menu. This menu gives access to the various Style Play edit sections.

When in the menu, select an edit section, or press EXIT or STYLE PLAY to exit the menu and return to the main page. To return to the main page, you can also select the Main Page menu item.

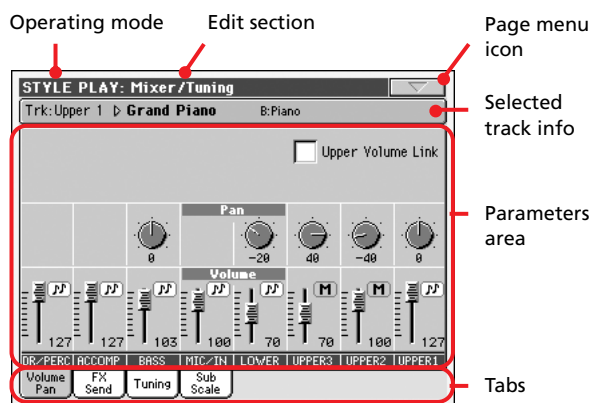
When in an edit page, press EXIT or the STYLE PLAY button to return to the main page of the Style Play operating mode.



Each item in this menu corresponds to an edit section. Each edit section groups various edit pages, that may be selected by pressing the corresponding tab on the lower part of the display.

## Edit page structure

All edit pages share some basic elements.



### Operating mode

This indicates that the instrument is in Style Play mode.

### Edit section

This identifies the current edit section, corresponding to one of the items of the edit menu (see “Edit menu” on page 82).

### Page menu icon

Press this icon to open the page menu (see “Page menu” on page 95).

### Parameters area

Each page contains various parameters. Use the tabs to select one of the available pages. For detailed information on the various types of parameters, see sections starting from page 82.

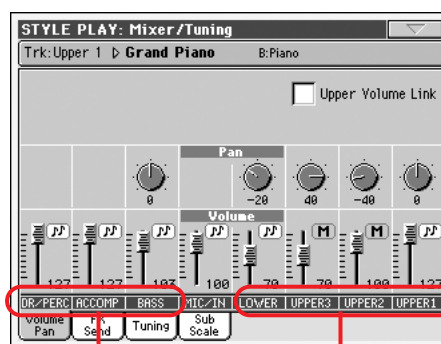
### Tabs

Use tabs to select one of the edit pages of the current edit section.

## Mixer/Tuning: Volume/Pan

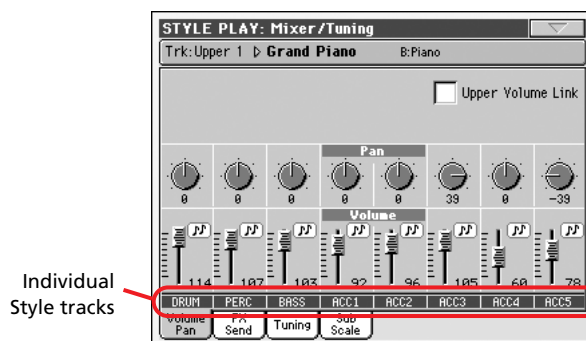
This page lets you set the volume and pan for each of the Keyboard or Style tracks. Volume settings are the same as in the Volume panel of the main page.

Use the TRK. SEL. button to switch from the Keyboard to the Style tracks, and vice versa.



Grouped Style tracks

Keyboard tracks



### Upper Volume Link

►GBLSty

This parameter allows you to define if changing the volume for one of the Upper tracks, proportionally changes also the other Upper tracks.

**Note:** This parameter is the same you can find in the “Preferences: Global Setup” page (see page 94).

**On** When changing volume to one of the Upper tracks, volume for the other Upper tracks changes in proportion.

**Off** When changing volume to one of the Upper tracks, only that track's volume is changed. Other Upper tracks are left unchanged.

### Pan

►PERF ►PERFSty ►STS

Track position in the stereo field.

L-64...L-1 Left stereo channel.

- C0 Center.
- R+1...R+63 Right stereo channel.
- Off If the track's output status is Left&Right (normal setting), the direct (unaffected) signal is not sent to the outputs; only the FX signal is heard for this track.
- If the track is sent to a separate output, no FX is sent to any output.
- To program the output status for each track, see "Audio Output: Sty/Kbd" on page 233.

## Volume ►PERF ►PERF<sup>Sty</sup> ►STS

Track's volume.

0...127 MIDI value of the track's volume.

## Play/Mute icon ►PERF ►PERF<sup>Sty</sup> ►STS

Track's play/mute status.



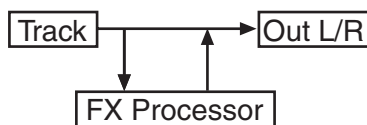
Play status. The track can be heard.



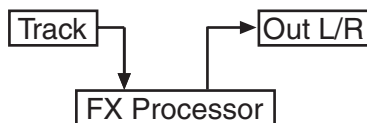
Mute status. The track cannot be heard.

## Mixer/Tuning: FX Send

This page lets you set the level of the track's direct (unaffected) signal going to the Internal FX processors. The effect processors included in Pa1X are connected in parallel, so you can decide which percentage of the direct signal can be effected:



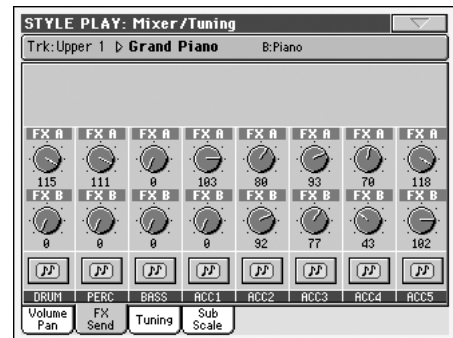
In case you do not want to send a track's direct signal to the output, but only the effected signal (as when using "insert" effects, like Rotary, Distortion, EQ...), just set the Pan to Off (see "Pan" above):



There are four Internal FX processors in Style Play mode (two for Keyboard and Pad tracks, two for Style tracks). You can assign them any kind of available effects, but we found it convenient to arrange them in the following way, for most of the Styles, STS and Performances included with the Pa1X:

- FX A Reverb processor for the Style tracks.
- FX B Modulating FX processor for the Style tracks.
- FX C Reverb processor for the Realtime (Keyboard) tracks.
- FX D Modulating FX processor for the Realtime (Keyboard) tracks.

Use the TRK. SEL. button to switch from Keyboard to Style tracks, and vice-versa.



## Send level (A...D) ►PERF ►PERF<sup>Sty</sup> ►STS

0...127 Level of the track (direct) signal sent to the effect processor.

## Play/Mute icon ►PERF ►PERF<sup>Sty</sup> ►STS

Track's play/mute status.



Play status. The track can be heard.

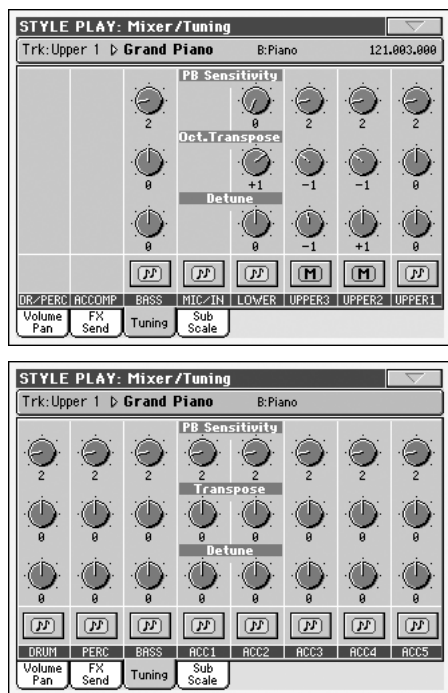


Mute status. The track cannot be heard.

## Mixer/Tuning: Tuning

This page is where you can set the octave transpose and fine tuning for each track. Plus, you can program the Pitch Bend range for each track.

Use the TRK. SEL. button to switch from the Keyboard to the Style tracks, and vice-versa.



### PB Sensitivity ▶PERF ▶PERF<sup>Sty</sup> ▶STS

These parameters show the Pitch Bend range for each track, in semitones.

- 1...12 Maximum up/down pitch bend range (in semitones). 12 =  $\pm 1$  octave.
- 0 No pitch bend allowed.

### Octave Transpose ▶PERF ▶PERF<sup>Sty</sup> ▶STS

This is the octave transpose value.

- 3 Lowest octave.
- 0 Standard tuning.
- +3 Highest octave.

### Detune ▶PERF ▶PERF<sup>Sty</sup> ▶STS

This is the fine tuning value.

- 64 Lowest pitch.
- 00 Standard tuning.
- +63 Highest pitch.

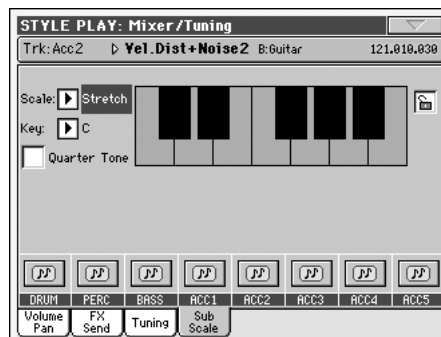
### Play/Mute icon ▶PERF ▶PERF<sup>Sty</sup> ▶STS

Track's play/mute status.

- Play status. The track can be heard.
- Mute status. The track cannot be heard.

## Mixer/Tuning: Sub Scale

This page lets you program an alternative scale for the tracks selected with the "Scale Mode" parameter (see page 93). The remaining tracks (if any) use the basic scale set in Global mode (see "Main Scale" on page 226).



**Note:** A different Scale can be associated to each Performance or STS.

**Note:** Quarter Tone selection can be received by MIDI (i.e., by an external sequencer or controller). Conversely, selection of Quarter Tone settings can be sent by the Pa1X to an external MIDI recorder as System Exclusive data.

### Scale ▶PERF ▶STS

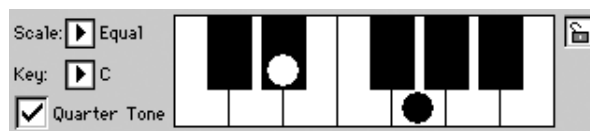
Selected scale. See "Scales" on page 375 for a list of the available scales. When selecting the User scale, the keyboard diagram on the right becomes active (see "How to fine tune each note of the User scale" below).

### Key ▶PERF ▶STS

This parameter is needed by some scales to set the preferred key (see "Scales" on page 375).

### Quarter Tone

Check the Quarter Tone parameter to make the keyboard diagram active. In the display, touch any note you want to lower a quarter tone, making a big dot appear on the note diagram. Touch the note again to make the dot disappear.



This control is momentary and not saved to memory, to allow for fast scale alteration while playing. You can assign the Quarter Tone function also to a footswitch, an EC5 switch or an Assignable Switch.

See below "How to use the Quarter Tone function with a footswitch, EC5 switch or Assignable Switch" for information on the use of this function.

### Keyboard diagram ▶PERF ▶STS

When Quarter Tone is checked, or a User scale is selected, this diagram allows you to modify each note's pitch.

## Scale lock icon

►GBL

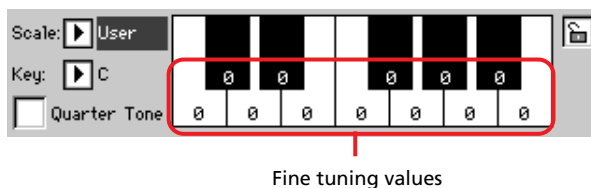
When locked, Scale parameters remain unchanged when selecting a different Performance or STS.

This lock is reset when turning the instrument off, unless you write Global settings to memory (see “Write Global - Global Setup dialog box” on page 251).

For more information on parameter locks, see “General Controls: Lock” on page 227.

## How to fine tune each note of the User scale

When the User scale is selected, the keyboard diagram becomes active. You can then change each note tuning in cents of a semitone (within a range of  $\pm 99$  cents, referred to Equal tuning). This way, you can create a custom scale, you can save to a Performance or STS.



Fine tuning values

After selecting the User scale, touch a note in the keyboard diagram, and use TEMPO/VALUE controls to adjust the selected note tuning in cents.

## How to use the Quarter Tone function with a footswitch, EC5 switch or Assignable Switch

The Quarter Tone function allows you to program a custom scale in realtime, for example those sudden scale change typical of Arabic music. Changes are not saved anywhere, so the scale is easily “wiped-out” when selecting a different Performance or STS, or when pressing the Quarter Tone pedal again.

**Note:** You can create a custom scale, to be assigned to a Performance or STS, simply by selecting and editing a User scale, and saving any change to a Performance or STS. See “Scale” above.

You can assign the “Quarter Tone” function to a footswitch, a Korg EC5 switch, or an Assignable Switch.

1. Program a footswitch, one of the EC5 pedals, or an Assignable Switch, to be the Quarter Tone switch.

Simply go to the Global mode, and reach the “Controllers: Pedal/Switch” or “Controllers: EC5” page. There, you will find the “Pedal/Footswitch” and “EC5-A...E” parameters, to which you can assign the Quarter Tone function.

While still in Global mode, select the Write Global-Global Setup command from the page menu, to save these settings to the Global (see “Write Global - Global Setup dialog box” on page 251).

2. Lower some note pitches.

Keep the Quarter Tone pedal pressed. The keyboard will not play at this time. Press the notes you want to lower a quarter tone. Release the pedal.

3. Play with your new scale.

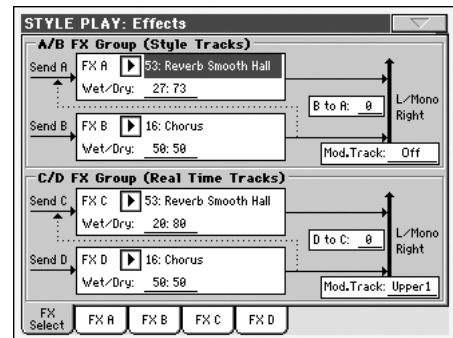
Notes you pressed on step 2 are now lowered of a quarter tone.

4. Reset the original scale.

Press and release the Quarter Tone pedal again, without playing any note. All pitches will be reset, and the scale selected by the Performance, STS will be recalled.

## Effects: FX Select

This page allows you to select the A/B (Style) and C/D (Keyboard and Pads) effects.



### FX A...D

►PERF ►PERF<sup>Sty</sup> ►STS

Effects assigned to the corresponding effect processors. Usually, A and C are reverbs, while B and D are modulating effects (chorus, flanger, delay...). For a list of the available effects, see “Effects” on page 322.

Effects from A to D can be saved to a Performance. Effect A/B (Style tracks) can be saved to a Style Performance. Effects C/D (Keyboard and Pad tracks) can be saved to an STS.

### Wet/Dry

►PERF ►PERF<sup>Sty</sup> ►STS

Mix between the effected (Wet) and direct (uneffected, Dry) signal.

Dry Direct signal only.

Wet Effected signal only.

nn:nn Percentage of Wet/Dry signal.

### B to A, D to C

►PERF ►PERF<sup>Sty</sup> ►STS

Amount of the B effect going back to the input of the A effect, or of the D effect going back to the input of the C effect.

### Mod.Track (Modulating Track)

►PERF ►PERF<sup>Sty</sup> ►STS

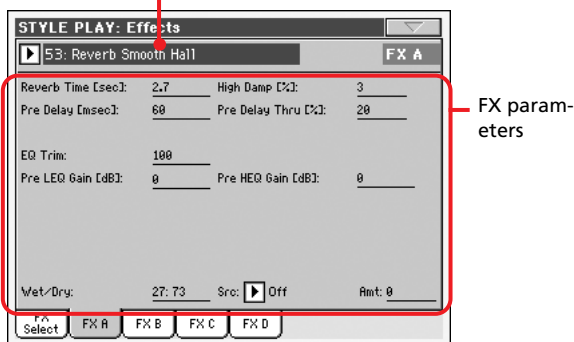
Source track for modulating MIDI messages. You can modulate an effect parameter with a MIDI message generated by a physical controller.



## Effects: FX A...D

These pages contain the editing parameters for the four effect processors. Here is an example of the FX A page, with the Reverb Smooth Hall effect assigned.

Selected effect



### Selected effect

►PERF ►PERF<sup>Sty</sup> ►STS ►STS<sup>SB</sup>

Select one of the available effects from this pop-up menu. This is equivalent to the “FX A...D” parameters found in the “Effects: FX Select” page (see above).

**Note:** Effects can be different for each of the four editing pages.

### FX parameters

►PERF ►PERF<sup>Sty</sup> ►STS ►STS<sup>SB</sup>

Parameters may be different, depending on the selected effect. See “Effects” on page 322 for a list of available parameters for each effect type.

### Wet/Dry

►PERF ►PERF<sup>Sty</sup> ►STS ►STS<sup>SB</sup>

Mix between the effected (Wet) and direct (uneffected, Dry) signal. This is the same as the “Wet/Dry” parameters found in the “Effects: FX Select” page (see above).

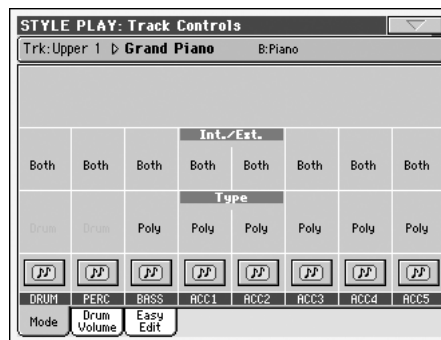
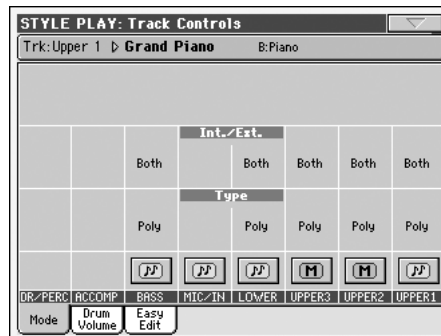
### Src (Source)

►PERF ►PERF<sup>Sty</sup> ►STS ►STS<sup>SB</sup>

Modulation source. To select the track generating this message, see the “Mod.Track (Modulating Track)” parameters found in the “Effects: FX Select” page (see above). For a list of modulation source, see the “Effects” chapter.

## Track Controls: Mode

This page lets you connect each track to the internal sound generator and to external MIDI devices. This is very useful to let a Style track drive an external expander, or play a digital piano with one of Pa1X’s Keyboard tracks. In addition, here you can set the polyphony mode for each track.



### Int./Ext. (Internal/External)

►PERF ►PERF<sup>Sty</sup> ►STS

#### Internal

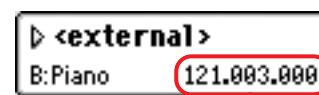
The track plays the sounds generated by the internal sound engine. It does not play an external instrument connected to the MIDI OUT.

#### External

The track plays an external instrument connected to the MIDI OUT. The connected device must receive on the MIDI channel associated with this track on the Pa1X (see “MIDI: MIDI Out Channels” on page 232).

A track set to this status does not play the internal sounds, therefore saving polyphony.

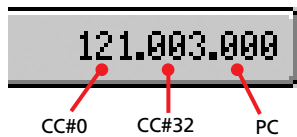
Instead of the assigned Sound name, the <external> remark is shown on a track’s area in the Main page:



Control Change/Program Change area

If the “Show Program Change name” is checked (see page 228), a strings of transmitted Control Change and Program Change data is shown next to the <external> remark. This will let you know what the track is transmitting to the MIDI OUT. In the following example, CC#0 is the Control Change 0 (Bank Select MSB), CC#32 is the Con-

trol Change 32 (Bank Select LSB), PC is the Program Change:



When touching the Sound area, the numeric keypad appears, instead of the Sound Select window. You can enter the Control Change/Program Change bundle shown above, separating the three parts with a dot (.). If entering just one of the three numbers, a Program Change message is sent.

**Both** The track plays both the internal sounds and an external instrument connected to the MIDI OUT.

**Type** ▶PERF ▶PERF<sup>Sty</sup> ▶STS

**Drum** Drum/Percussion track. Set a track to Drum mode if you wish to separately adjust the volume and set a different output for each percussive family of the assigned Drum Kit Sound. (See “Track Controls: Drum Volume” on page 87, and “Audio Output: Sty/Kbd” on page 233).

***Note:** Tracks set to Drum or Percussion mode, while in Style Record (see “Track Type” on page 117), cannot be edited here. This option appears in grey. Other Style tracks cannot be set to Drum mode here.*

**Poly** Tracks of this kind are polyphonic, i.e. they can play more than one note at the same time.

**Mono** Tracks of this kind are monophonic, i.e. each new note stops the previous note.

**Mono Right** A Mono track, but with priority assigned to the rightmost (highest) note.

**Play/Mute icon** ▶PERF ▶PERF<sup>Sty</sup> ▶STS

Track's play/mute status.



Play status. The track can be heard.



Mute status. The track cannot be heard.

## Track Controls: Drum Volume

In this page you can adjust the volume for each *family* of Drum and Percussion instrument for the selected track. A list of families is shown below.

These parameters can be accessed only on tracks set in Drum mode (see above). Use them on tracks with a Drum Kit assigned, or you will not be able to hear any change.

***Note:** All values are referred to the value of the original Sounds.*



**Drum families** ▶PERF ▶PERF<sup>Sty</sup> ▶STS

- Kick** Kick drums volume.
- Snare** Snare drums volume.
- Tom** Toms volume.
- HiHat** Hi-Hat volume.
- Cymbal** Ride, Crash and other cymbals volume.
- Perc.1** Low-pitched percussions volume.
- Perc.2** High-pitched percussions volume.
- EFX** Special effects volume.

### Select

Use these buttons to select the track to edit.

### Reset Track

Press this button to reset all changes to percussive instrument volumes in the selected track.


### Reset All Tracks


Press this button to reset all changes to percussive instrument volumes in all tracks.

**Play/Mute icon** ▶PERF ▶PERF<sup>Sty</sup> ▶STS

Track's play/mute status.



 Play status. The track can be heard.

 Mute status. The track cannot be heard.

## How to adjust volume for a single Drum Family

Here is a quick example of the use of the Drum Volume function.

1. While in this page, press TRK. SEL. to see individual Style tracks.
2. Press the Select button, in the display, above the Drum track.
3. Press START/STOP to let the Style go.
4. While listening to the Style, select the Cymb. knob, and use TEMPO/VALUE controls to turn the volume completely off.

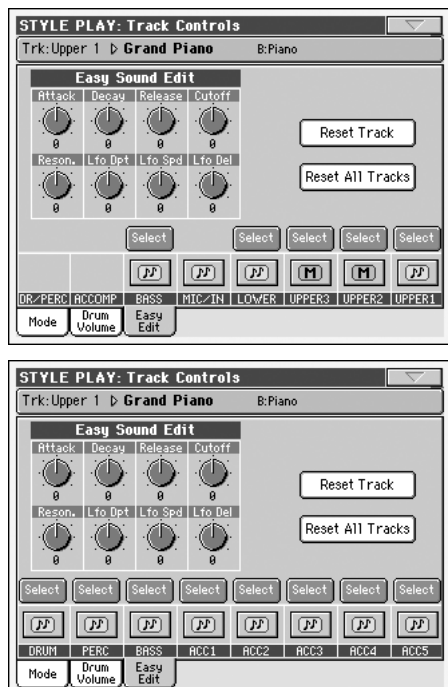
You'll notice how all cymbals stops sounding.

5. Press the Reset Track button in the display to recall the original cymbals volume.

## Track Controls: Easy Edit

In this page you can edit the main parameters of the Sounds assigned to each track.

**Note:** All values refer to the value of the original Sound.



### Parameters ▶PERF ▶PERF<sup>Sty</sup> ▶STS

**Attack** Attack time. This is the time during which the sound goes from zero (at the moment when you strike a key) to it's maximum level.

**Decay** Decay time. Time to go from the final Attack level to the beginning of the Sustain.

**Release** Release time. This is the time during which the sound goes from the sustaining phase, to zero. The Release is triggered by releasing a key.

**Cutoff** Filter cutoff. This sets the sound brightness.

**Resonance** Use the Filter Resonance to boost the cutoff frequency.

**LFO Depth** Intensity of the Vibrato (LFO).

**LFO Speed** Speed of the Vibrato (LFO).

**LFO Delay** Delay time before the Vibrato (LFO) begins, after the sound starts.

### Select

Use these buttons to select the track to edit.

### Reset Track


Press this button to reset all changes to Sound parameters in the selected track.


### Reset All Tracks

Press this button to reset all changes to Sound parameters in all tracks.

### Play/Mute icon ▶PERF ▶PERF<sup>Sty</sup> ▶STS

Track's play/mute status.

 Play status. The track can be heard.

 Mute status. The track cannot be heard.

## How to adjust sound parameters for a single Sound

Here is a quick example of the use of the Easy Sound Edit function.

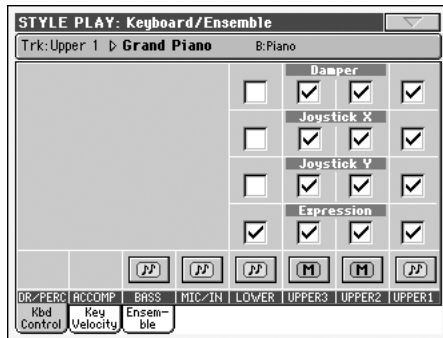
1. If needed, while in this page press TRK. SEL. to see Key-board tracks.
2. Press the Select button, in the display, above the Upper 1 track.
3. While playing on the keyboard to hear the Sound, select the Cutoff knob, and use TEMPO/VALUE controls to turn its value completely off.

You'll notice how the filter progressively cuts out high frequencies, making the sound darker and mellower.

4. Press the Reset Track button in the display to recall the original Cutoff value.

## Keyboard/Ensemble: Keyboard Control

This page lets you enable/disable the Damper and Expression pedals, plus the Joystick, for each of the Keyboard tracks.



### Damper ▶PERF ▶STS

**On** When you press the Damper pedal and release the keys, the track's sound is kept sustained.

**Off** The Damper pedal is not active on any track set to this status.

### Joystick X ▶PERF ▶STS

This enables/disables the left/right movement of the Joystick (Pitch Bend, and sometimes a Sound parameter's control; for Pitch Bend settings, see "Mixer/Tuning: Tuning" on page 84).

### Joystick Y ▶PERF ▶STS

This enables/disables the front/rear movement of the Joystick (Y+: Modulation, and sometimes a different Sound parameter's control; Y-: Various controls, or non-active).

### Expression ▶PERF ▶STS

This parameters allows you to switch the Expression control on/off on each individual Keyboard track. The Expression control is a relative level control, always subtracted from the Volume value of the track.

As an example, imagine you have a Piano sound assigned to Upper 1, and a Strings sound assigned to Upper 2. If you turn the Expression switch on on Upper 2, and off on Upper 1, you can use a continuous pedal to control only the Strings' volume, while the Piano remains unchanged.

To program a pedal or Assignable Slider to act as an Expression control, see "Controllers: Pedal/Switch" on page 229 or "Controllers: Assignable Sliders" on page 229. You can only assign this function to a volume-type pedal, not to a switch-type one. Assign the "KB Expression" option to the pedal or Assignable Slider, then select Write Global-Global Setup from the page menu to save the setting to the Global.

### Play/Mute icon ▶PERF ▶STS

Track's play/mute status.



Play status. The track can be heard.



Mute status. The track cannot be heard.

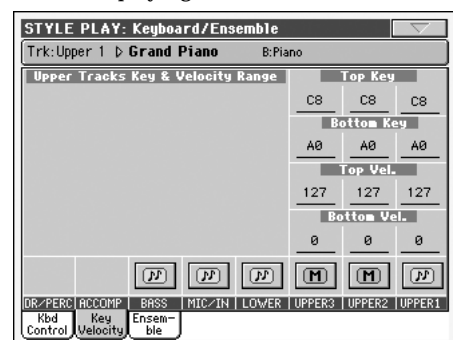
## Keyboard/Ensemble: Key/Velocity Range

This page lets you program a key and dynamic (velocity) range for each of the Keyboard tracks.

Key range is useful to create a set of Keyboard tracks playing in different zones of the keyboard. For example, you may have french horns and woodwinds playing in the center range of the keyboard, while only woodwinds play on the higher range.

Velocity range is useful to create a sound made of up to three dynamic layers, assigning each of the Upper tracks to a different dynamic range.

As an example, you may assign the El.Piano 1 Program to the Upper 1, and the El.Piano 2 Program to the Upper 2 track. Then, set Upper 1 to [Bottom=0, Top=80], and Upper 2 to [Bottom=81, Top=127]. The El.Piano 1 will play when playing softer, the El.Piano 2 when playing louder.



### Top/Bottom Key (Key Range) ▶PERF ▶STS

This parameter pair sets the Top and Bottom key range for the track.

C-1...G9 Selected key.

### Top/Bottom Vel. (Velocity Range) ▶PERF ▶STS

This parameter pair sets the Top and Bottom dynamic range for the track.

0 Lowest velocity value.

127 Highest velocity value.

### Play/Mute icon ▶PERF ▶STS

Track's play/mute status.



Play status. The track can be heard.

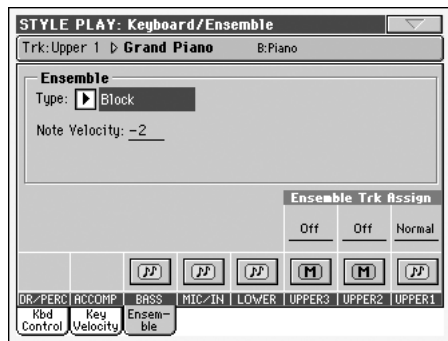


Mute status. The track cannot be heard.

## Keyboard/Ensemble: Ensemble

This page lets you program the Ensemble function. This function harmonizes the right-hand melody (played in realtime) using the recognized chords of the left-hand.

**Note:** The Ensemble function only works in Style Play mode, with the Split Keyboard Mode.



### Ensemble

►PERF ►STS

Harmonization type.

- Duet Adds a single note to the melody.
- Close Adds a closed-position chord to the melody.
- Open 1 Adds an open-position chord to the melody.
- Open 2 As the above, but with a different algorithm.
- Block Block harmonization – very typical of jazz music.
- Power Ensemble

Adds a fifth and an octave to the melody, as heard in hard rock.

**Fourths LO** Typical of jazz, this option adds a perfect fourth and a minor seventh under the melody.

**Fourths UP** As the above, but with notes added over the melody.

**Fifths** This adds a series of Fifths below the original note.

**Octave** Adds one or more octaves to the melody.

**Dual** This option adds to the melody line a second note, at a fixed interval set with the “Note” parameter. When selecting this option, a transposition value appears (-24...+24 semitones to the original note).

**Brass** Typical Brass section harmonization.

**Reed** Typical Reed section harmonization.

**Trill** When two notes are played on the keyboard, this option trills them. If three or more notes are played, only the last two are trilled. You can set the trill speed by using the Tempo parameter (see below).

**Repeat** The played note is repeated in sync with the Tempo parameter (see below). When playing a chord, only the last note is repeated.

### Echo

As the Repeat option, but with the repeated notes fading away after the time set with the Feedback parameter (see below).

### Note Velocity

►PERF ►STS

This parameter sets the velocity difference between the right-hand melody and the added harmonization notes.

-10...0 Subtracted velocity value.

### Tempo

►PERF ►STS

**Note:** This parameter only appears when the Trill, Repeat or Echo options are selected.

Note value for the Trill, Repeat or Echo Ensemble options. This is in sync with the Metronome Tempo.

### Feedback

►PERF ►STS

**Note:** This parameter only appears when the Echo option is selected.

This parameter sets how many times the original note/chord is repeated by the Echo option.

### Ensemble Track Assign

►PERF ►STS

Use these parameters to separately set Upper tracks for the Ensemble function.

**Off** There is no harmonization on this track.

**Normal** This track is included in the harmonization.

**Mute** This track only plays the Ensemble notes, but not the original note.

### Play/Mute icon

►PERF ►STS

Track's play/mute status.



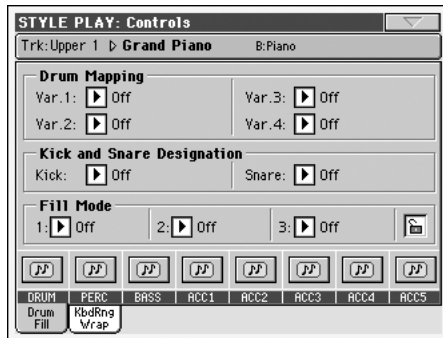
Play status. The track can be heard.



Mute status. The track cannot be heard.

## Style Controls: Drum/Fill

In this page you can select various general parameters for the Style.



### Drum Mapping (Var.1...Var.4)

►PERF ►PERF<sup>Sty</sup>

The Drum Mapping lets you select an alternative arrangement of percussive instruments for the selected Drum Kit, without any additional programming. Just select a Drum Map, and some percussive instruments will be replaced with different instruments.

Off Standard mapping.

Drum Mapping 1...7

Drum Map number. Mapping 1 is “soft-sounding”, while mapping 7 is “loud-sounding”.

### Kick and Snare Designation

►PERF ►PERF<sup>Sty</sup>

The Kick Designation replaces the original Kick (Bass Drum) sound with a different Kick of the same Drum Kit, while the Snare Designation replaces the original Snare Drum sound with a different Snare of the same Drum Kit.

**Hint:** Select different Designations while listening to the Style, and see how they affect the Style. When you like the result, save your setting to a Performance or Style Performance.

Off Original Kick or Snare.

Type 1...3 Kick or Snare replacing the original one.

### Fill Mode (1...3)

►PERF ►PERF<sup>Sty</sup>

These parameters set a Variation to be automatically selected at the end of each of the three available Fills (1...3).

Off The same Variation, playing before selecting a Fill, will be selected again.

V1&V2 ... V3&V4

The specified Variations will be alternatively selected. For example, with the “V1&V2” option, Variation 1 and Variation 2 will be alternatively selected after the end of the Fill.

Var.Up/Var.Down

The next higher/lower numbered Variation is selected, in cycle. After Variation 4, an Up command will select Variation 1. After Variation 1, a Down command will select Variation 4.

Var.Inc/Var.Dec

The next higher/lower numbered Variation is

selected. When Variation 4 is reached, an Inc command will select Variation 1 again. When Variation 1 is reached, a Dec command will select Variation 4 again.

To Var.1...To Var.4

“Fill to Variation” (->1, ->2, ->3, ->4) automatically selects one of the four available Style Variations at the end of the fill.

### Fill Mode lock icon

►GBL Gbl

This lock prevents the Fill Mode being changed when selecting a different Performance or Style.

This lock is reset when turning the instrument off, unless you write Global settings to memory (see “Write Global - Global Setup dialog box” on page 251).

For more information on parameter locks, see “General Controls: Lock” on page 227.

### Track status

►PERF ►PERF<sup>Sty</sup>

Track play/mute status. Press these icons to change it.



Play status. The track can be heard.



Mute status. The track cannot be heard.

## Style Controls: Keyboard Range On/Off / Wrap Around

In this page you can program the Wrap Around point, and turn on/off the Keyboard Range included in each Style tracks.



### Keyboard Range On/Off

►PERF ►PERF<sup>Sty</sup>

This parameter is an on/off switch for the Key Range parameter memorized into each Style Element track.

On

The Keyboard Range is considered – provided it has been programmed (see “Style Element Track Controls: Keyboard Range” on page 116 in Style Record mode). When a track goes over the lower or higher Keyboard Range point, it is automatically transposed, to stay in the programmed range.

Off

No Keyboard Range used.

**Wrap Around**▶PERF ▶PERF<sup>Sty</sup>

The wrap-around point is the highest register limit for the backing track. The accompaniment patterns will be transposed according to the detected chord. If the chord is too high, the Style tracks might play in a register that is too high, and therefore unnatural. If, however, it reaches the wrap-around point, it will be automatically transposed an octave lower.

The wrap-around point can be individually set for each track in semitone steps up to a maximum of 12 semitones, relative to the chord root set in Style Record mode (see “Key/Chord” on page 104).

It is advisable to set different Wrap Around points for each track, to avoid all tracks “jump” to a different octave at the same time.

1...12 Maximum transposition (in semitones) of the track, referred to the original key of the Style pattern.

**Play/Mute icon**▶PERF ▶PERF<sup>Sty</sup>

Track's play/mute status.



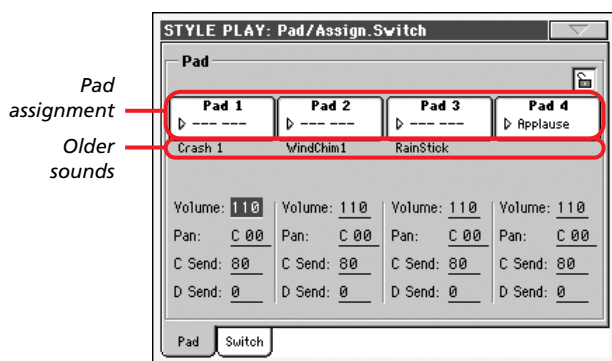
Play status. The track can be heard.



Mute status. The track cannot be heard.

**Pad/Switch: Pad**

This page lets you select a different sound for each of the four PAD buttons.



**Note:** You can also assign different Sounds from the Pad panel of the main page.

**Pad assignment**▶PERF ▶STS ▶STS<sup>SB</sup>

Name of the Hit or Sequence assigned to each Pad. Press the box to make the Pad Select window appear (see “Pad Select window” on page 73).

**Older sounds**▶PERF ▶STS ▶STS<sup>SB</sup>

To warrant compatibility with data generated prior to OS version 2.0, the name of the older sounds assigned to the Pads is shown under each Pad assignment box. As soon as you select a new Hit or Sequence, the name of the older sound disappears.

**Volume**

▶PERF ▶STS

Volume for each of the four Pad tracks.

**Pan**

▶PERF ▶STS

Pan for each of the four Pad tracks.

-64...-1 Left stereo channel.

0 Center.

+1...+63 Right stereo channel.

**C Send**

▶PERF ▶STS

Send level to the C Internal FX processor (usually reverb) for each of the four Pad tracks.

**D Send**

▶PERF ▶STS

Send level to the D Internal FX processor (usually modulating effect) for each of the four Pad tracks.

**Pad lock icon**▶GBL<sup>Gbl</sup>

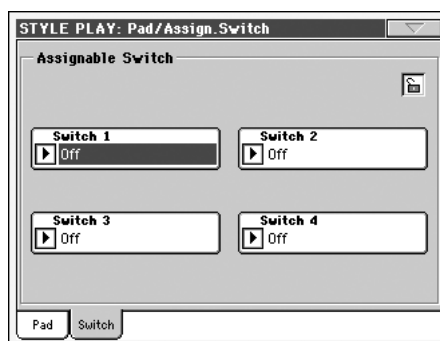
This lock avoids selecting a different Performance or STS changes also the Hit or Sequence Pads assigned to the Pads.

This lock is reset when turning the instrument off, unless you write Global settings to memory (see “Write Global - Global Setup dialog box” on page 251).

For more information on parameter locks, see “General Controls: Lock” on page 227.

**Pad/Switch: Assignable Switch**

This page lets you select a different function for each of the four ASSIGN. SWITCH buttons.

**Switch 1...4**

▶PERF ▶STS

Each of the four ASSIGN. SWITCH buttons. Use these pop-up menus to assign a function to each switch. See “List of Assignable Switches functions” on page 373.

**Assignable Switch lock icon**▶GBL<sup>Gbl</sup>

This lock avoids selecting a different Performance or STS changes also the functions assigned to the switches.

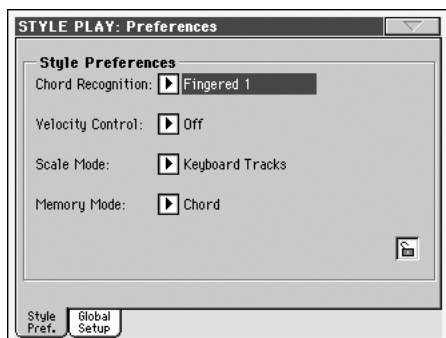
This lock is reset when turning the instrument off, unless you write Global settings to memory (see “Write Global - Global Setup dialog box” on page 251).

For more information on parameter locks, see “General Controls: Lock” on page 227.



## Preferences: Style Preferences

In this page you can set various general parameters for the Style play mode. Settings can be saved to a Performance, or STS.



### Chord Recognition Mode

►PERF ►STS 🔒

This parameter defines how chords are recognized by the auto-accompaniment engine. Please note that when in Full or Upper Chord Scanning mode, the Fingered 3 mode is always selected, and you must always play at least three notes, to let a chord be recognized.

**Note:** This parameter is the same you can find in the main page (see “Split panel” on page 81).

- Fingered 1** Play one or more notes, according to the selected Chord Scanning Mode. A full Major chord will be recognized even if only a single note is played.
- Fingered 2** You must always play three or more notes for a full chord to be recognized. If you play just one note, a unison will be played. If you play a suspended chord (a root+5th), a suspended chord will be played. The full chord will be recognized when you play three or more notes.
- Fingered 3** You must always play three or more notes for a chord to be recognized. This option is automatically selected when selecting the FULL Chord Scanning mode.
- One Finger** You can also compose a chord using a simplified chord playing technique:
  - If you play only one note, a Major chord is recognized.
  - Play the root note, plus a white key on the left, for a 7th. For example, play C3 + B2 for a C7.
  - Play the root note, plus a black key on the left, for a Minor chord. For example, play C3 + Bb2 for a C minor.
  - Play the root note, plus a white and a black key on the left, for a Minor 7th. For example, play C3 + B2 + Bb2 for a C min 7.

### Velocity Control

►PERF ►STS ►STS<sup>SB</sup> 🔒

Set this parameter to trigger one of the following functions simply by playing louder with your left hand. When playing with a velocity value higher than the value set by the “Velocity Control Value” parameter (see page 94), the selected function will be activated.

- This function only works in SPLIT Keyboard Mode, with the LOWER or no Chord Scanning mode selected.
- It does not work in FULL Chord Scanning mode, or in SPLIT Keyboard Mode, with the UPPER Chord Scanning mode selected.

**Off** The function is turned off.

**Break, Fill In 1, Fill In 2**

When playing with a velocity higher than the trigger value on the Lower track, the selected element is automatically triggered.

**Start/Stop** You can start or stop the Style by playing harder on the keyboard.

**Bass Inversion**

When playing with a velocity higher than the trigger value, the Bass Inversion function will be activated.

**Memory** When playing with a velocity higher than the trigger value, the Memory function will be activated.

### Scale Mode

►PERF ►STS 🔒

This parameter defines which tracks are affected by the selected alternative scale (see “Scale” on page 84).

**Keyboard tracks**

The scale will only affect Keyboard tracks.

**Upper tracks** The scale will only affect Upper 1-3 Keyboard tracks.

**All Tracks** The scale will affect all tracks (Keyboard, Style, Pads).

### Memory Mode

►PERF ►STS 🔒

This parameter sets the way the MEMORY button works.

**Chord** When its LED is on, the MEMORY button keeps the recognized chord in memory. When its LED is off, the chord is reset when raising the hand from the keyboard.

**Chord + Lower**

When its LED is on, the MEMORY button keeps the recognized chord in memory, and keeps the Lower track held until the next note or chord is played. When its LED is off, the chord is reset when raising the hand from the keyboard, and the Lower track is not sustained.

**Fixed Arr. + Lower**

When its LED is on, the MEMORY button keeps the Lower track held until the next note or chord is played. When off, the Lower track is not sustained when raising the hand from the keyboard. The chord is always kept in memory.

### Lock icon

►GBL 🔒

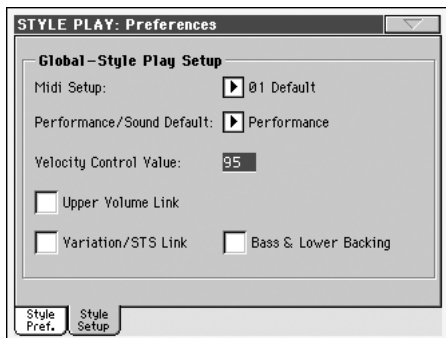
All parameters in this page may be protected from selecting a different Performance or STS.

This lock is reset when turning the instrument off, unless you write Global settings to memory (see “Write Global - Global Setup dialog box” on page 251).

For more information on parameter locks, see “General Controls: Lock” on page 227.

## Preferences: Global Setup

In this page you can set various general parameters for the Style Play mode.



**Note:** These settings are stored in the Style Play Setup area of the Global file (together with all the other parameters marked with the **GBL<sup>Sty</sup>** abbreviation through the manual). After changing these settings, select the Write Global-Song Play Setup command from the page menu to save them to the Global.

### Midi Setup **GBL<sup>Sty</sup>**

MIDI channels for the Style Play mode can be automatically configured by selecting a MIDI Setup with this parameter. See “MIDI” on page 273 for more information on using MIDI Setups.

**Note:** To automatically select a MIDI Setup when entering the Style Play mode, select the Write Global-Style Setup command from the page menu.

For detailed information on MIDI Setup settings, see “MIDI Setup” on page 321.

**Note:** After selecting a MIDI Setup, you can go to the Global mode and apply any change to each channel setting. To store these changes to a MIDI Setup, while still in Global mode select the Write Global-Midi Setup command from the page menu. All MIDI Setup can be freely customized and overwritten.

**Hint:** To restore the original MIDI Setups, load the original Factory data again (downloadable from [www.korgpa.com](http://www.korgpa.com)).

### Performance/Sound Default **GBL<sup>Sty</sup>**

Performance banks and Sound banks share the same buttons on the control panel. Use this parameter to define whether the PERFORMANCE SELECT or the SOUND SELECT LED must be on when you turn the instrument on.

### Velocity Control Value **GBL<sup>Sty</sup>**

Use this parameter to set a velocity value over which to automatically trigger the Style Start/Stop or select a Style Element (see “Velocity Control” above).

### Upper Volume Link **GBL<sup>Sty</sup>**

This parameter allows you to define if changing the volume for one of the Upper tracks, proportionally changes also the other Upper tracks.

- On When changing volume to one of the Upper tracks, volume for the other Upper tracks changes in proportion.
- Off When changing volume to one of the Upper tracks, only that track’s volume is changed. Other Upper tracks are left unchanged.

### Variation/STS Link **GBL<sup>Sty</sup>**

This parameter makes each Variation recall the corresponding STS. It only works when the SINGLE TOUCH function is engaged.

- Off Selecting a Variation doesn’t automatically recalls any STS.
- On If the SINGLE TOUCH LED is turned on, selecting a Variation automatically recalls the corresponding STS, i.e., Variation #1 recalls STS #1, Variation #2 recalls STS #2, and so on. However, if the SINGLE TOUCH LED is turned off, no STS is automatically recalled.

**Note:** You can turn this parameter on or off by means of the SHIFT + SINGLE TOUCH shortcut.

### Bass & Lower Backing **GBL<sup>Sty</sup>**

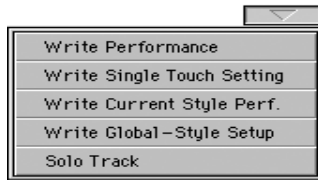
When the SPLIT Keyboard Mode is selected, and the Style is not running, this function lets you play a simple accompaniment with your left hand.

- On If the Style is not playing, and you play chords with your left hand, the Sound assigned to the Lower track plays chord notes (even if the Lower track is muted), and a Bass sound plays the chord root. When you start the Style, the normal behavior is restored.
- Off If the Style is not playing, and the Lower track is muted, no sound can be heard when you play with your left hand. If the Lower track is set to play, you can hear the sound assigned to the Lower track.



## Page menu

Press the page menu icon to open the menu. Press a command to select it. Press anywhere in the display to close the menu without selecting a command.



### Write Performance

Select this command to open the Write Performance dialog box, and save most of the current control panel settings to a Performance.

See “Write Performance dialog box” on page 95 for more information.

### Write Single Touch Setting

Select this command to open the Write Single Touch Setting (STS) dialog box, and save Keyboard track settings to one of the Single Touch Settings (STS) of the current Style.

See “Write Single Touch Setting dialog box” on page 96 for more information.

### Write Current Style Performance

Select this command to open the Write Current Style Performance dialog box, and save Style track settings to the Style Performance of the current Style.

See “Write Single Touch Setting dialog box” on page 96 for more information.

### Write Global-Style Setup

Select this command to open the Write Global-Style Setup dialog box, and save global settings that are unique to the Style Play mode. These settings are programmed on the “Preferences: Global Setup” page (see page 94).

See “Write Global-Style Play Setup dialog box” on page 96 for more information.

### Solo Track

Select the track to be soloed, and check this item. You will hear only the selected track, and the ‘Solo’ warning will flash on the page header.

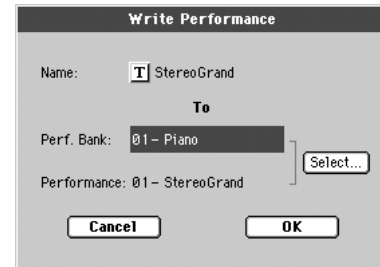
Uncheck this item to exit the Solo function.

The Solo functions works in a slightly different way, depending on the selected track:

- **Keyboard track:** The selected Keyboard track is the only track you can hear when playing on the keyboard. All other Keyboard tracks are muted. The status of the Style tracks is unaffected.
- **Style track:** The selected track is the only Style track you can hear. All other Style tracks are muted. The status of the Keyboard tracks is unaffected.

## Write Performance dialog box

Open this window by selecting the Write Performance item from the page menu. Here, you can save all track settings, the selected Style number, various Style settings, and the selected Voice Processor Preset, to a Performance.



Parameters saved in the Performance are marked with the ►PERF symbol through the user’s manual.

### Name

Name of the Performance to be saved. Press the **T** (Text Edit) button next to the name to open the Text Edit window.

### Perf Bank

Target bank of Performances. Each bank corresponds to one of the PERFORMANCE/SOUND buttons. Use TEMPO/VALUE controls to select a different bank.

### Performance

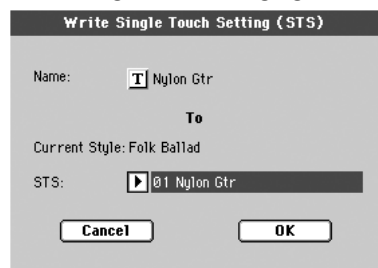
Target Performance location in the selected bank. Use TEMPO/VALUE controls to select a different location.

### Select... button

Press this button to open the Performance Select window, and select a target location.

## Write Single Touch Setting dialog box

Open this window by selecting the Write Single Touch Setting item from the page menu. Here, you can save Keyboard track settings, and the selected Voice Processor Preset, to one of the four single Touch Settings (STS) belonging to the current Style.



Parameters saved in the STS are marked with the ▶**STS** symbol through the user's manual.

### Name

Name of the STS to be saved. Press the **T** (Text Edit) button next to the name to open the Text Edit window.

### Current Style

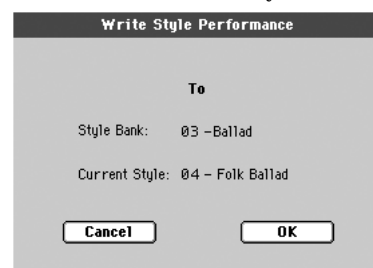
*Non editable.* Settings are saved in one of the four STSs belonging to the current Style. This parameter displays the name of the "parent" Style.

### STS

Target STS location. The name of the STS currently saved at the target location is shown. Use TEMPO/VALUE controls to select a different location.

## Write Style Performance dialog box

Open this window by selecting the Write Style Performance item from the page menu. Here, you can save Style track settings to the Style Performance of the current Style.



Parameters saved in the Style Performance are marked with the ▶**PERF<sup>Sty</sup>** symbol through the user's manual.

### Style Bank

*Non editable.* Bank of Styles the current Style belongs to. Each bank corresponds to one of the STYLE buttons.

### Current Style

*Non editable.* Name of the current Style.

## Write Global-Style Play Setup dialog box

Open this window by selecting the Write Global-Style play Setup item from the page menu. Here, you can save various Style Preference settings (see "Preferences: Global Setup" on page 94), that are saved to the Global file.



Parameters saved in the Style Play Setup area of the Global are marked with the ▶**GBL<sup>Sty</sup>** symbol through the user's manual.

## The DIRECT HD bank

You can expand the internal memory User Styles with nine additional banks residing on the hard disk (optional on the Pa1X with speakers). When both LEDs of the leftmost STYLE button are lit, the DIRECT HD banks are selected. No loading is required.

Use the first nine STYLE bank buttons to select these banks. Each bank can include up to 32 Styles; browse them using the PAGE buttons.

The DIRECT HD Styles are contained in three folders, inside the DIRECTHD folder you can find in the hard disk's root. These folders, automatically created by the Pa1X, have fixed names:

Folder name	DIRECT HD bank buttons
BANK123.SET	1, 2, 3
BANK456.SET	4, 5, 6
BANK789.SET	7, 8, 9

## Creating the DIRECT HD banks

There are two ways to create the DIRECT HD banks:

- While in Style Record mode, you can write the new or edited Style in the Direct HD banks, as an alternative to the User Style banks. See the Style Record chapter for more information.
- While in Disk mode, you can save any Style into the DIRECT HD folders. See below the relevant procedure. More information on the disk procedures are in the Disk chapter.

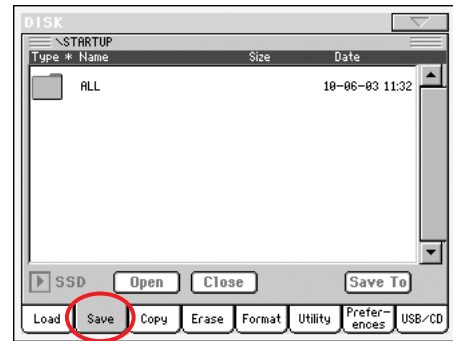
**Note:** The following procedure requires you overwrite the User Style banks. Save these banks before proceeding, to avoid losing important data.

- Press DISK and go to the Load page.

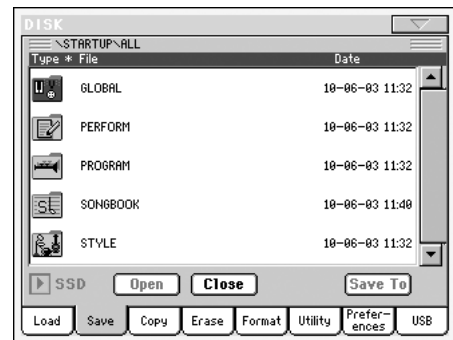


- Load three banks of Styles, to be transformed in DIRECT HD banks 1, 2 and 3, into the USER01, USER 02 and USER03 banks.

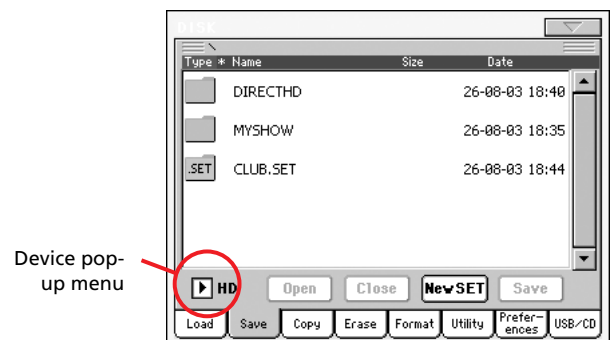
- Go to the Save page.



- While the "All" item is selected, press Open to open it. The internal memory content appears.



- Select the "Style" folder, and press Save To, to make the target device directory appear.



- If it is not yet selected, select the hard disk (HD), by using the Device pop-up menu.
- The hard disk directory appears. Select the DIRECTHD folder and press Open to open it.
- The DIRECTHD folder directory appears. Select the "BANK123.SET" folder, and press Save to save the banks.
- Load other Styles into the USER01-USER03 banks. Save them onto the "BANK456.SET" folder.
- Load other Styles into the USER01-USER03 banks. Save them onto the "BANK789.SET" folder.

## The DIRECT FD bank

In addition to the internal memory and DIRECT HD Styles, you can have DIRECT FD Styles, directly accessed from the floppy disk.

Just insert a disk, with Styles contained in the “DIRECTFD.SET” folder, and press the DIRECT FD Style bank button. The disk drive will read the “DIRECTFD.SET” folder’s content, and will give you direct access to the Styles (no loading required).

**Note:** Reading from floppy disk may take some seconds, before the Styles are shown.

When the Style Select window opens, browse through the DIRECT FD Styles. There are up to 12 pages, and up to 96 DIRECT FD Style locations in a disk.

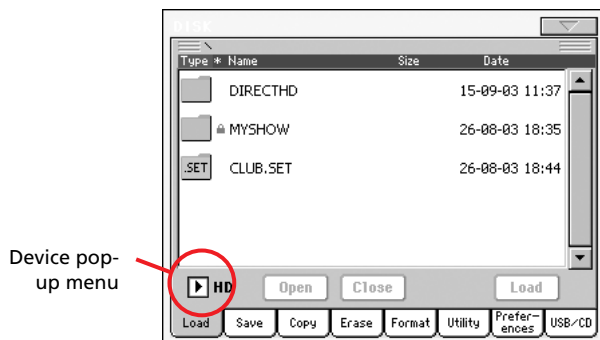
**Note:** Reading from floppy disk is a little slower than reading from the internal memory or the hard disk. So, there is a chance that you will have to wait some beats, before the selected DIRECT FD Style is ready to play. The Style will start at the next beginning of measure.

## Creating the DIRECT FD bank

To configure the DIRECT FD bank, create a “DIRECTFD.SET” folder in the floppy disk, and save your Styles to this folder.

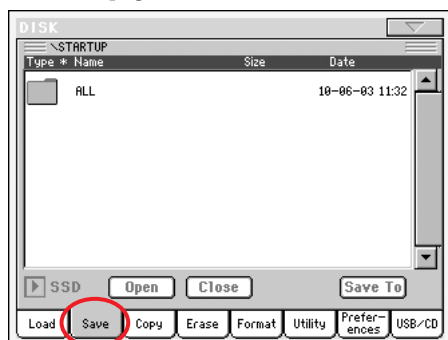
**Note:** The following procedures requires you overwrite the User Style banks. Save these banks before proceeding, to avoid losing important data.

1. Press DISK and go to the Load page.

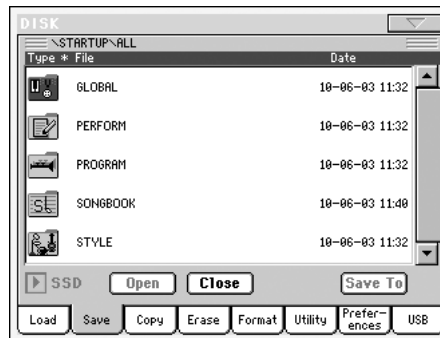


2. Select a device where to load the Styles from, by pressing the Device pop-up menu. Load three banks of Styles, to be transformed to the DIRECT FD bank.

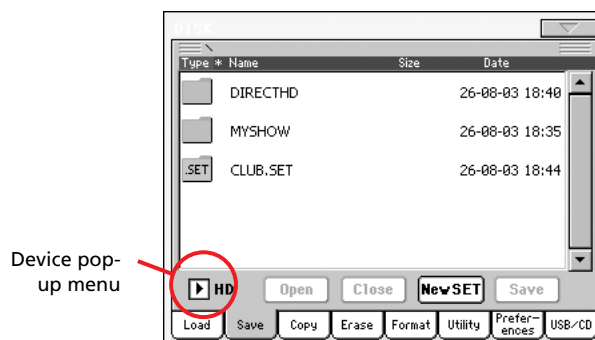
3. Go to the Save page.



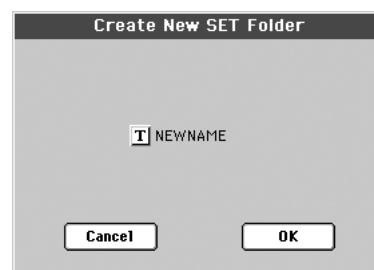
4. While the “All” item is selected, press Open to open it. The internal memory content appears.



5. Select the “Style” folder, and press Save To, to make the target device directory appear.



6. Insert the floppy disk in the disk drive.
7. If it is not yet selected, select the floppy disk (FD), by using the Device pop-up menu.
8. Press New SET to create a new “.SET” folder.



9. Press the **T** (Text Edit) button. When the Text Edit dialog box opens, name the new folder “DIRECTFD”. Press OK to confirm.



10. Press OK to close the Create New SET Folder, and return to the floppy disk directory.
11. With the “DIRECTFD” folder selected, press Save To to save the banks.
12. Press the DIRECT FD button in the STYLE SELECT section, to gain direct access to the saved Styles.

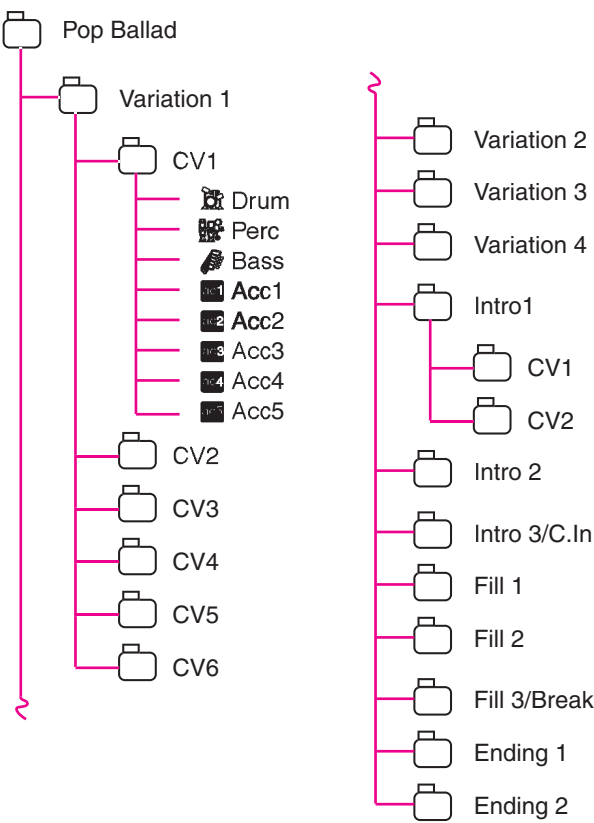
# Style Record mode

By entering the Style Record mode, you can create your own Styles, or edit an existing Style.

## The Style structure

The term “Style” relates with music sequences automatically played by the arranger of the Pa1X. A Style consists of a pre-defined number of **Style Elements (E)** (Pa1X features twelve different Style Elements: Variation 1-4, Intro 1-3, Fill 1-3, Ending 1-2). When playing, these Style Elements can be selected directly from the control panel, using the corresponding buttons.

To explain the Style structure, we can use a tree-structure, as shown in the following diagram:



Each Style Element is made up of smaller units, called **Chord Variations (CV)**, but not all of them have the same number of CVs. Variations 1-4 have up to 6 CVs each, while the other Style Elements have only up to 2 CVs.

When you play on the chord recognition area (Lower, Upper or Full, depending on the Chord Scanning section on the control panel), the arranger scans the keyboard and determines which chord you are playing. Then, depending on the selected Style Element, it determines which Chord Variation (CV) should be played for the scanned chord. Which Chord Variation corresponds to each scanned chord is a setting of the Style: the **Chord Variation Table**. Each Style Element contains a Chord Variation Table, whose prototype is the following:

Chord	Chord Variations (CVs)	
	Variation 1-4	Intro 1-3, Fill 1-3, Ending 1-2
Maj	CV1 – CV6	CV1 – CV2
6		
M7		
M7b5		
Sus4		
Sus2		
M7sus4		
min		
m6		
m7		
m7b5		
mM7		
7		
7b5		
7sus4		
dim		
dimM7		
aug		
aug7		
augM7		
no 3rd		
no 3rd, no 5th		

After deciding what CV to play, the arranger triggers the right sequence for each track. Since each sequence is written in a particular key (for example, CMajor, GMajor or Emin), the arranger transposes it according to the scanned chord. Notes in the sequence are carefully transposed according to the **Note Transposition Tables (NTT)**, to make them work fine with all recognized chords. The NTT allows you to record just some Chord Variations, and have all the notes play in the right place, avoiding dissonances and transposing the pattern notes to the notes of the recognized chord.

Going deeper into the Style structure, we can see that each Chord Variation is made up of **Track Sequences**, and the Pa1X supports 8 different tracks. DRUM and PERC are used for drum and percussion sequences, BASS for bass and ACC1-5 are for

accompaniment sequences (string, guitar, piano or other accompaniment instruments).

Just to summarize, when you play a chord on the chord recognition area, the arranger determines which Style Element is used, then determines which Chord Variation should be used for the played chord, then Style sequences for every track of that Chord Variation are transposed from the original chord to the recognized chord using the NTT, and so on every time you play a chord.

## What to record

Recording a Style is a matter of recording tracks, inside a series of Chord Variations, inside a series of Style Elements, inside the Style itself.

You don't need to record all Chord Variations for all Style Elements. It is often only needed to record just a Chord Variation for each Style Element. Exceptions are the Intro 1 and Ending 1, where we suggest to record both a Major and minor Chord Variations.

## Pattern data vs. track data

While the Style Record mode is where you can create or edit music patterns for the Style, track parameters (like Sounds, Volume, Pan, Octave Transpose, FX settings...) have to be edited in Style Play mode.

- After creating or editing music patterns in Style Record mode, save them by selecting the Write Style command from the page menu of the Style Record mode (see "Write Style dialog box" on page 120).
- After editing track parameters in Style Play mode, save them to the Style Performance by selecting the Write Style Performance command from the page menu of the Style Play mode (see "Write Style Performance dialog box" on page 96).

## Style Import/Export

As an alternative to creating Styles on the Pa1X, you can use Korg's **Style To Midi** application to import a Standard MIDI Files (SMF) from your computer to a Pa1X's Style. The application is freely downloadable from [www.korgpa.com](http://www.korgpa.com). Please read the included instructions.

## Entering the Style Record mode

While in the Style Play operating mode, press the REC button. The following page will appear in the display:



- Select **Record/Edit Current Style** to edit the current Style. If it is a Factory Style, you may not be able to save it at the original location (depending on the status of the "Factory Style and Pad Protect" parameter, see page 265); you will select a User Style instead.

When editing an existing Style, the original Style Performance is recalled, but the following parameters are reset to their default values: Drum Mapping (Off), Kick & Snare Designation (Off), Original Style Sound (On), Keyboard Range (On). This means that you can hear some differences between the Style in play and the same Style being edited; for example, resetting the Drum Mapping may lead to some instruments being replaced.

- Select **Record New Style** to start from a new, empty Style. A default Style Performance will be recalled. When finished recording, you will save the new Style onto a User Style location. (Styles can be saved onto Factory Style locations only when the "Factory Style and Pad Protect" parameter is set to On – see page 265).

After editing the Style, please save it (see "Exit by saving or deleting changes" below) and exit the Style Record mode. Then, while in Style Play mode, edit the Style Performance to adjust track settings (Tempo, Volume, Pan, FX Send... see page 82 and following in the "Style Play operating mode" chapter) and save it by selecting the "Write Current Style Performance" from the page menu (see "Write Style Performance dialog box" on page 96).

*Note: After a record or edit operation, the memory is automatically reorganized. Therefore, when you press START/STOP there is a delay before you can actually listen to the Style. This delay is higher with a Style containing more MIDI events.*

*Note: While in Record mode, the footswitch and EC5 pedals are disabled. On the contrary, volume/expression-type pedals can be used.*



## Exit by saving or deleting changes

When finished editing, you can save your Style in memory, or abort any change.

- To save changes, select the “Write Style” command from the page menu (see “Write Style dialog box” on page 120).
- To abort all changes, select the “Exit from Record” command from the page menu, or press the REC button, to exit from record and return to the main page of the Style Record mode.

**Hint:** Save often while recording, to avoid accidentally losing your Style.

## Listening to the Style while in Edit mode

While you are in Style Record mode, you can listen to the selected Chord Variation or to the whole Style, depending on the page you are in.

To select a Chord Variation, go to the Main page of the Record/Edit mode (see “Element (Style Element)” and “Chord Var (Chord Variation)” on page 102).

- When you are in the Main, Event Edit, Quantize, Transpose, Velocity, or Delete pages, you can listen to the selected Chord Variation. Press START/STOP to check how it works. Press START/STOP again to stop the playback.
- When you are in the Sounds/Expression, Keyboard Range, Chord Table, Trigger/Tension, Delete All, Copy, Style Element Controls or Style Control pages, you can listen to the whole Style. Press START/STOP and play some chords to do your tests. Select any Style Element using the control panel buttons (VARIATION 1-4, INTRO 1-2, FILL 1-2, ENDING 1-2). Press START/STOP again to stop the playback.

**Note:** While in Style mode, the Fingered 3 Chord Scanning mode is automatically selected.

## List of recorded events

The Style Record mode filters out some events that may cause wrong operation of the Style. Here are the recorded events, and the most important filtered-out events.

Control function	CC# (Control Change Number)
<b>Allowed</b>	
Note On	
Note Off <sup>(a)</sup>	
Pitch Bend	
Modulation 1	1
Modulation 2	2
Pan	10
Expression	11
CC#12	12
CC#13	13
Damper	64
Filter Resonance	71
Low Pass Filter Cutoff	74
CC#80	80
CC#81	81
CC#82	82
<b>Not allowed</b>	
Program Change	
After Touch	
Volume	7
All other Control Change messages	

(a). A Note Off will always be inserted at the end of the Chord Variation.

**Note:** Some Control Change messages cannot be recorded directly by using Pa1X integrated controls.

All allowed controllers can be assigned to an Assignable Pedal/Slider/Switch.

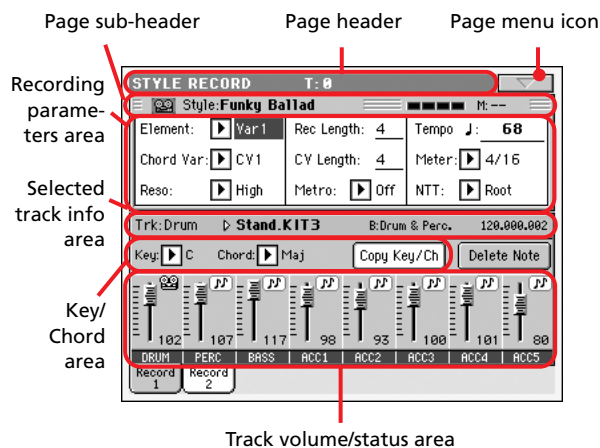
MIDI Control Change messages inserted by using a software on an external computer are imported when using the **Style to Midi** application, available from [www.korgpa.com](http://www.korgpa.com).

Some controllers are reset at the end of the pattern.



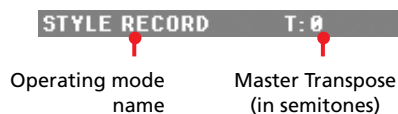
## Main page - Record 1

After pressing the REC button, and having chosen whether you want to edit an existing Style or create a new one, the main page of the Style Record mode appears, with the tab “Record 1” selected.



### Page header

This line shows the current operating mode, transposition and recognized chord.



### Operating mode name

Name of the current operating mode.

### Master transpose

Master transpose value in semitones. This value can be changed using the TRANSPOSE buttons on the control panel.

### Page menu icon

Press this icon to open the page menu. See “Page menu” on page 120.

### Page sub-header

This area shows some performing info on the Style.



### Style in record/edit

Name of the Style currently in edit or record.

### Beat counter

This indicator shows the current beat inside the current measure.

### Measure number

Current measure you are recording.

## Recording parameters area

### Element (Style Element)

This parameter lets you select a Style Element for editing. Each Style Element corresponds to a button on the control panel carrying the same name. After selecting a Style Element, select a Chord Variation for actual editing (see below).

Var1...CountIn

This is the selected Style Element

### Chord Var (Chord Variation)

This parameter lets you select a Chord Variation for editing, after selecting the Style Element this Chord Variation belongs to.

**Note:** When this parameter and the assigned value is in small letters (cv1...cv6), the Chord Variation is empty; when it is in capitals (CV1...CV6), it is already recorded.

- If Style Element is Var1, Var2, Var 3 or Var4, you can select one of 6 Chord Variations to edit.

- If Style Element is Intro1, Intro2, Intro3, Fill1, Fill2, Fill3, Ending1 or Ending2, you can select one of 2 Chord Variations to edit.

### Resolution

Use this parameter to set the quantization during recording. Quantization is a way of correcting timing errors; notes played too soon or too later are moved to the nearest axis of a rhythmic “grid”, set with this parameter, thus playing perfectly in time.

**Note:** To quantize after recording, use the Quantize function in the Edit section (see “Style Edit: Quantize” on page 111).

High

No quantization applied.

♪ (1/32)...♪ (1/8)

Grid resolution, in musical values. For example, when you select 1/16, all notes are moved to the nearest 1/16 division. When you select 1/8, all notes are moved to the nearest 1/8 division. A ‘3’ after the quantization value means triplet.



### Rec Length (Recording Length)

►STYLE

This parameter sets the recording length (in measures) of the selected track. Its value is always equal to, or a divider of, the Chord Variation Length (see next parameter).

This is not the total length of the Chord Variation, but just of the current track. For example, you may have a Chord Variation eight measures long, with a drum pattern repeating each two measures. If so, set the CV Length parameter to "8", and the Rec Length parameter to "2" before starting recording the Drum track. When playing back the Style, saving it or executing any edit operation on the Style, the 2-measures pattern will be extended to the full 8-measures length of the Chord Variation.

**Warning:** If you assign CV Length a value lower than Rec Length, the value of Rec Length is not immediately updated in the display. Therefore, you are still free of changing the value of CV Length, before the measures exceeding its value are deleted (see warning in "CV Length (Chord Variation Length)" below).

However, if you press START/STOP to begin recording, the real Rec Length value is changed to the new one, even if the display still shows the old value.

For example, you may have CV Length = 4 and Rec Length = 4. If you set CV Length to 2, and press START/STOP to begin recording, Rec Length is still shown as 4, but it is in reality set to 2, and recording will cycle for just 2 measures. After you press START/STOP to stop recording, Rec Length is updated to 2, and all measures after the second measure are deleted.

### CV Length (Chord Variation Length) ▶STYLE

This parameter sets the total length (up to 32 measures) for the selected Chord Variation. When playing a Style, this will be the length of the accompaniment pattern, when the chord corresponding to the Chord Variation is recognized on the keyboard.

**Warning:** If you reduce the Chord Variation Length after recording, any measure after the selected length will be deleted. Be very careful when setting the CV Length to a lower value after recording! If it happens, we suggest to exit from record without saving (see "Exit from Record" on page 120).

### Metro (Metronome)

This is where you can set the metronome.

- Off No metronome click will be heard during recording. In any case, a one-bar precount will be played before starting recording.
- On1 Metronome on, with a one-bar precount before starting recording.
- On2 Metronome on, with a two-bar precount before starting recording.

### Tempo

Select this parameter to use TEMPO/VALUE controls to set the tempo.

**Hint:** You can always change the Tempo, when other parameters are selected, by keeping the SHIFT button pressed, and rotating the DIAL.

**Note:** When recording tempo, old data is always replaced by the new data.

**Note:** The actual tempo of the Style will be the one shown when saving the Style Performance in Style Play mode (see "Current tempo" on page 77).

### Meter

▶STYLE

This is the meter (time signature) of the Style Element. You can edit this parameter only when the Style Element is empty, i.e. before you begin recording anything.

### NTT (Note Transposition Table) ▶STYLE

The Note Transposition Table (NTT) determines how the arranger will transpose pattern notes, when a chord is recognized that does not exactly match the original chord of a Chord Variation. For example, if you only recorded a Chord Variation for the CMaj chord, when a CMaj7 is recognized on the keyboard the arranger must transpose some notes to create the missing 7th.

**Note:** To conform to Korg specifications, it is advisable to set the NTT to "No Transpose" on the Intro 1 and Ending 1.

- Root The root note (in CMaj = C) is transposed to the missing notes.
- Fifth The 5th note (in CMaj = G) is transposed to the missing notes.
- i-Series All original patterns must be programmed on the "Maj7" or "min7" chords. When loading old Korg i-Series Styles, this option is automatically selected.
- NoTrnsp No transposition applied. The pattern will always play as recorded. This is the standard setting of Intro 1 and Ending 1 in Korg's original Styles.

As recorded with  
NTT = Root or 5th  
(Key/Chord = CMaj)



When you play a CM7  
with NTT = Root



When you play a CM7  
with NTT = 5th



As recorded with  
NTT = i-Series  
(Key/Chord = CM7)



When you play a CMaj  
with NTT = i-Series

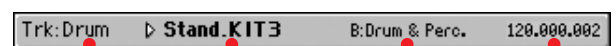


When you play a C7  
with NTT = i-Series



### Selected track info area

This line lets you see the Sound assigned to the selected track.



Track name

Sound name

Sound bank

Program Change

### Track name

Name of the selected track.

Drum...Acc5 Style track.

### Sound name

▶STYLE

Sound assigned to the selected track. The triangle means you can press the name to open the Sound Select window, and select a different Sound.

## Sound bank

Bank the selected Sound belongs to.

## Program Change

Program Change number. Shown only when the “Show Program Change number” parameter is turned on in Global mode. (See page 228).

## Key/Chord area

### Key/Chord

►STYLE

This parameter pair allows you to define the track’s original key and chord type, for the current Chord Variation. When in Style Play mode, this chord will be played back exactly as it was recorded, without any NTT processing (see above).

To record just one Chord Variation for a Style Element, the suggested original key/chord is “maj7” (with NTT = i-Series). Be very careful to play the 7th+ note (i.e., with a “Cmaj7th” key/chord, the B), to avoid the lack of notes, or a bad NTT conversion when playing different chords.

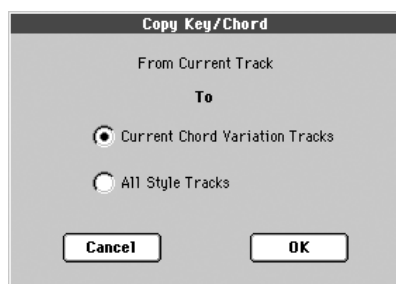
**Note:** To conform to Korg specifications, it is advisable to record both the “Major” and “minor” Chord Variations for the Intro 1 and Ending 1 Style Elements.

When you select a track, the original key/chord assigned to the selected track will be shown. All recorded tracks will play back on that key/chord. For example, if the original key/chord for the Acc1 track is A7th, when selecting the Acc1 track all the remaining tracks will play on the A7th key/chord.

In the example above, you will record the Acc1 track in the A Major key, with notes pertaining to the A7th scale. This exact pattern will be recalled, when an A7th chord will be recognized.

### Copy Key/Ch (Copy Key/Chord) button

Press this button in the display to copy Key/Chord settings of the currently selected track to all other tracks of the same Chord Variation, or to the whole Style. This function is useful to speed-up pattern programming, and to avoid having different tracks in different keys within the same Chord Variation.



#### Current Chord Variation Tracks

The Key/Chord of the current track will be copied to all tracks of the current Chord Variation.

#### All Style Tracks

The Key/Chord of the current track will be copied to all tracks of the Style (i.e., all Chord Variations).

## Delete Note button

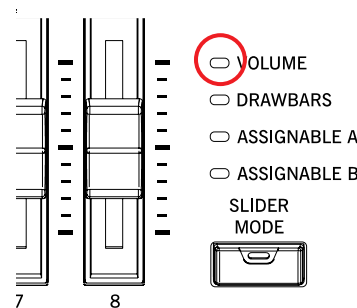
When a track is selected, you can use this command to delete a single note or a single percussive instrument.

If the Style is playing, this shortcut deletes the instrument only while the key is kept pressed, leaving all other notes untouched within the track.

## Tracks volume/status area

### Virtual sliders

Each virtual slider in the display corresponds to an Assignable Slider on the control panel. Use the Assignable Sliders to change each value, provided the VOLUME LED (over the SLIDER MODE button) is turned on. This LED status depends on the last selected Performance, but can be changed anytime by using the SLIDER MODE button.



As an alternative, press the track’s area to select a track, and use TEMPO/VALUE controls to change the value.

### Track status icons

►STYLE

Status of tracks. Press this icon to change the status.



Play status. The track can be heard.



Mute status. The track cannot be heard.



Record status. After starting recording, the track will receive notes from the keyboard and the MIDI IN connector.

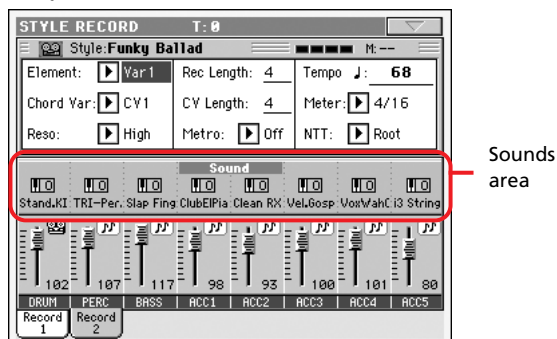
### Track names

Under the sliders, a label for each track is shown.

Drum...Acc5 Shown Style tracks.

## Main page - Record 2

While in the main page, press the “Record 2” tab to see this page. Most parameters in this page are the same as in “Main page - Record 1”. In addition, here you can see and select Sounds for each Style track.



### Sounds area

This area lets you see Sounds and octave transposition for the eight Style tracks.



### Octave icon

*Non editable.* This indicator shows the track's octave transposition. To change this value, go to the “Mixer/Tuning: Tuning” edit page in the Style Play mode (see page 84). Save this value to the Style Performance.

### Sound name

►STYLE

Name of the Sound assigned to the track. Touch a name a first time to select the corresponding track (detailed information are shown on the Selected Track Info area, see above). Touch it a second time to open the Sound Select window.

**Note:** These Sounds can be replaced by Sounds selected by a Performance, provided the “Original Style Sounds” parameter is left unchecked in Style Play mode (see page 78).

## Style Record procedure

There are two different methods for recording a Style: Realtime and Step.

- Realtime Recording allows you to record Style patterns in realtime.
- Step Recording allows you to create a new Style by entering single notes or chords in each track. This is very useful when transcribing an existing score, or needing a higher grade of detail, and is particularly suitable to create drum and percussion tracks.

### Preparing to record

- If you like to edit an existing Style, select that Style.
- Press the REC button to enter the Style Record mode. You are prompted to select either the Current Style, or a New Style.
- Select “record/edit Current Style” if you want to edit the current Style, or make a new Style starting from an existing one. Select “Record New Style” if you want to start from scratch with an empty Style.
- After you select your preferred option, the main page of the Style Record mode will appear.
- Select the Element (Style Element) and Chord Var (Chord Variation) parameters, to select the Chord Variation to be recorded/edited.

**Note:** For more information on the Style Elements and Chord Variations, and the Style structure in general, see “The Style structure” on page 99.

- Use the Rec Length (Recording Length) parameter to set the length (in measures) of the pattern to record.
- Use the Meter parameter to set the Style Element's meter.

**Note:** You can edit this parameter only if you selected the “Record New Style” option when entering the Record mode, or when editing an empty Chord Variation.


- Select the Tempo parameter and set the tempo.
- Press the Record 2 tab to see the Sounds area. Here you can assign the right Sound to each Style track. You cannot select Digital Drawbars Sounds. (For more details, see “Sounds area” on page 105).
- If needed, set the Octave Transpose for each track. **Note:** The Octave Transpose will affect only the notes coming from the keyboard, and not from the arranger.
- At this point, if you want to do a Realtime Recording go on reading “Realtime Record procedure” below. Otherwise, if you prefer to do a Step Record, jump to “Step Record procedure” on page 106.

## Realtime Record procedure


1. Select the track to record. Its status icon will turn to 'Record'. (For more details, see "Tracks volume/status area" on page 104).

**Note:** When entering the Record mode, the last selected track is already in Record status. When you press START/STOP after entering the Record mode, you can immediately start recording.

If you like, you can try your part before recording:

- Mute the track, by repeatedly pressing its icon status, until the  (Mute) status icon appears.

- Press START/STOP to let any recorded track play back, and practice on the keyboard.

- When you have finished practicing, press START/STOP to stop the arranger, and unmute the track by repeatedly pressing its icon status, until the  (Record) status icon appears again.

2. While the shown status icon is Record, press START/STOP to begin recording. Depending on the "Metro" (metronome) option you selected, a 1- or 2-bars precount may play before the recording actually begins. When it begins, play freely. The pattern will last for some measures, according to the Rec Length value, then restart.

Since the recording will happen in overdub, you can add notes on any following passage. This is very useful to record different percussive instruments at any cycle on a Drum or Percussion track.

**Note:** While recording, track's **Keyboard Range** (see page 116) is ignored, and the track can play over the whole keyboard range. The **Local** parameter (see "Local Control On" on page 231) is also automatically set to On, to allow playing on the keyboard.

3. When finished recording, press START/STOP to stop the arranger. Select a different track, and go on recording the full Chord Variation.

**Note:** You can select a different track only when the arranger is not running.

4. When finished recording the Chord Variation, select a different Chord Variation or Style Element to go on recording the full Style.
5. When finished recording the new Style, select the "Write Style" command from the page menu, to open the Write Style dialog box (see "Write Style dialog box" on page 120) and save it to memory.

To exit the Style Record mode without saving any change, select the "Exit from Record" command from the page menu.

## Step Record procedure

1. While in the main page of the Style Record mode, select the "Overdub Step Recording" command from the page menu, to enter the Overdub Step Record mode.

2. The "Pos" parameter shows the current position.

- If you do not want to insert a note or chord at the current position, insert a rest instead, as shown in step 4.

- To jump to the next measure, filling the remaining beats with rests, press the Next M. button in the display.

3. To change the step value, use the "Step Time values" area in the display.

4. Insert a note, rest or chord at the current position.

- To insert a single note, just play it on the keyboard. The inserted note length will match the step length. You may change the velocity and relative duration of the note, by editing the "Duration" and "Velocity" parameters (see page 122).

- To insert a rest, just press the Rest button in the display. Its length will match the step value.

- To tie the note to be inserted to the previous one, press the Tie button in the display. A note will be inserted, tied to the previous one, with exactly the same name. You don't need to play it on the keyboard again.

- To insert a chord or a second voice, see "Chords and second voices in Step Record mode" below.

5. After inserting a new event, you may go back by pressing the Back button in the display. This will delete the previously inserted event, and set the step in edit again.

6. When the end of the pattern is reached, the "End of Loop" event is shown, and the recording restarts from the "001.01.000" position. Any note exceeding the pattern length, inserted at its end, will be reduced to fit the total length of the pattern.

At this point, you may go on, inserting new events in overdub mode (the previously inserted events will not be deleted). This is very useful when recording a drum or percussion track, where you may want to record the bass drum on a first cycle, the snare drum on the second cycle, and the hi-hat and cymbals during the following cycles.

7. When finished recording, press the Done button in the display to exit the Step Record mode.

When back to the main page of the Style Record mode, you may turn all tracks to the play status, then press START/STOP to listen to the Style. Press START/STOP again to stop the playback.

8. From the main page of the Style Record mode, select either the "Write Style" or the "Exit from Record" command to exit from the Style record mode, respectively by saving the Style to memory, or by canceling any change (see "Write Style dialog box" on page 120).



## Chords and second voices in Step Record mode

You are not obliged to insert single notes in a track. There are several ways to insert chords and double voices. Lets look at some.

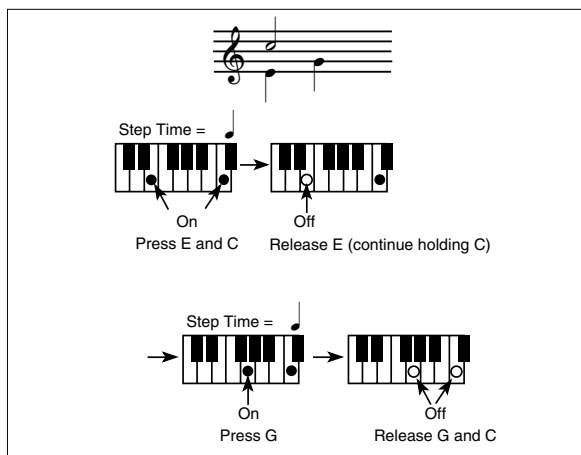
**Entering a chord.** Simply play a chord instead of a single note. The event name will be the first note of the chord you pressed, followed by the “...” abbreviation.

**Entering a chord made of notes with different velocity values.** You can make the upper or lower note of a chord, for example, louder than the remaining ones, to let the most important stand out from the chord. Here is how to insert a three-note chord:

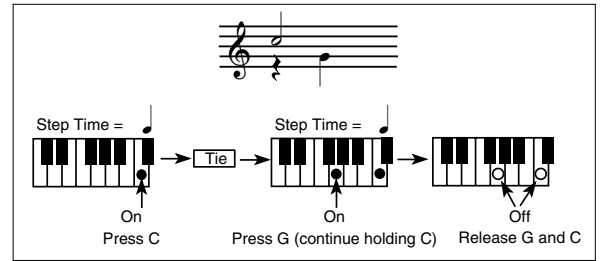
1. Edit the first note's Velocity value.
2. Press the first note and keep it pressed.
3. Edit the second note's Velocity value.
4. Press the second note and keep it pressed.
5. Edit the third note's Velocity value.
6. Press the third note, then release all notes.

**Entering a second voice.** You can insert passages where one note is kept pressed, while another voice moves freely.

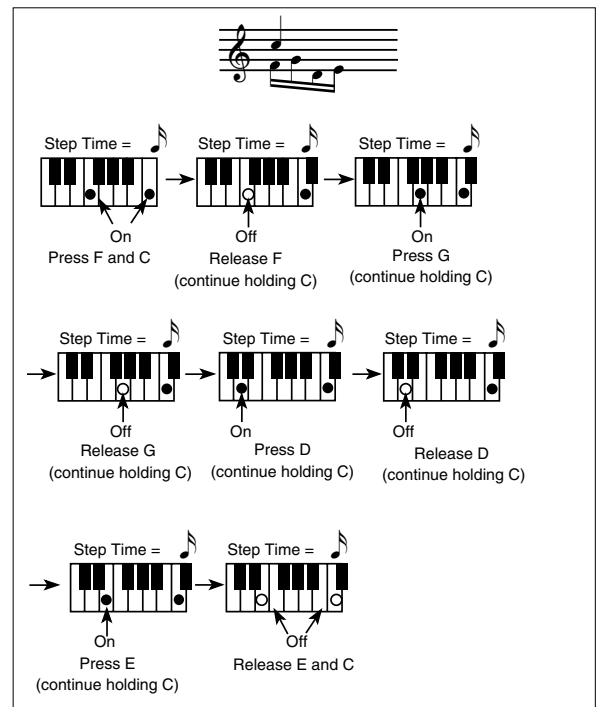
Ex. 1:



Ex.2:



Ex.3:

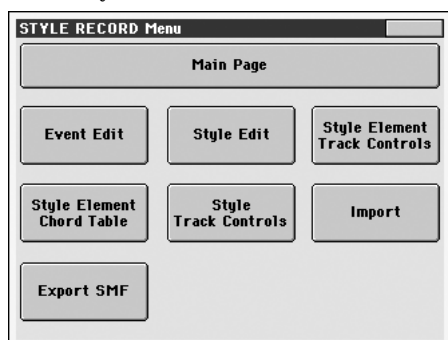


## Edit menu

From any page (apart for Step Record), press the MENU button to open the Style Record edit menu. This menu gives access to the various Style Record edit sections.

When in the menu, select an edit section, or press EXIT to exit the menu and return to the main page. To return to the main page, you can also select the Main Page menu item.

When in an edit page, press the EXIT button to return to the main page of the Style Record mode.

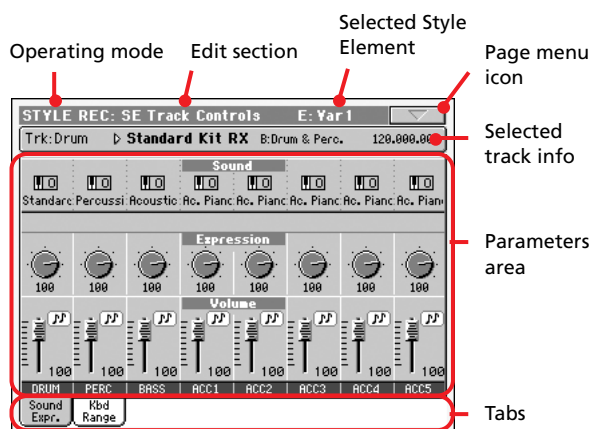


**Note:** While the Style is in play, you cannot access the Edit section pages from the main page (see page 102). Stop the playback before pressing MENU.

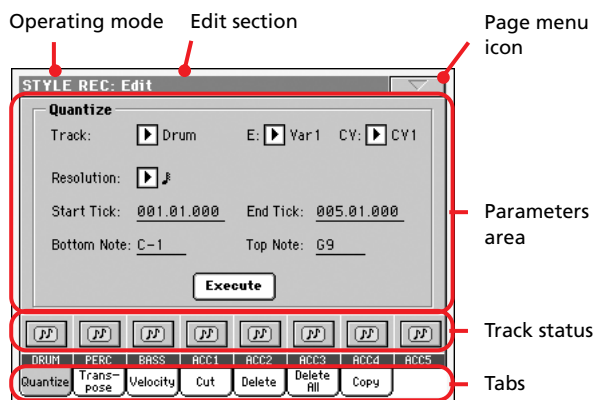
**Note:** When switching from the Edit section pages (Quantize, Transpose, Velocity, Delete) to the other pages, or vice-versa, the Style (if in play) is automatically stopped.

## Edit page structure

Most edit pages share some basic elements.



Other pages have a slightly different structure.



### Operating mode

This indicates that the instrument is in Style Record mode.

### Edit section

This identifies the current edit section, corresponding to one of the items of the edit menu (see “Edit menu” on page 108).

### Selected Style Element

In Style Record mode, edits always happen on the selected Style Element.

### Page menu icon

Press this icon to open the page menu (see “Page menu” on page 120).

### Parameters area

Each page contains various parameters. Use the tabs to select one of the available pages. For detailed information on the various types of parameters, see sections starting from page 109.

### Track status

Use these buttons to mute/unmute tracks while editing.

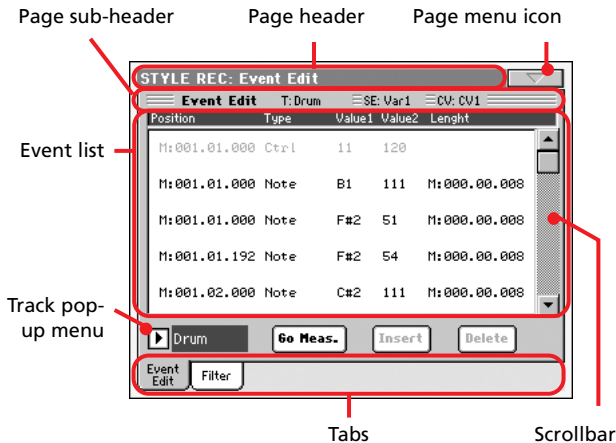
### Tabs

Use tabs to select one of the edit pages of the current edit section.



## Event Edit: Event Edit

The Event Edit is the page where you can edit each single MIDI event of the selected Chord Variation. You can, for example, replace a note with a different one, or change its playing strength (i.e., velocity value). See “Event Edit procedure” on page 110 for more information on the event editing procedure.



### Page header

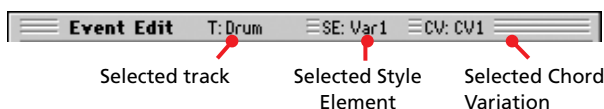
See “Page header” on page 102.

### Page menu icon

Press this icon to open the page menu. See “Page menu” on page 120.

### Page sub-header

This area shows some performing info on the Song.



#### Selected track

Name of the track in edit. Use the Track pop-up menu to select one of the Style tracks.

#### SE/CV (Style Element/Chord Variation)

Selected Style Element and Chord Variation. This parameter cannot be edited. To select a different Style Element and Chord Variation, press EXIT to go back to the main page of the Style Record mode (see “Main page - Record 1” on page 102).

### Event list

Use the Event list to see all events contained in the selected track in the selected Style Element.

Use the scrollbar to browse through the events.

Touch the event to be selected. Selected events are highlighted and can be heard.

### Position

Position of the event, expressed in the form ‘aaa.bb.ccc’:

- ‘aaa’ is the measure
- ‘bb’ is the beat
- ‘ccc’ is the tick (each quarter beat = 384 ticks)

You can edit this parameter to move the event to a different position. You can edit a position in either of the following ways:

- select the parameter, and use the TEMPO/VALUE controls to change the value, or
- select the parameter, then touch it again; the numeric keypad will appear. Enter the new position by dialing in the three parts of the number, separated by a dot. Zeroes at the beginning can be omitted, as well as the least important parts of the number. For example, to enter position 002.02.193, dial “2.2.193”; to enter position 002.04.000 dial “2.4”; to enter position 002.01.000, simply dial “2”.

### Type, Value 1, Value 2

Type and values of the event shown in the display. Depending on the selected event, the value may change. This parameter also shows the (greyed-out, so non-editable) “CC#11” (Expression) event at the beginning of the pattern, and the “End Of Loop” marking, when the end of a track is reached.

Event type	Value 1	Value 2
Note	Note name	Velocity
Ctrl	Control Change number	Control Change value
Bend	Bending value	–

To change the event type, select the Type parameter, then use the TEMPO/VALUE controls to select a different event type. A set of default values will be automatically assigned to the event.

To select and edit the event’s value, select the corresponding parameter, and use TEMPO/VALUE controls.

### Length

Length of the selected Note event. The value format is the same as the Position value. This is only available for Note events.

**Note:** If you change a length of “000.00.000” to a different value, you can’t go back to the original value. This rather uncommon zero-length value may be found in some drum or percussion tracks.

### Scrollbar

Use the scrollbar to browse the event through the list.

### Other elements

#### Track pop-up menu

Use this pop-up menu to select the track to edit, inside the current Chord Variation.

Drum...Acc5 Style track.

#### Go Meas./Catch

This is a dual-function command.

- While the sequencer is not running, it works as a Go to Measure command. Press it to open the Go to Measure dialog box:



When in this dialog box, select a target measure, and press OK. The first event available in the target measure will be selected.

- While the sequencer is running, it works as a Catch Locator command. Press it to show the event that is currently playing.

## Insert

Press the Insert button in the display to insert a new event at the current shown Position. The default values are Type = Note, Pitch = C4, Velocity = 100, Length = 192.

## Delete

Press the Delete button in the display to delete the event selected in the display.

## Event Edit procedure

Here is the general procedure to follow for the event editing.

1. Select the Style to edit, and press the REC button. Select the "Current Style" option to enter recording. The main page of the Style Record mode will appear.
2. Select the "Element (Style Element)" and "Chord Var (Chord Variation)" parameters.  
*Note: For more information on the Style Elements and Chord Variations, and the Style structure in general, see "The Style structure" on page 99.*
3. Press MENU, and select the Event Edit section. The Event Edit page appears (see "Event Edit: Event Edit" on page 109 for more information).
4. Press START/STOP to listen to the selected Chord Variation. Press START/STOP to stop it. Chord Scanning does not work, so you will listen the pattern at the original Key/Chord.
5. Press the Filter tab to select the Filter page, and uncheck the filters for the event types you wish to see in the display (see "Event Edit: Filter" on page 111 for more information).
6. Press the Event Edit tab to go back to the Event Edit page.
7. Use the Track pop-up menu to select the track to edit (see "Track pop-up menu" on page 109).
8. The list of events contained in the selected track (inside the Chord Variation selected on step 2) will appear in the display. Some events on the beginning of the Chord Variations, as well as the "EndOfTrk" event (marking its ending point) cannot be edited, therefore appearing in grey.

9. Scroll through the various events by using the scrollbar.
10. Select an event to be edited by touching it in the display. This is usually a note, that you can edit.

M:001.01.000	Note	F#2	51	M:000.00.008
--------------	------	-----	----	--------------

For more information on the event types and their values, see "Event Edit: Event Edit" on page 109.

11. Edit the event.
  - Select the "M" parameter. Use TEMPO/VALUE controls to change the event's position.
  - Select the Type parameter. You may use TEMPO/VALUE controls to change the event type, as well as its Value 1 and Value 2.
  - If a Note event is selected, select the Length parameter, and use TEMPO/VALUE controls to change the event's length.
12. You may use the Go Meas. command to go to a different measure (see "Go Meas./Catch" on page 109)
13. As described in step 4, you may press START/STOP to listen how the pattern sounds after your changes. Press START/STOP again to stop the pattern running.
14. Press the Insert button in the display to insert an event at the Position shown in the display (a Note event with default values will be inserted). Press the Delete button in the display to delete the selected event.
15. When editing is complete, you may select a different track to edit (go to step 7).
16. When finished editing the selected Chord Variation, press EXIT to go back to the main page of the Style Record mode, then go to step 2 to select and edit a different Chord Variation.
17. When finished editing the whole Style, select the "Write Style" command from the page menu to open the Write Style dialog box (see "Write Style dialog box" on page 120), or select the "Exit from Record" command to cancel all changes.
  - Press the **T** (Text Edit) button to enter the Text Edit dialog box. Enter a name and confirm by selecting OK.
  - Select a target memory location where to save the Style. The name of the Style already existing at the selected location is shown after the Style Bank-Location number.

**Warning:** If you select an existing Style and confirm writing, the older Style is deleted and replaced by the new one. Save the Styles you don't want to lose on disk, before overwriting them.
18. Press OK to save the Style to the internal memory, or Cancel to delete any changes made in Style Record mode. When the "Are you sure?" message appears, press OK to confirm, or Cancel to go back to the "Write Style" dialog box.

## Event Edit: Filter

This page is where you can select the event types to be shown in the Event Edit page.



Turn On the filter for all event types you do not wish to see in the Event Edit page.

**Note:** Some of the events are “ghosted”, and non editable, since the corresponding events are not editable in a Style.

Note/RX Noise

Notes and RX Noises.

Control

Control Change events. Only the following Control Change numbers are allowed with Styles.

Control function	CC# (Control Change Number)
Modulation 1	1
Modulation 2	2
Pan	10
Expression <sup>(a)</sup>	11
CC#12	12
CC#13	13
Damper	64
Filter Resonance	71
Low Pass Filter Cutoff	74
CC#80	80
CC#81	81
CC#82	82

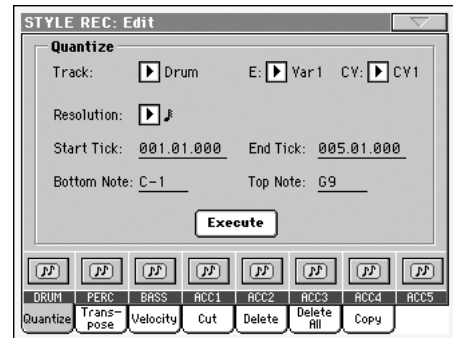
(a). Expression events cannot be inserted at the starting Position (001.01.000). An Expression value is already among the default “header” parameters of the Style Element.

Tempo/Meter Tempo and Meter changes (Master Track only).

Pitch Bend Pitch Bend events.

## Style Edit: Quantize

The quantize function may be used to correct any timing mistake after recording, or to give the pattern a “groovy” feeling.



After setting the various parameters, press Execute.

### Track

Use this parameter to select a track.

All All tracks selected.

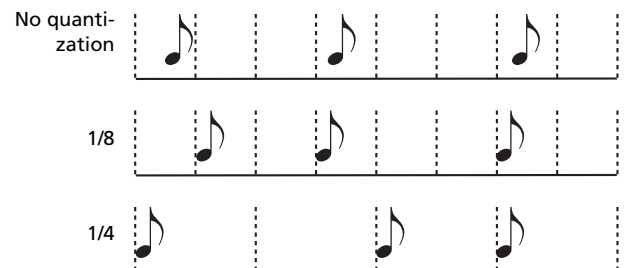
Drum...Acc5 Selected track.

### E / CV (Style Element/Chord Variation)

Use these parameters to select the Style Element and Chord Variation for editing.

### Resolution

This parameter sets the quantization after recording. For example, when you select 1/8, all notes are moved to the nearest 1/8 division. When you select 1/4, all notes are moved to the nearest 1/4 division.



♩ (1/32)...♩ (1/4)

Grid resolution, in musical values. A “b...f” character added after the value means swing-quantization. A “3” means triplet.

### Start / End Tick

Use these parameters to set the starting and ending points of the range to quantize.

If a Chord Variation is four measures long, and you want to select it all, the Start will be positioned at 1.01.000, and the End at 5.01.000.

### Bottom / Top Note

Use these parameters to set the bottom and top of the keyboard range to quantize. If you select the same note as the Bottom and Top parameters, you can select a single percussive instrument in a Drum or Percussion track.

**Note:** These parameters are available only when a Drum or Percussion track is selected.

### Execute

Press this button to execute the operation set in this page.

### Track status icon

Status of tracks. Press this icon to change the status.



Play status. The track can be heard.



Mute status. The track cannot be heard.

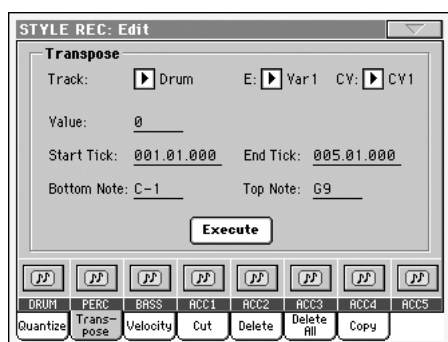
### Track names

Under the buttons, a label for each track is shown.

## Style Edit: Transpose

In this page you can transpose the selected track(s).

**Note:** After transposing, please don't forget to readjust the "Key/Chord" parameter in the main page of the Style Record mode (see page 104).



After setting the various parameters, press Execute.

### E / CV (Style Element/Chord Variation)

Use these parameters to select the Style Element and Chord Variation for editing.

### Track

Use this parameter to select a track.

**All** All tracks selected, apart for tracks set in Drum mode (like the Drum and Percussion tracks). The whole selected Chord Variation will be transposed.

**Drum...Acc5** Single selected track.

### Value

Transpose value ( $\pm 127$  semitones).

### Start / End Tick

Use these parameters to set the starting and ending points of the range to be transposed.

If a Chord Variation is four measures long, and you want to select it all, the Start will be positioned at 1.01.000, and the End at 5.01.000.

### Bottom / Top Note

Use these parameters to set the bottom and top of the keyboard range to be transposed. If you select the same note as the Bottom and Top parameters, you can select a single percussive instrument in a Drum or Percussion track. Since in a Drum Kit each instrument is assigned to a different note of the scale, transposing a percussive instrument means assigning the part to a different instrument.

### Execute

Press this button to execute the operation set in this page.

### Track status icon

Status of tracks. Press this icon to change the status.



Play status. The track can be heard.



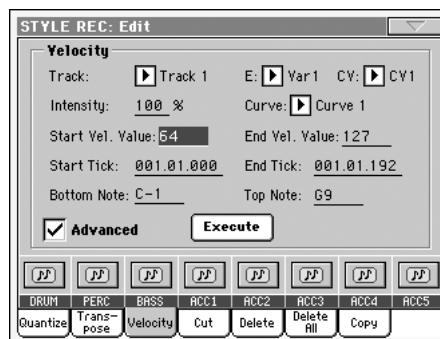
Mute status. The track cannot be heard.

### Track names

Under the buttons, a label for each track is shown.

## Style Edit: Velocity

In this page you can change the velocity (dynamics) value of notes in the selected track. An Advanced mode is available, allowing you to select a velocity curve for the selected range. This is useful to create fade-ins or fade-outs.



After setting the various parameters, press Execute.

**Note:** When an RX Sound is assigned to the track being edited, the resulting sound may change, since this kind of Sounds is made of several different layers triggered by different velocity values.

Also, a fade-out may result in the level "jumping" up next to the zero, since a higher-level layer may be selected by low velocity values.

### Track

Use this parameter to select a track.

**All** All tracks selected. The velocity for all notes of the whole selected Chord Variation will be changed.

**Drum...Acc5** Selected track.

### E / CV (Style Element/Chord Variation)

Use these parameters to select the Style Element and Chord Variation for editing.

## Value

Velocity change value ( $\pm 127$ ).

## Start / End Tick

Use these parameters to set the starting and ending points of the range to be modified.

If a Chord Variation is four measures long, and you want to select it all, the Start will be positioned at 1.01.000, and the End at 5.01.000.

## Bottom / Top Note

Use these parameters to set the bottom and top of the keyboard range to be modified. If you select the same note as the Bottom and Top parameters, you can select a single percussive instrument in a Drum or Percussion track.

## Advanced

When this checkbox is checked, the "Intensity", "Curve", "Start Velocity Value" and "End Velocity Value" parameters can be edited.

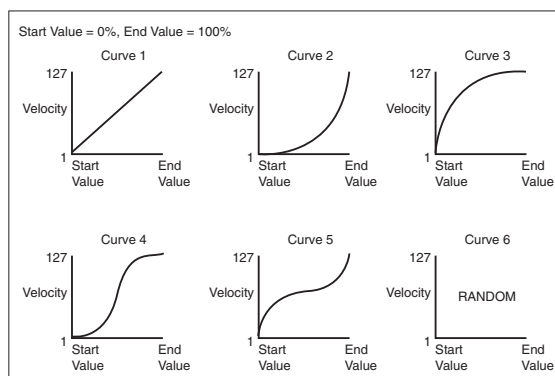
## Intensity

(Only available in Advanced mode). Use this parameter to specify the degree to which the velocity data will be adjusted toward the curve you specify in "Curve".

0...100% Intensity value. With a setting of 0 [%], the velocity will not change. With a setting of 100 [%], the velocity will be changed the most.

## Curve

(Only available in Advanced mode). Use this parameter to select one of the six curves, and to specify how the velocity will change over time.



## Start / End Vel. Value

(Only available in Advanced mode). Velocity change at the starting and ending ticks of the selected range.

0...100 Velocity change in percentage.

## Execute

Press this button to execute the operation set in this page.

## Track status icon

Status of tracks. Press this icon to change the status.



Play status. The track can be heard.



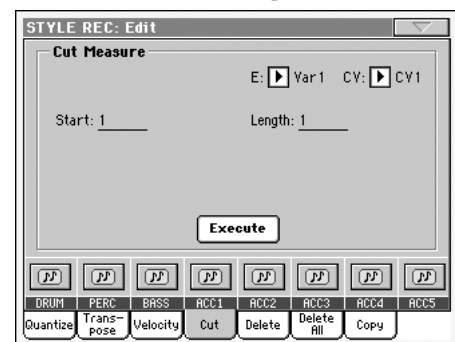
Mute status. The track cannot be heard.

## Track names

Under the buttons, a label for each track is shown.

## Style Edit: Cut

This function lets you quickly delete a selected measure (or a series of measures) from the selected Chord Variation. All following events are moved back, to replace the cut measure(s).



After setting the various parameters, press Execute.

## E / CV (Style Element/Chord Variation)

Use these parameters to select the Style Element and Chord Variation for editing.

## Start

First measure to be cut.

## Length

Number of measures to be cut.

## Execute

Press this button to execute the operation set in this page.

## Track status icon

Status of tracks. Press this icon to change the status.



Play status. The track can be heard.



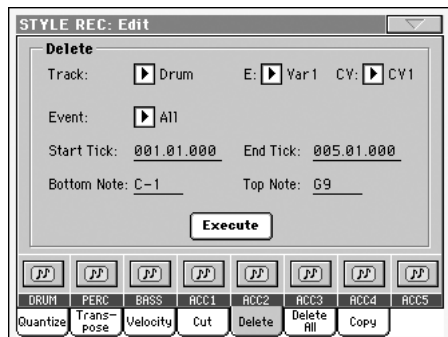
Mute status. The track cannot be heard.

## Track names

Under the buttons, a label for each track is shown.

## Style Edit: Delete

This page is where you can delete MIDI events out of the Style. This function does not remove measures from the pattern. To remove whole measure, use the Cut function (see “Style Edit: Cut” on page 113)



After setting the various parameters, press Execute.

### E / CV (Style Element/Chord Variation)

Use these parameters to select the Style Element and Chord Variation for editing.

#### Track

Use this parameter to select a track.

**All** All tracks selected. After deletion, the selected Chord Variation will remain empty.

**Drum...Acc5** Selected track.

#### Event

Type of MIDI event to delete.

**All** All events. The measures are not removed from the Chord Variation.

**Note** All notes in the selected range.

**Dup.Note** All duplicate notes. When two notes with the same pitch are encountered on the same tick, the one with the lowest velocity is deleted.

**After Touch** After Touch events.

**Note:** This kind of data is automatically removed during recording.

**Pitch Bend** Pitch Bend events.

**Prog.Change** Program Change events, excluding the bundled Control Change #00 (Bank Select MSB) and #32 (Bank Select LSB).

**Note:** This kind of data is automatically removed during recording.

**Ctl.Change** All Control Change events, for example Bank Select, Modulation, Damper, Soft Pedal...

**CC00/32...CC127**

Single Control Change events. Double Control Change numbers (like 00/32) are MSB/LSB bundles.

**Note:** Some CC data are automatically removed during recording. See the table on page 101 for more information on the allowed data.

### Start / End Tick

Use these parameters to set the starting and ending points of the range to delete.

If a Chord Variation is four measures long, and you want to select it all, the Start will be positioned at 1.01.000, and the End at 5.01.000.

### Bottom / Top Note

Use these parameters to set the bottom and top of the keyboard range to delete. If you select the same note as the Bottom and Top parameters, you can select a single percussive instrument in a Drum or Percussion track.

**Note:** These parameters are available only when the All or Note option is selected.

### Execute

Press this button to execute the operation set in this page.

### Track status icon

Status of tracks. Press this icon to change the status.



Play status. The track can be heard.



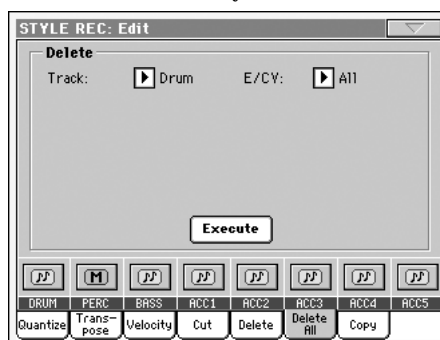
Mute status. The track cannot be heard.

### Track names

Under the buttons, a label for each track is shown.

## Style Edit: Delete All

This function lets you quickly delete a selected Style Element or Chord Variation, or the whole Style.



After setting the various parameters, press Execute.

### Track

**All** All tracks of the selected Style, Style Element or Chord Variation.

**Drum-Acc5** Single track of the selected Style, Style Element or Chord Variation.



## E / CV (Style Element/Chord Variation)

Use these parameters to select the Style Element and Chord Variation for editing.

All All Style Elements, i.e. the whole Style. When E/Track=All and CV=All, the whole Style is deleted, and all parameters are set to the default status.

Var1...CountIn

Single Style Element.

V1-CV1...CI-CV2

Single Chord Variation.

### Execute

Press this button to execute the operation set in this page.

### Track status icon

Status of tracks. Press this icon to change the status.



Play status. The track can be heard.



Mute status. The track cannot be heard.

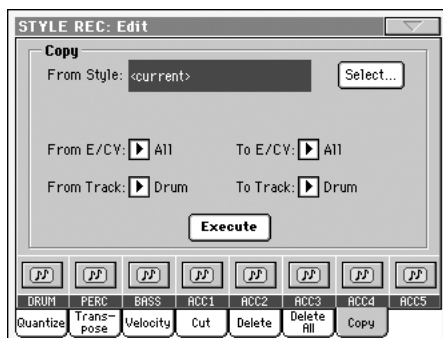
### Track names

Under the buttons, a label for each track is shown.

## Style Edit: Copy

Here you can copy a track, Chord Variation or Style Element inside the same Style, or from a different one. Furthermore, you can copy a whole Style.

**Warning:** The Copy operation deletes all data at the target location (overwrite).



After setting the various parameters, press Execute.

**Note:** If you copy too many events on the same "tick", the "Too many events!" message appears, and the copy operation is aborted.

**Note:** When you copy over an existing Chord Variation, Program Change data is not copied, to leave the original Sounds unchanged for that Chord Variation.

### From Style

Choose this option to select the source Style to copy the track, Chord Variation or Style Element from. Press the Select button to open the Style Select window and select the source Style.

## From... To E/CV (Style Element/Chord Variation)

Use these parameters to select the source and target Style Elements or Chord Variations.

**Note:** You can't copy from a Variation to a different Style Element (or vice-versa), because of their different structure.

All All Style Elements, i.e. the whole Style. You can't change the target, that is automatically set to All.

Var1...End2 Single Style Element.

V1-CV1...E2-CV2

Single Chord Variation.

### From... To Track

Use this parameter to select the source and target track to copy. You can double a track, to strengthen a pattern.

All All tracks of the selected Style, Style Element or Chord Variation.

Drum-Acc5 Single track of the selected Style, Style Element or Chord Variation.

### Execute

Press this button to execute the operation set in this page.

### Track status icon

Status of tracks. Press this icon to change the status.



Play status. The track can be heard.



Mute status. The track cannot be heard.

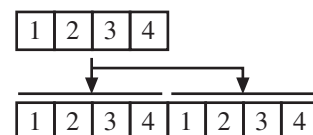
### Track names

Under the buttons, a label for each track is shown.

## Copying to a Chord Variation of a different length

You can copy a Chord Variation to a different one of a different length. Just keep in mind the following:

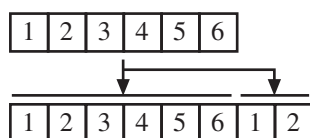
- If the source length is a divider of the target length, the source Chord Variation will be multiplied to fit the target Chord Variation. For example, if the source is 4-measures long, and the target 8-measures, the source will be copied two times.



- If the source length is not a divider of the target length, the source Chord Variation will be copied for as many measures as can fit the target Chord Variation. For example, if the source is 6-measures long, and the target 8-measures,



the source will be copied once, then the first 2 measures will be copied to fit the remaining 2 measures.

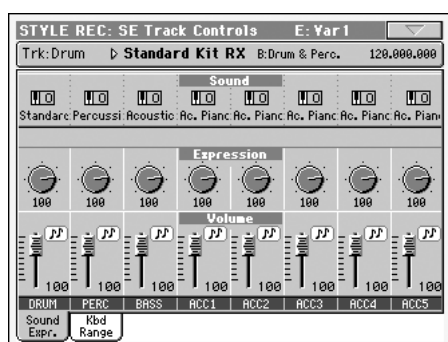


**Note:** Avoid copying to a Chord Variation with a different meter, for example a 4/4 Chord Variation onto a 3/4 one.

## Style Element Track Controls: Sound/Expression

In this page you can assign a different Sound to each track of the selected Style Element. Each Style Element can have different Sound; after saving the new Style, please don't forget to check the "Original Style Sounds" parameter in the Style Play mode (see page 78), to let the Style select the Sound bypassing the Style Performance settings.

In this page you can also modify the Expression (CC#11) value for each of the Style Element tracks. This lets you reduce the relative level of a track in a single Style Element, without reducing the overall Volume of the Style. This is a very useful control, when you have different Sounds assigned to the same track in different Style Elements, and the internal level of these Sounds must be different.



When in this page, press the corresponding button on the control panel to select a Style Element (VARIATION1 ... ENDING2).

To copy the settings of this page to another Style Element, use the "Copy Sound" and "Copy Expression" commands from the page menu (see "Copy Sounds dialog box" and "Copy Expression dialog box" starting from page 121).

### Selected Track Info area ▶STYLE

See "Selected track info area" on page 103 for detailed information.

### Sounds area ▶STYLE

See "Sounds area" on page 105 for detailed information.

### Expression area ▶STYLE

Use these knobs to set the Expression (CC#11) value for the corresponding track. This value can be seen at the beginning of the Event Edit list (see "Event Edit: Event Edit" on page 109).

Different Expression values can be defined for each Style Element. This way, you can set a different volume in each Style Element, relative to the general Volume value set in the Style Header.

### Volume area

Use these controls to set the volume and status of each track. See page 104 for more information.

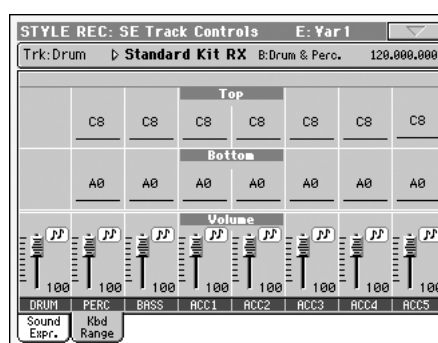
The Volume value is the same for the whole Style. Use the Expression controls to adjust the relative balance between tracks in each Style Element.

## Style Element Track Controls: Keyboard Range

The Keyboard Range automatically transposes any pattern note that would otherwise play too high or too low in pitch, compared to the original acoustic instrument, when transposed by the arranger. This will result in a more natural sound for each accompaniment instrument.

For example, the lower limit for a guitar is E2. If you play a chord under the E2, the transposed pattern could exceed this limit, and sound unnatural. A Bottom limit set to E2 for the guitar track will solve the problem.

Different Keyboard Range values can be set for each Style Element.



**Note:** The Keyboard Range is ignored while recording. The selected track can play on the full range of the keyboard.

When in this page, press the corresponding button on the control panel to select a Style Element (VARIATION1 ... ENDING2).

To copy the settings of this page to another Style Element, use the "Copy Keyboard Range" command from the page menu (see "Copy Key Range dialog box" on page 121).

### Top/Bottom ▶STYLE

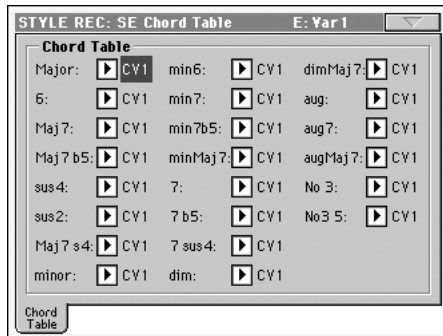
Use these parameters to set the bottom and top of the keyboard range for the corresponding track of the current Style Element.

## Volume area

Use these controls to set the volume and status of each track. See page 104 for more information.

## Style Element Chord Table: Chord Table

This is the page where you can assign a Chord Variation to each of the most important recognized chord. When a chord is recognized, the assigned Chord Variation will be automatically selected by the arranger to play the accompaniment.



When in this page, press the corresponding button on the control panel to select a Style Element (VARIATION1 ... ENDING2).

### Chord / Chord Variation

►STYLE

Use these parameters to assign a Chord Variation to each of the most important chords.

## Style Track Controls: Type/Trigger/Tension

In this page you can set the Mode, Retrigger mode for the Style tracks, and activate/deactivate the Tension for the Accompaniment tracks.



When in this page, press the corresponding button on the control panel to select a Style Element (VARIATION1 ... ENDING2).

### Track Type

►STYLE

Use this parameter to set the type of the corresponding track.

**Drum** Drum track. This type of track is not transposed by the arranger, and is used for Drum Kits made of Drum sounds. It can be affected by the Drum

Mapping of the Style Play mode (see “Drum Mapping (Var.1...Var.4)” on page 91).

**Perc** Percussion track. This type of track cannot be transposed, and is used for Drum Kit made of Percussion sounds. It is NOT affected by the Drum Mapping.

**Bass** Bass track. This type of track always plays the root when changing chord.

**Acc** Accompaniment track. This type of track can be used freely, for melodic or harmonic accompaniment patterns.

### Trigger Mode

►STYLE

This setting lets you define how Bass and Acc-type tracks are retriggered when the chord is changed.

**Off** Each time you play a new chord, current notes will be stopped. The track will remain silent until a new note will be encountered in the pattern.

**Rt** (Retrigger) The sound will be stopped, and new notes matching the recognized chord will be played back.

**Rp** (Repitch) New notes matching the recognized chord will be played back, by repitching notes already playing. There will be no break in the sound. This is very useful on Guitar and Bass tracks.

### Tension

►STYLE

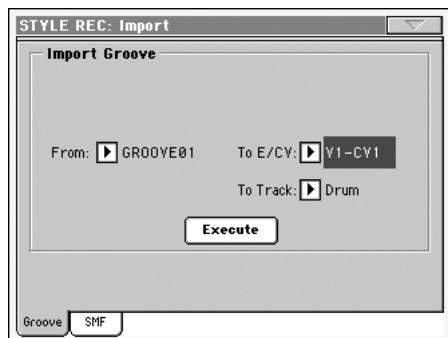
Tension adds notes (a 9th, 11th and/or 13th) that have actually been played to the accompaniment, even if they haven't been written in the Style pattern. This parameter specifies whether or not the Tension included in the recognized chord will be added to the Acc-type tracks.

**On** The Tension will be added.

**Off** No Tension will be added.

## Import: Import Groove

The Import Groove function allows the loading of MIDI Grooves (“.GRV” files) generated by the Slice function (see “Time Slice” on page 215 in the Sampling mode). By importing these data to a track, and assigning the Sound based on the sliced samples to the same track, you can play the original audio groove, and freely change its tempo.



**Note:** After importing a groove generated by a melody line (not by a percussive groove), the imported groove and samples will not be transposed together with the other Style tracks. Audio data cannot be transposed by the arranger.

**Note:** Please execute the Import Groove operation before turning the instrument off. All “.GRV” files generated by a Time Slice operation are deleted when turning the instrument off.

### From

Use this parameter to select one of the MIDI Groove patterns (“.GRV” files) generated when saving data after a Time Slice operation.

### To E/CV (Style Element/Chord Variation)

Use this parameter to select the target Style Element and Chord Variation.

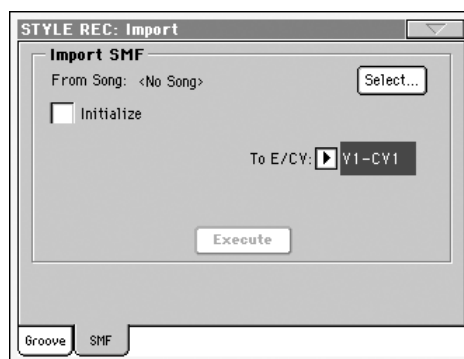
### To Track

Use this parameter to select the target track inside the selected Chord Variation. The Percussion track is usually suggested, since the Drum track is still suitable for standard Drum Kit sounds (count-in, break etc.). After importing the MIDI Groove pattern, assign the Sound, to which the sliced samples are assigned, to the track playing the MIDI Groove pattern.

## Import: Import SMF

The Import SMF function allows you to import MIDI data from a Standard MIDI File (SMF) created on your preferred external sequencer, and transform them in a Chord Variation.

**Note:** You cannot use this function to import data from any generic Song. The Standard MIDI File to be imported must be programmed as if it was one of Pa1X’s Chord Variations.



When importing an SMF, parameters like CV Length, Meter, Tempo Changes, Program Changes and Expression are recognized. These parameters will be imported as the header of the Style Element containing the Chord Variation, provided the “Initialize” parameter is checked, or the Style Element is empty.

**Hint:** It is a good idea to check the “Initialize” parameter when importing the first Chord Variation of a Style Element, and uncheck it when importing the following Chord Variations.

- Sounds assigned to each track can be imported, provided the Program Change, Bank Select MSB and LSB events are on the first ‘tick’ of the SMF. These data are loaded in the Style Element’s header, and not as Sounds assigned to the Style Performance.

**Note:** Sounds in the Style Element header can be overridden by Sounds assigned to the Style Performance, by checking the “Original Style Sound” parameter in the main page of the Style Play mode (Style Track view).

- If the above data was not found on the first ‘tick’ of the imported SMF, Sounds must be manually assigned to each track. You can do this in the “Record 1” or “Record 2”, or the “Sound/Expression” page of the Style Record mode,.
- Key/Chord, Chord Table, Expression, and any other Style Variation parameter, must be manually programmed in the relevant Style Record pages.
- The starting Tempo, and each track’s Volume, must be programmed as Style Performance data, and then saved in the Style Performance.
- Meter Change is not allowed, therefore not recognized.
- The Chord Variation length is the same as the imported SMF. You can change length by changing the value of the CV Length parameter, on the main page of the Style Record mode.

**Hint:** If a note extends beyond the last measure of the Chord Variation, an additional measure is appended (for example, if a note extends after the end of the fourth measure in a 4-measure pattern, a 5-measure Chord Variation will be generated). If so, change the CV Length value to reset the Chord Variation length. The exceeding note will be cut, to fit the new pattern length.

When programming a Chord Variation on an external sequencer, please assign each Style track to the correct MIDI channel, according to the following table.

MIDI Channel(s)	Pa1X Track
9	Bass
10	Drum
11	Percussion
12-16	Accompaniment 1-5

**Note:** Only SMF in format 0 can be loaded.

### From Song

This is the name of the Standard MIDI File to be loaded. Press the Select button to open the file selector, and select an “.SMF” file.

### Select

Press this button to open the file selector and load the SMF.

### Initialize

Check this parameter if you want all settings of the target Style Element (i.e., Key/Chord, Chord Table, Sounds...) are reset when loading the SMF.

**Hint:** It is a good idea to check the “Initialize” parameter when importing the first Chord Variation of a Style Element, and uncheck it when importing the following Chord Variations.

### To E/CV

Use this parameter to select a target Chord Variation.

### Execute

After setting all parameters in this page, press this button to import the Standard MIDI File into the target Chord Variation.

## Export SMF

The Export SMF function allows you to export a Chord Variation as a Standard MIDI File (SMF), and edit it on your preferred external sequencer.



### To Song

This (non-editable) parameter shows the name of the Standard MIDI File to be generated. The (automatically assigned) name will be the same of the exported Chord Variation.

### From E/CV

Use this pop-up menu to select one of the available Chord Variations from the current Style.

### Execute

After selecting a Chord Variation, press this button to export it as a Standard MIDI File. A standard file selector will appear. Select the target device and directory, then press Save.

## Page menu

Press the page menu icon to open the page menu. Press a command to select it. Press anywhere in the display to close the menu without selecting a command.



### Write Style

Select this command to open the Write Style dialog box, and save the Style to the internal memory.

See “Write Style dialog box” on page 120 for more information.

### Undo

*Only available in Record mode.* While in Record mode, cancels the latest recorded data and restores the previous situation. Selected a second time, it restores recorded data again (“Redo” function).

### Copy Sound

While the Style Element Track Control edit section is selected, use this command to open the Copy Sound dialog box and copy all Sounds assigned to the current Style Element tracks to a different Style Element.

See “Copy Sounds dialog box” on page 121 for more information.

### Copy Expression

While the Style Element Track Control edit section is selected, use this command to open the Copy Expression dialog box and copy all Expression values assigned to the current Style Element tracks to a different Style Element.

See “Copy Expression dialog box” on page 121 for more information.

### Copy Keyboard Range

While the Style Element Track Control edit section is selected, use this command to open the Copy Keyboard Range dialog box and copy all Keyboard Range values for the current Style Element tracks to a different Style Element.

See “Copy Key Range dialog box” on page 121 for more information.

### Copy Chord Table

*Only available while in the Style Element Chord Table page.* Select this command to open the Cpy Chord Table dialog box (see “Copy Chord Table dialog box” on page 121).

### Delete Current Track

Select this command to delete the selected track.

### Overdub Step Recording

Select this command to open the Overdub Step recording window (see “Overdub Step Recording window” on page 122).

### Solo Track

Select the track to be soloed, then check this item. You will hear only the selected track, and the ‘Solo’ warning will flash on the page header.

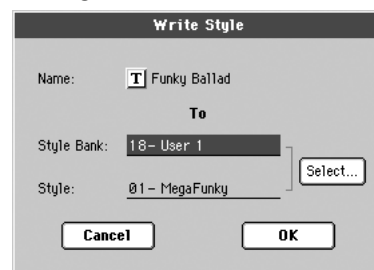
Uncheck this item to exit the Solo function.

### Exit from Record

Select this command to exit from Record without saving changes to the Style.

## Write Style dialog box

Open this window by choosing the Write Style item from the page menu. Here you can save the recorded or edited Style to memory, by choosing either a User or Direct HD bank.



Parameters saved in the Style are marked with the ▶STYLE symbol through the user’s manual.

### Name

▶STYLE

Name of the Style to be saved. Press the **T** (Text Edit) button next to the name to open the Text Edit window.

### Style Bank

Target bank of Styles. Each bank corresponds to one of the STYLE SELECT buttons. Use TEMPO/VALUE controls to select a different bank.

### Style

Target Style location in the selected bank. Use TEMPO/VALUE controls to select a different location.

**Note:** A User Style is usually prompted when writing a Style. However, you can overwrite a Factory Style, when the “Factory Style and Pad Protect” parameter is left unchecked (see page 265).

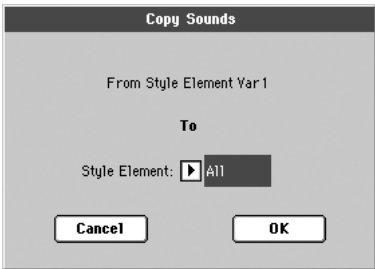
### Select... button

Press this button to open the Style Select window, and select a target location.

While in the Style Select window, use the buttons on top of the window to select either the User or the Direct HD banks.

## Copy Sounds dialog box

Open this window by choosing the Copy Sounds item from the page menu. Here you can copy all Sounds assigned to the current Style Element tracks to a different Style Element.



### From Style Element

*Non editable.* Currently selected Style Element.

### To Style Element

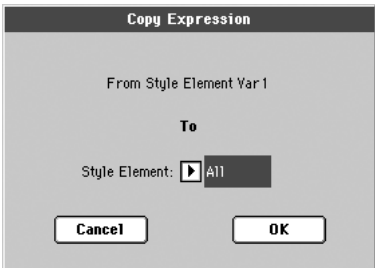
Target Style Element.

All                Settings will be copied to all Style Variation of the Style in edit.

Var1...CountIn  
Single Style Element where to copy settings to.

## Copy Expression dialog box

Open this window by choosing the Copy Expression item from the page menu. Here you can copy all Expression values assigned to the current Style Element tracks to a different Style Variation.



### From Style Element

*Non editable.* Currently selected Style Element.

### To Style Element

Target Style Element.

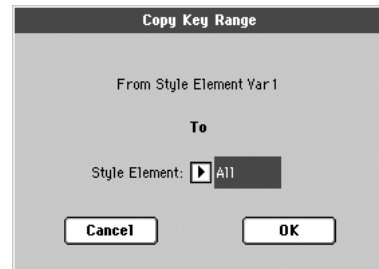
All                Settings will be copied to all Style Variation of the Style in edit.

Var1...CountIn

Single Style Element where to copy settings to.

## Copy Key Range dialog box

Open this window by choosing the Copy Keyboard Range item from the page menu. Here you can copy all Keyboard Range values for the current Style Element tracks to a different Style Variation.



### From Style Element

*Non editable.* Currently selected Style Element.

### To Style Element

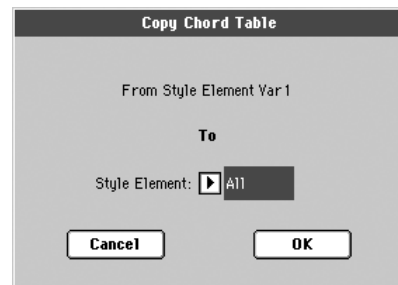
Target Style Element.

All                Settings will be copied to all Style Variation of the Style in edit.

Var1...CountIn  
Single Style Element where to copy settings to.

## Copy Chord Table dialog box

Open this window by choosing the Copy Chord Table item from the page menu. Here you can copy the Chord Table of the current Style Element to a different Style Element.



### To Style Element

Target Style Element.

All                Settings will be copied to all Style Variation of the Style in edit.

Var1...CountIn  
Single Style Element where to copy settings to.



## Overdub Step Recording window

The Step Record allows you to create a new Style by entering single notes or chords to each track, by playing them on the keyboard one at a time, with no need to play on time. This is very useful when transcribing an existing score, or needing a higher grade of detail, and is particularly suitable to create drum and percussion tracks.

To access this page, select the “Overdub Step Recording” command from the page menu.



### Track (Selected track)

Name of the selected track in record.

DRUM...ACC5

Style track.

### SE (Selected Style Element)

See “Element (Style Element)” on page 102.

### CV (Selected Chord Variation)

See “Chord Var (Chord Variation)” on page 102.

### Pos (Position)

This is the position of the event (note, rest or chord) to be inserted.

### Event list

Previously inserted events. You may delete this event, and set it in edit again, by pressing the Back button.

### Step Time values

Length of the event to be inserted.

♩ ... ♪ Note value.

Standard (–) Standard value of the selected note.

Dot (.) Augments the selected note by one half of its value.

Triplet (3) Triplet value of the selected note.

### Meter

Meter of the current measure. This parameter cannot be edited. You can set the Meter in the main page of the Style Record mode, before actually starting recording (see step 6 on page 105 for more information).

### Free Memory

Remaining memory for recording.

### Duration

Relative duration of the inserted note. The percentage is always referred to the step value.

25% Staccatissimo.

50% Staccato.

85% Ordinary articulation.

100% Legato.

### Velocity

Set this parameter before entering a note or chord. This will be the playing strength (i.e., velocity value) of the event to be inserted.

Kbd Keyboard. You can select this parameter, by turning all counter-clockwise the dial. When this option is selected, the playing strength of the played note is recognized and recorded.

1...127 Velocity value. The event will be inserted with this velocity value, and the actual playing strength of the note played on the keyboard will be ignored.

### Rest

Press this button to insert a rest.

### Tie

Press this button to tie the note to be inserted to the previous note.

### Back

Goes to the previous step, erasing the inserted event.

### Next M. (Next Measure)

Goes to the next measure, and fills the remaining space with rests.

### Done

Exits the Step Record mode.



## Pad Record mode

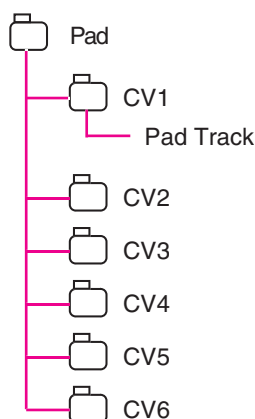
By entering the Pad Record mode, you can create your own Pads, or edit an existing Pad.

### The Pad structure

A Pad is basically a single-track Style. Most of what applies to Style recording also applies to Pad recording.

There are two different categories of Pads:

- “Hit” Pads. While they are mostly used as non-transposing events, they can also be transposing notes or chords. Basically, they are single-note or single-chord Sequences (see below).
- “Sequence” Pads, i.e., complex single-track patterns, that can be transposed by playing different chords on the keyboard – exactly as a Style track. They are roughly equivalent to single-element, single-track, multi-chord variation Styles (see illustration).



Each Pad is made up of up to six smaller units, called **Chord Variations (CV)**. Each Chord Variation is made of a single track (the Pad track).

Exactly as with the Styles, when playing a chord in the chord recognition area, the corresponding Chord Variation is recalled. Recognized chords are associated to a Chord Variation by means of the **Chord Variation Table**. Each Pad contains a Chord Variation Table.

As with the Styles, the **Note Transposition Tables (NTT)** applies to the Pads.

### What to record

Recording a Pad is a matter of recording a single track, inside a series of Chord Variations, inside the Pad itself.

You don't need to record all Chord Variations. It is often only needed to record just a Chord Variation.

### Pattern data vs. track data

While the Pad Record mode is where you can create or edit music patterns for the Pad, track parameters (like Sounds, Volume, Pan, Octave Transpose, FX settings...) have to be edited in Style Play mode.

- After creating or editing music patterns in Pad Record mode, save them by selecting the Write Pad command from the page menu of the Pad Record mode (see “Write Pad dialog box” on page 133).
- After editing track parameters in Style Play mode, save them to the Performance or STS by selecting the Write Performance or Write STS command from the page menu of the Style Play mode (see “Write Performance dialog box” on page 95 or “Write Single Touch Setting dialog box” on page 96).

### Entering the Style Record mode

To enter Pad Record mode, go to the Style Play mode and press REC. The Style/Pad Record Select window appears.



- Select **Record/Edit Pad** to select an existing Pad to edit. If it is a Factory Pad, you may not be able to save it at the original location (depending on the status of the “Factory Style and Pad Protect parameter in the ->Disk->Preferences page); you will select a User Pad location instead.
- Select **Record New Pad** to start from a new, empty Pad. When finished recording, you will save the new Pad into a User Pad location. (Pads can be saved into Factory Pad locations only when the “Factory Style and Pad Protect” parameter is set to Off).

When you have finished recording or editing the Hit or Sequence Pad, please save it (see “Exit by saving or deleting changes” below) and exit the Pad Record mode.

Then, go to the Pad page of the Style Play or Song Play mode, assign the new Hit or Sequence to a Pad button, and adjust the various track settings (Volume, Pan, and C/D FX Send... see “Pad/Switch: Pad” on page 92). Finally, save the Performance or STS by selecting the “Write Performance” or “Write STS” command from the page menu.

**Note:** While in Record mode, the footswitch and EC5 pedals are disabled. On the contrary, volume/expression-type pedals can be used.

## Exit by saving or deleting changes

When finished editing, you can save your Pad in memory, or cancel any change.

- To save changes, select the “Write Pad” command from the page menu (see “Write Pad dialog box” on page 133).
- To cancel all changes, select the “Exit from Record” command from the page menu, or press the REC button, to exit from record and return to the main page of the Style Record mode.

**Hint:** Save often while recording, to avoid accidentally losing your Pad.

## Listening to the Pad while in Record/Edit mode

While you are in Pad Record or Pad Edit mode, you can listen to the selected Chord Variation. To select a Chord Variation, go to the Main page of the Record/Edit mode.

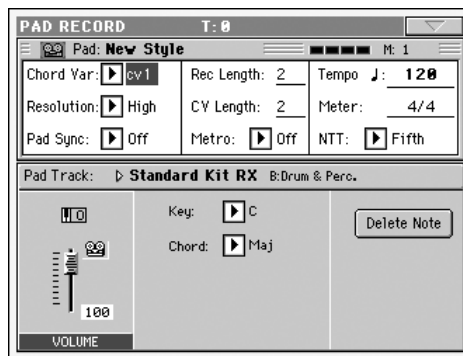
- When you are in the Main, Event Edit, Quantize, Transpose, Velocity, or Delete pages, you can listen to the selected Chord Variation. Press START/STOP to check how it works. Press START/STOP again to stop the playback.
- When you are in the Sounds/Expression, Keyboard Range, Chord Table, Trigger/Tension, Delete All, Copy, Style Element Controls or Style Control pages, you can listen to the whole Pad. Press START/STOP and play some chords to do your tests.

**Note:** In this mode, the pattern is always played back in loop, even if the “Pad Type” parameter is set to “One Shot” (see page 130).

**Note:** While in Pad Record mode, the Fingered 3 Chord Scanning mode is automatically selected.

## Main page - Pad Record

The Main page of the Pad Record mode looks like a simplified version of the Main page of the Style Record mode, with just a single track to be recorded and no Style Elements to be chosen. The only addition is the “Pad Sync” parameter.



Please look at the User's Manual for more information on the various parameters. Only general information and differences with the Style Record mode are described here.

## Recording parameters area

### Chord Var (Chord Variation)

This parameter lets you select one of the six available Chord Variations (CV1 ... CV6) for editing or recording.

**Note:** When this parameter and the assigned value is in small letters (cv1...cv6), the Chord Variation is empty; when it is in capitals (CV1...CV6), it is already recorded.

### Resolution

Use this parameter to set the quantization during recording.

### Pad Sync

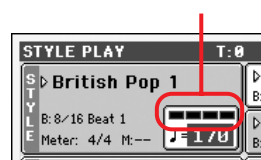
►PAD

This parameter allows you to set a synchronization mode for the Pad's pattern.

- |           |  |
|-----------|--|
| Off       | No synchronization. The sequence will start as soon as you press the PAD button.   |
| Continued | The pattern will start immediately, in sync with the arranger's or active sequencer's tempo. Depending on the current position of the beat counter, it might not start from its very beginning; instead, it will continue from the current position. |

For example, if the arranger's or sequencer's beat counter shows the third beat, and is playing tick 91, the Pad will start from its third beat, at tick 91.

The beat counter



This works exactly as if it was a Fill.

**Beat** The sequence will start at the next beat, in sync with the arranger's or sequencer's tempo. It will start from its very beginning (i.e., tick 1 or measure 1).

### Rec Length (Recording Length) ▶PAD

This parameter sets the recording length (in measures) of the sequence. Its value is always equal to, or a divider of, the Chord Variation Length (see next parameter).

**Warning:** If you assign CV Length a value lower than Rec Length, the value of Rec Length is not immediately updated in the display. Therefore, you are still free of changing the value of CV Length, before the measures exceeding its value are deleted (see warning in "CV Length (Chord Variation Length)" below).

However, if you press START/STOP to begin recording, the real Rec Length value is changed to the new one, even if the display still shows the old value.

### CV Length (Chord Variation Length) ▶PAD

This parameter sets the total length (up to 32 measures) for the selected Chord Variation. When playing a Style, this will be the length of the accompaniment pattern, when the chord corresponding to the Chord Variation is recognized on the keyboard.

**Warning:** If you reduce the Chord Variation Length after recording, any measure after the selected length will be deleted. Be very careful when setting the CV Length to a lower value after recording! If it happens, we suggest to exit from record without saving (see "Exit from Record" on page 133).

### Metro (Metronome)

This is where you can set the metronome.

- Off** No metronome click will be heard during recording. In any case, a one-bar precount will be played before starting recording.
- On1** Metronome on, with a one-bar precount before starting recording.
- On2** Metronome on, with a two-bar precount before starting recording.

### Tempo

Select this parameter to use TEMPO/VALUE controls to set the tempo.

**Note:** This value will not be recorded, and will only be used for testing the pattern at various speeds while editing or recording.

**Hint:** You can always change the Tempo, when other parameters are selected, by keeping the SHIFT button pressed, and rotating the DIAL.

### Meter ▶PAD

This is the meter (time signature) of the sequence. You can edit this parameter only when the sequence is empty, i.e. before you begin recording anything.

### NTT (Note Transposition Table) ▶PAD

The Note Transposition Table (NTT) determines how the arranger will transpose pattern notes, when a chord is recognized that does not exactly match the original chord of a Chord Variation. For example, if you only recorded a Chord Variation

for the CMaj chord, when a CMaj7 is recognized on the keyboard the arranger must transpose some notes to create the missing 7th.

- Root** The root note (in CMaj = C) is transposed to the missing notes.
- Fifth** The 5th note (in CMaj = G) is transposed to the missing notes.
- i-Series** The original pattern must be programmed on the "Maj7" or "min7" chords.
- NoTrnsp** No transposition table is applied. The pattern will always play as recorded, with no added notes. However, it will be transposed to other keys, depending on the played chord.

As recorded with  
NTT = Root or 5th  
(Key/Chord = CMaj)



When you play a CM7  
with NTT = Root



When you play a CM7  
with NTT = 5th



As recorded with  
NTT = i-Series  
(Key/Chord = CM7)



When you play a CMaj  
with NTT = i-Series



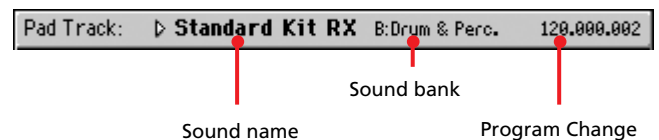
When you play a C7  
with NTT = i-Series



**Note:** The NTT does not work if the "Track Type" parameter is set to "Drum".

## Pad Track info area

This line lets you see the Sound assigned to the selected track.



### Sound name ▶PAD

Sound assigned to the Pad track. The triangle means you can press the name to open the Sound Select window, and select a different Sound.

### Sound bank ▶PAD

Bank the selected Sound belongs to.

### Program Change ▶PAD

Program Change number. Shown only when the "Show Program Change number" parameter is turned on in Global mode.

## Tracks volume/status area

### Octave Transpose

This (non-editable) indicator shows the current octave transposition. To change this value use the OCTAVE TRANSPOSE buttons on the control panel.

While this value is not memorized with the Pad, the transposition is used during recording. For example, if you play a C4 and a +1 octave transposition is selected, a C5 is recorded.


## Virtual slider


The virtual slider in the display shows the track's volume. To change the volume, touch the slider and use TEMPO/VALUE controls to change the value.

This value is not saved with the Pad, and is only used to test the Pad's volume during editing or recording.

## Track status icons

Status of the track. Press this icon to change the status.

 Record status. After starting recording, the track will receive notes from the keyboard and the MIDI IN connector.

 Mute status. The track cannot be heard.

## Key/Chord area

### Key/Chord

►PAD

This parameter pair allows you to define the track's original key and chord type, for the current Chord Variation. When playing the pattern back, this chord will be played back exactly as it was recorded, without any NTT processing (see above).

## Delete Note button

When a track is selected, you can use this command to delete a single note or a single percussive instrument.

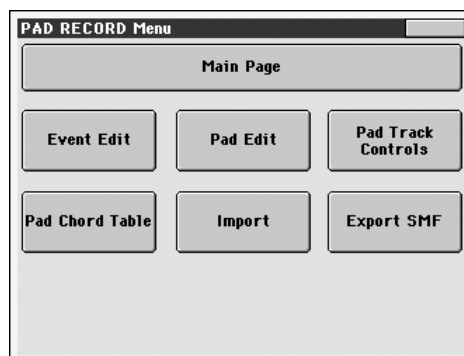
If the Pad is playing, this shortcut deletes the instrument only while the key is kept pressed, leaving all other notes untouched within the track.

## Pad Record procedure

Recording a Pad is very similar to recording a Style. Please see the relevant chapter in the User's manual.

## Edit menu

When pressing the MENU button while in Pad Record mode, the Pad Record Edit Menu will appear.



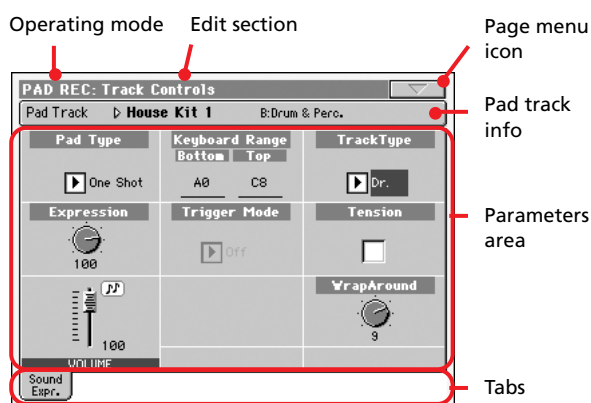
**Note:** The Pad Edit pages are a simplified version of the Style Edit pages. See the User's manual for information on the various parameters.

**Note:** While the Pad is in play, you cannot access the Edit section pages from the main page (see page 124). Stop the playback before pressing MENU.

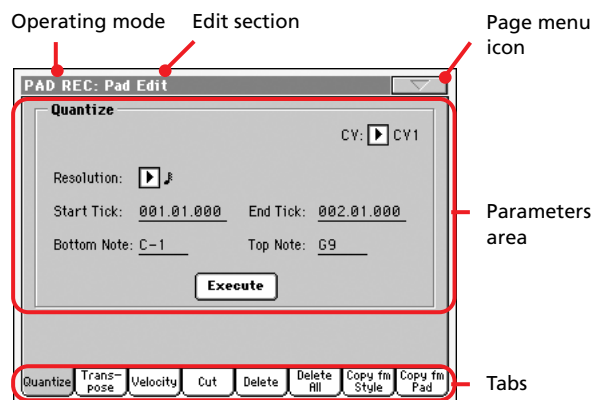
**Note:** When switching from the Edit section pages (Quantize, Transpose, Velocity, Delete) to the other pages, or vice-versa, the Pad (if in play) is automatically stopped.

## Edit page structure

Most edit pages share some basic elements.



Other pages exhibit a slightly different structure.



## Operating mode

This indicates that the instrument is in Pad Record mode.

## Edit section

This identifies the current edit section, corresponding to one of the items of the edit menu (see “Edit menu” on page 126).

## Page menu icon

Press this icon to open the page menu (see “Page menu” on page 132).

## Parameters area

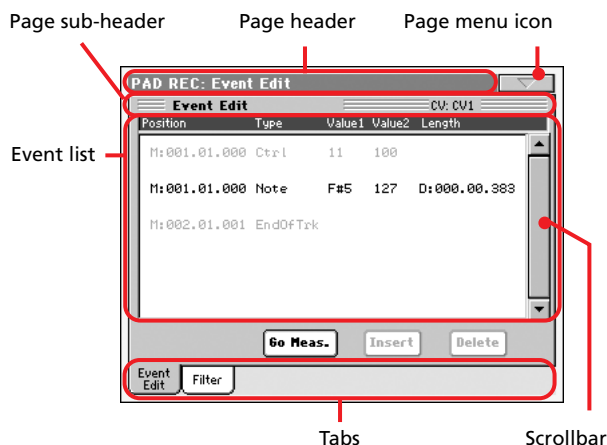
Each page contains various parameters. Use the tabs to select one of the available pages. For detailed information on the various types of parameters, see sections starting from page 127.

## Tabs

Use tabs to select one of the edit pages of the current edit section.

# Event Edit: Event Edit

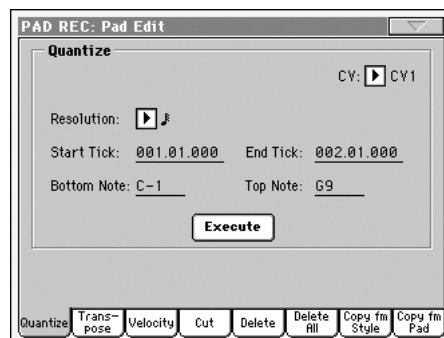
The Event Edit is the page where you can edit each single MIDI event of the selected Chord Variation. You can, for example, replace a note with a different one, or change its playing strength (i.e., velocity value).



This is very similar to the Style Record's Event Edit page. See the User's Manual for more information on the event editing procedure.

# Pad Edit: Quantize

The quantize function may be used to correct any timing mistake after recording, or to give the pattern a “groovy” feeling.



After setting the various parameters, press Execute.

## CV (Chord Variation)

Use this parameters to select the Chord Variation for editing.

## Resolution

This parameter sets the quantization after recording.

## Start / End Tick

Use these parameters to set the starting and ending points of the range to quantize.

## Bottom / Top Note

Use these parameters to set the bottom and top of the keyboard range to quantize.

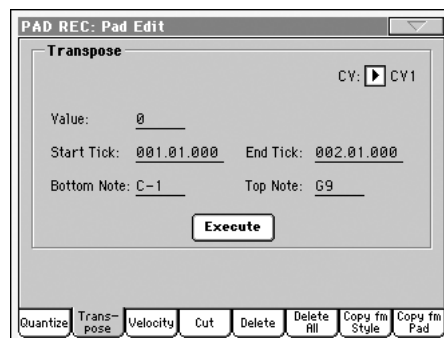
## Execute

Press this button to execute the operation set in this page.

# Pad Edit: Transpose

In this page you can transpose the selected track(s).

**Note:** After transposing, please don't forget to readjust the “Key/Chord” parameter in the main page of the Pad Record mode (see page 126).



After setting the various parameters, press Execute.

## CV (Chord Variation)

Use this parameters to select the Chord Variation for editing.

**Value**

Transpose value ( $\pm 127$  semitones).

**Start / End Tick**

Use these parameters to set the starting and ending points of the range to be transposed.

**Bottom / Top Note**

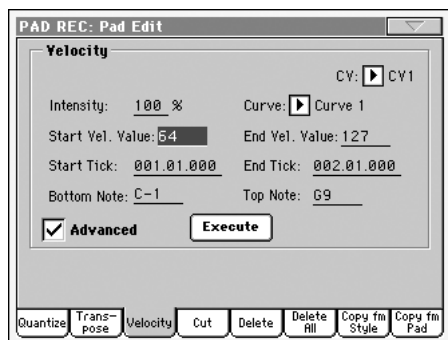
Use these parameters to set the bottom and top of the keyboard range to be transposed.

**Execute**

Press this button to execute the operation set in this page.

## Pad Edit: Velocity

In this page you can change the velocity (dynamics) value of notes in the selected track.



After setting the various parameters, press Execute.

**CV (Chord Variation)**

Use this parameters to select the Chord Variation for editing.

**Value**

Velocity change value ( $\pm 127$ ).

**Intensity**

(Only available in Advanced mode). Use this parameter to specify the degree to which the velocity data will be adjusted toward the curve you specify in "Curve".

**Curve**

(Only available in Advanced mode). Use this parameter to select from six types of curve, and specify how the velocity will change over time.

**Start / End Vel. Value**

(Only available in Advanced mode). Velocity change at the starting and ending ticks of the selected range.

**Start / End Tick**

Use these parameters to set the starting and ending points of the range to be modified.

**Bottom / Top Note**

Use these parameters to set the bottom and top of the keyboard range to be modified.

**Advanced**

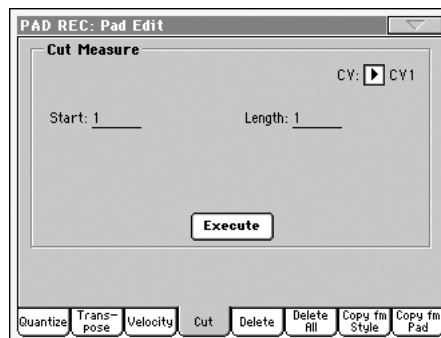
When this checkbox is checked, the "Intensity", "Curve", "Start Velocity Value" and "End Velocity Value" parameters can be edited.

**Execute**

Press this button to execute the operation set in this page.

## Pad Edit: Cut

This function lets you quickly delete a selected measure (or a series of measures) from the selected Chord Variation. All following events are moved back, to replace the cut measure(s).



After setting the various parameters, press Execute.

**CV (Chord Variation)**

Use this parameters to select the Chord Variation for editing.

**Start**

First measure to be cut.

**Length**

Number of measures to be cut.

**Execute**

Press this button to execute the operation set in this page.



## Pad Edit: Delete

This page is where you can delete MIDI events out of the Pad. This function does not remove measures from the pattern. To remove whole measure, use the Cut function (see “Pad Edit: Cut” on page 128)



After setting the various parameters, press Execute.

### CV (Chord Variation)

Use this parameters to select the Chord Variation for editing.

#### Event

Type of MIDI event to delete.

- All** All events. The measures are not removed from the Chord Variation.
- Note** All notes in the selected range.
- Dup.Note** All duplicate notes. When two notes with the same pitch are encountered on the same tick, the one with the lowest velocity is deleted.
- After Touch** After Touch events.  
*Note: This kind of data is automatically removed during recording.*
- Pitch Bend** Pitch Bend events.
- Prog.Change** Program Change events, excluding the bundled Control Change #00 (Bank Select MSB) and #32 (Bank Select LSB).  
*Note: This kind of data is automatically removed during recording.*
- Ctl.Change** All Control Change events, for example Bank Select, Modulation, Damper, Soft Pedal...
- CC00/32...CC127** Single Control Change events. Double Control Change numbers (like 00/32) are MSB/LSB bundles.  
*Note: Some CC data are automatically removed during recording. See the table in the User's Manual for more information on the allowed data.*

#### Start / End Tick

Use these parameters to set the starting and ending points of the range to delete.

### Bottom / Top Note

Use these parameters to set the bottom and top of the keyboard range to delete.

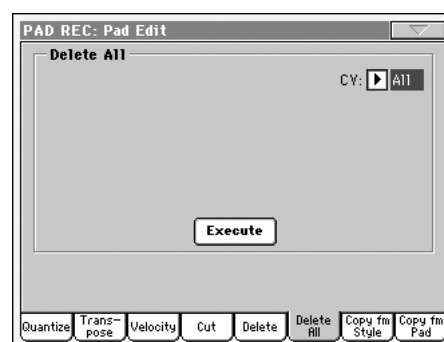
*Note: These parameters are available only when the All or Note option is selected.*

#### Execute

Press this button to execute the operation set in this page.

## Pad Edit: Delete All

This function lets you quickly delete a single Chord Variation, or the whole Pad.



After setting the various parameters, press Execute.

### CV (Chord Variation)

Use this parameters to select the Chord Variation to be deleted.

- All** All Chord Variations, i.e. the whole Pad. After deletion, all parameters are set to the default status.
- CV1...CV6** Single Chord Variation.

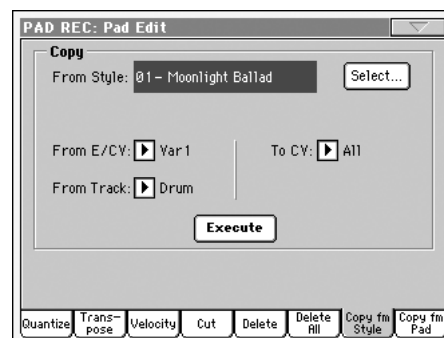
#### Execute

Press this button to execute the operation set in this page.

## Pad Edit: Copy from Style

Here you can copy a track from a Style, and transform it into a Pad pattern.

**Warning:** The Copy operation deletes all data at the target location (overwrite).



After setting the various parameters, press Execute.



**Note:** If you copy too many events on the same “tick”, the “Too many events!” message appears, and the copy operation is aborted.

**Note:** When you copy over an existing Chord Variation, Program Change data is not copied, to leave the original Sounds unchanged for that Chord Variation.

### From Style

Choose this option to select the source Style to copy the track from. Press the **Select** button to open the Style Select window and select the source Style.

### From E/CV (Style Element/Chord Variation)

Use this parameter to select the source Style Element and Chord Variation.

Var1...End2 A single Style Element, i.e., all Chord Variations.

V1-CV1...E2-CV2

A single Chord Variation.

### From Track

Use this parameter to select the source track to copy.

Drum-Acc5 Single track of the selected Style Element or Chord Variation.

### To CV (Chord Variation)

Use this parameter to select a target Chord Variation inside the current Pad.

CV1...CV6 Target Chord Variation.

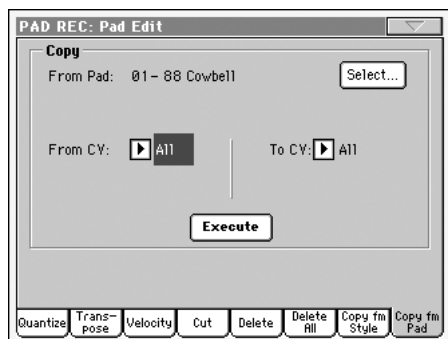
### Execute

Press this button to execute the operation set in this page.

## Pad Edit: Copy from Pad

Here you can copy a Chord Variation from a different Pad. Furthermore, you can copy a whole Pad.

**Warning:** The Copy operation deletes all data at the target location (overwrite).



After setting the various parameters, press Execute.

**Note:** If you copy too many events on the same “tick”, the “Too many events!” message appears, and the copy operation is aborted.

**Note:** When you copy over an existing Chord Variation, Program Change data is not copied, to leave the original Sounds unchanged for that Chord Variation.

### From Pad

Choose this option to select the source Pad to copy the Chord Variation from. Press the **Select** button to open the Pad Select window and select the source Pad.

### From CV (Chord Variation)

Use this parameter to select the source Chord Variation.

All All Chord Variations, i.e. the whole Pad. You can't change the target, that is automatically set to All.

CV1...CV6 Single Chord Variation.

### To CV (Chord Variation)

Use this parameter to select a target Chord Variation inside the current Pad.

CV1...CV6 Target Chord Variation. Automatically set to All if the “From CV” parameter is also set to All.

### Execute

Press this button to execute the operation set in this page.

## Pad Track Controls: Sound/Expression

In this page you can assign a Sound to the Pad track, adjust its Volume (CC#07) and Expression (CC#11) values, and set various other parameters, like the Keyboard Range, Track Type, Trigger Mode, Tension and Wrap Around.



### Sound/Bank

►PAD

Sound assigned to the Pad track.

### Pad Type

►PAD

Use this parameter to decide if the Pad will play once or if it will loop.

**Note:** While in Pad Record mode, the pattern is always played back in loop, even if this parameter is set to “One Shot”.

#### One Shot

When you press one of the PAD buttons, the corresponding Pad is only played once. This is useful for playing Hits or Sequences than must only play once.

#### Loop

When you press one of the PAD buttons, the corresponding Pad plays up to the end, then continues playing from the start. Press STOP in the PAD section to stop it playing. This is useful for playing cyclic sequences.

## Expression

►PAD

Use this knob to set the Expression (CC#11) value for the Pad track. This value can be seen at the beginning of the Event Edit list.

The Expression is useful to balance the Pad with the other Pads. For example, if you want the Pad you are recording is mellower than the average, just lower the Expression value.

## Volume

Use this slider to set the Volume (CC#07) value for the Pad track. This value is not saved with the Pad, and is only used to test the Pad's volume during editing or recording.

## Keyboard Range

►PAD

The Keyboard Range automatically transposes any pattern note that would otherwise play too high or too low in pitch, compared to the original acoustic instrument, when transposed by the arranger. This will result in a more natural sound for the Pad instrument.

**Note:** The Keyboard Range is ignored while recording. The Pad track can play on the full range of the keyboard.

## Trigger Mode

►PAD

(Not available if Track Type = Drum). This setting lets you define how Bass and Acc-type tracks are retriggered when the chord is changed.

- Off Each time you play a new chord, current notes will be stopped. The track will remain silent until a new note will be encountered in the pattern.
- Rt (Retrigger) The sound will be stopped, and new notes matching the recognized chord will be played back.
- Rp (Repitch) New notes matching the recognized chord will be played back, by repitching notes already playing. There will be no break in the sound. This is very useful on Guitar and Bass tracks.

## Track Type

►PAD

Use this parameter to set the type of the Pad track.

- Drum Drum track. This type of track is not transposed by the arranger, and is used for Drum Kits, or for tracks that you don't want to be transposed when playing a different chord.
- Bass Bass track. This type of track always plays the root when changing chord.
- Acc Accompaniment track. This type of track can be used freely, for melodic or harmonic accompaniment patterns.

## Tension

►PAD

Tension adds notes (a 9th, 11th and/or 13th) that have actually been played, even if they haven't been written in the Pad pattern. This parameter specifies whether or not the Tension included in the recognized chord will be added to an Acc-type track.

- On The Tension will be added.
- Off No Tension will be added.

## Wrap Around

►PAD

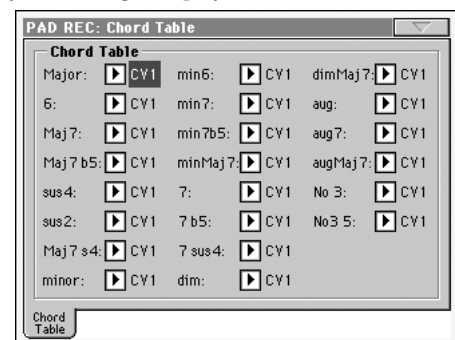
The wrap-around point is the highest register limit for the Pad track. The Pad pattern will be transposed according to the detected chord. If the chord is too high, the Pad track might play in a register that is too high, and therefore unnatural. If, however, it reaches the wrap-around point, it will be automatically transposed an octave lower.

The wrap-around point can be individually set in semitone steps up to a maximum of 12 semitones, relative to the chord root set in the main page of the Pad Record mode (see "Key/Chord" on page 126).

- 1...12 Maximum transposition (in semitones) of the track, referred to the original key of the Pad pattern.

## Pad Chord Table

This is the page where you can assign a Chord Variation to each of the most important recognized chord. When a chord is recognized, the assigned Chord Variation will be automatically selected by the arranger to play the Pad track.



## Chord / Chord Variation

►PAD

Use these parameters to assign a Chord Variation to each of the most important chords.

## Import: Import Groove

The Import Groove function allows the loading of MIDI Grooves (".GRV" files) generated by the Slice function (see "Time Slice" in the Sampling mode). By importing these data to the Pad track, and assigning the Sound based on the sliced samples to the same track, you can play the original audio groove, and freely change its tempo.



**From**

Use this parameter to select one of the MIDI Groove patterns (".GRV" files) generated when saving data after a Time Slice operation.

**To CV (Chord Variation)**

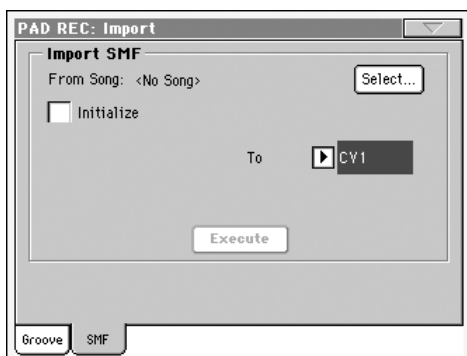
Use this parameter to select the target Chord Variation.

---

## Import: Import SMF

---

The Import SMF function allows you to import MIDI data from a Standard MIDI File (SMF) created on your preferred external sequencer, and transform them in a Chord Variation.



When programming a Chord Variation on the external sequencer, please assign the Pad track to the MIDI channel #10.

**Note:** Only SMF in format 0 can be loaded.

**From Song**

This is the name of the Standard MIDI File to be loaded. Press the Select button to open the file selector, and select an ".SMF" file.

**Select**

Press this button to open the file selector and load the SMF.

**Initialize**

Check this parameter if you want all Pad settings (i.e., Key/Chord, Chord Table, Sound...) are reset when loading the SMF.

**Hint:** It is a good idea to check this parameter when importing the first Chord Variation of the Pad, and uncheck it when importing the following Chord Variations.

**To CV**

Use this parameter to select a target Chord Variation.

**Execute**

After setting all parameters in this page, press this button to import the Standard MIDI File into the target Chord Variation.

---

## Export: SMF

---

The Export SMF function allows you to export a Chord Variation as a Standard MIDI File (SMF), and edit it on your preferred external sequencer.

**To Song**

This (non-editable) parameters shows the name of the Standard MIDI File to be generated. The (automatically assigned) name will be the same of the exported Chord Variation.

**From CV**

Use this pop-up menu to select one of the available Chord Variations from the current Pad.

**Execute**

After selecting a Chord Variation, press this button to export it as a Standard MIDI File. A standard file selector will appear. Select the target device and directory, then press Save.

---

## Page menu

---

Press the page menu icon to open the page menu. Press a command to select it. Press anywhere in the display to close the menu without selecting a command.

**Write Pad**

When done recording or editing a Pad, and you want to save the changes, select this command to open the Write Pad dialog box, and save the Pad to the internal memory.

See "Write Pad dialog box" on page 133 for more information.

**Undo**

Only available in the Main page of the Pad Record mode, and in some Pad Edit pages. While in Record mode, cancels the latest recorded data and restores the previous situation. Selected a second time, it restores recorded data again ("Redo" function).

### Delete Pad Track

Only available in the Main page of the Pad Record mode. Select this command to delete the Pad track.

### Overdub Step Recording

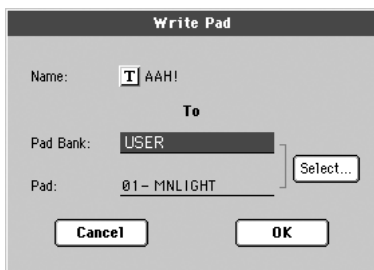
Only available in the Main page of the Pad Record mode. Select this command to open the Overdub Step recording window (see the Style Record chapter in the User's Manual for more information).

### Exit from Record

Select this command to exit from Record without saving changes to the Pad.

## Write Pad dialog box

Open this window by selecting the Write Pad item from the page menu. Here you can save the recorded or edited Pad to memory.



Parameters saved in the Pad are marked with the ▶PAD symbol through the user's manual.

### Name ▶PAD

Name of the Pad to be saved. Press the **T** (Text Edit) button next to the name to open the Text Edit window.

### Pad Bank

Target Pad bank. Only User banks can be selected.

### Pad

Target Pad location in the selected bank. Use TEMPO/VALUE controls to select a different location.

**Note:** A User Pad is usually prompted when writing a Pad. However, you can overwrite a Factory Pad, when the "Factory Style and Pad Protect" parameter is left unchecked (see page Disk->Preferences).

### Select... button

Press this button to open the Pad Select window, and select a target location.

## Song Play operating mode

The Song Play operating mode is where you can listen to Songs. Since the Pa1X is equipped with two onboard sequencers, you can play two Songs at the same time. This is very useful to mix between two Songs during a live performance. Songs can be in Standard MIDI File, Karaoke™, MP3 or Audio CD format (MP3 Player and Audio CD Player available as options).

You can play along with the Song with up to four Keyboard tracks (Upper 1-3, Lower). You can select different Sounds and Effects for Keyboard tracks by selecting Performances and STSs. A different Voice Processor Preset may be selected by a Performance or STS.

While in Song Play, you can use the SongBook to automatically select Songs for a desired music genre. With each Song entry in the SongBook, up to four STSs are associated.

### Transport controls

You can use the separate transport controls for each of the two onboard sequencers. Use the SEQUENCER 1 controls for Sequencer 1, and SEQUENCER 2 controls for Sequencer 2. See "SEQUENCER 1 TRANSPORT CONTROLS" on page 10 for more information).

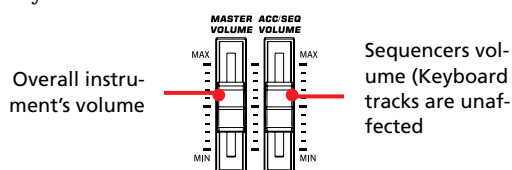
### MIDI Clock

In Song Play mode the MIDI Clock is always generated by the internal sequencer, even if the Clock parameter is set to MIDI (see "Clock Source" on page 230). While in this mode, Pa1X cannot receive MIDI Clock messages from the MIDI IN.

Pa1X transmits to the MIDI OUT only the MIDI Clock message generated by Sequencer 1.

### Master Volume, Sequencer Volume, Balance

While the MASTER VOLUME slider controls the general volume of the instrument, you can use the ACC/SEQ VOLUME slider to control only Sequencer's tracks volume. This lets you adjust the Sequencer's volume alone, while Keyboard tracks are not affected by this slider.



Use the BALANCE slider to mix between Sequencer 1 and Sequencer 2. Move it to the center for the maximum volume of both sequencers.



### Track parameters

Keyboard track settings made in Song Play mode may be saved to a Performance. You can recall different settings by just selecting a different Performance.

Settings for Song tracks, like pan, volume and FX sends, depend on the midifile.

Changes to Song tracks made in Song Play mode cannot be saved to the midifile, and are intended just for realtime editing. To permanently save changes to the various Song parameters, use Sequencer mode.

### Standard MIDI Files and Sounds

The native Song file format of the Pa1X is the Standard MIDI File (SMF), an universal standard set by all manufacturers. You can read these files with any musical instrument or computer.

A difference could be in the sound played by each track. If you recorded a Song with the Pa1X (Sequencer mode), using only General MIDI sounds, you can play the same Song on virtually any other musical instrument or computer. If you used Korg native sounds, you cannot play back the same sounds on instruments from other brands.

When you read SMFs in Song Play mode, there is no problem reading files made using only General MIDI sounds. Sounds could be different when playing a Song made on a different instrument: despite the wide compatibility of Pa1X with other, non-standard formats, differences may arise.

If so, go to the Sequencer operating mode and load the SMF. Then, manually reassign the non-matching Sounds, replacing them with similar Sounds on the Pa1X. Then, save the SMF again, and you will be able to play it in Song Play mode with the correct Sounds.

## NRPN Sound parameters

GM-compliant Standard MIDI Files can contain NRPN (#99, 98) Control Change messages. These messages are used to modify some Sound parameters before starting a Song. The following NRPN messages are recognized by the Pa1X:

NRPN	CC#99 (MSB)	CC#98 (LSB)	CC#06 (Data Entry)
Vibrato Rate	1	8	0...127 <sup>(a)</sup>
Vibrato Depth	1	9	0...127 <sup>(a)</sup>
Vibrato Decay	1	10	0...127 <sup>(a)</sup>
Filter Cutoff	1	32	0...127 <sup>(a)</sup>
Resonance	1	33	0...127 <sup>(a)</sup>
EG Attack Time	1	99	0...127 <sup>(a)</sup>
EG Decay Time	1	100	0...127 <sup>(a)</sup>
EG Release Time	1	102	0...127 <sup>(a)</sup>
Drum Filter Cutoff	20	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum Filter Resonance	21	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum EG Attack Time	22	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum EG Decay Time	23	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum Coarse Tune	24	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum Fine Tune	25	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum Volume	26	dd <sup>(b)</sup>	0...127
Drum Panpot	28	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum Rev Send (FX 1)	29	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum Mod Send (FX 2)	30	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>

(a). 64 = No change to the original parameter's value

(b). dd = Drum Instrument No. 0...127 (C0...C8)

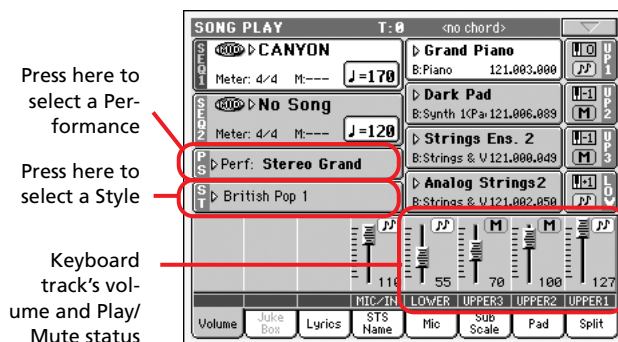
**Note:** These controls are reset when stopping the Song, or selecting a new Song.

## Keyboard, Pad and Sequencer tracks

The Pa1X is equipped with a double sequencer. Each Song can play a maximum of 16 tracks, for a total of 32 sequencer tracks.

In addition, you can play on the keyboard with four additional Keyboard tracks (Upper 1-3 and Lower). You can edit the Volume and Play/Mute status for these tracks on the main page of the Song Play mode (see illustration below).

While in Song Play mode, you can still select Performances or STSs from the latest selected Style. To select a different set of STSs, you can first select a different Style.



In addition to Keyboard tracks, selecting a different Performance or STS may change sounds assigned to the PADs.

When you enter Song Play mode from the Style Play mode, Keyboard and Pad tracks are the same as in Style Play mode.



## Main page

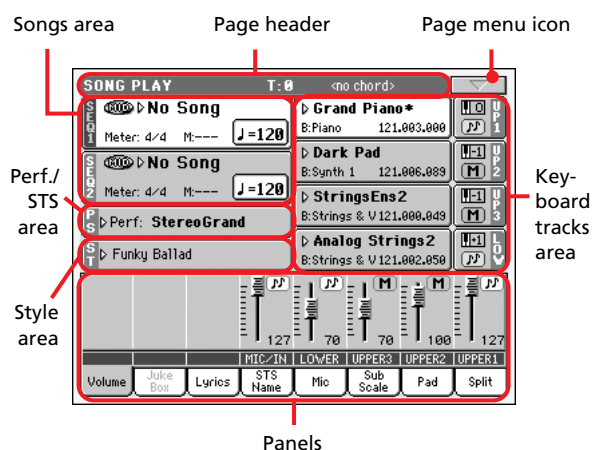
Press SONG PLAY to access this page from another operating mode.

To access this page from another operating mode, press the SONG PLAY button.

**Note:** When switching from Style Play to Song Play, the Song Setup is automatically selected, and various track parameters may change.

To return to this page from one of the Song Play edit pages, press the EXIT or SONG PLAY button.

To switch between Keyboard tracks (Normal view) and Song tracks (Song Tracks views), use the TRK. SEL. (TRACK SELECT) button. Pressed a first time, you will see tracks 1-8; a second press will show tracks 9-16; pressed again, you will go back to Keyboard tracks. (See “Song Tracks 1-8 and 9-16 pages” and “Volume panel” starting from page 139).



## Page header

This line shows the current operating mode, transposition and recognized chord.



Operating mode name      Master Transpose (in semitones)      Recognized chord

## Operating mode name

Name of the current operating mode.

## Master transpose



Master transpose value in semitones. This value can be changed using the TRANSPOSE buttons on the control panel.

**Note:** Transpose may be automatically changed when selecting a different Performance. It may also be changed when loading a Standard MIDI File generated with an instrument of the Korg Pa series.

To avoid transposing, “lock” the Master Transpose parameter in the Global (see “General Controls: Lock” on page 227), then write the Global to memory (see “Write Global - Global Setup dialog box” on page 251).

## Recognized chord

Displays the recognized chord, when you play a chord on the keyboard. If no chord abbreviation is shown, no chord recognition mode has been selected by using the CHORD SCANNING buttons (see page 11).

## Page menu icon

Press the page menu icon to open the menu. See “Page menu” on page 151 for more information.



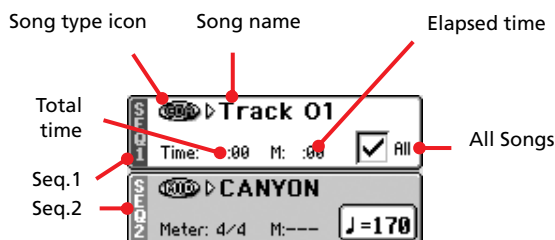
## Songs area

This is where Song names are shown, together with parameters depending on the selected type of Song.

• The following illustration shows parameters appearing when a *Standard MIDI Files* has been selected.



• The following illustration shows parameters appearing when an *Audio CD Track* has been selected.



• The following illustration shows parameters appearing when an *MP3 file* has been selected.



## Seq. 1/2

A different Song may be assigned to each of the two onboard sequencers (Seq.1 and Seq.2). Each sequencer has its own parameters.



## Song type icon

Songs of different types can be assigned to the sequencers. This icon shows the file type.



Standard MIDI File, often abbreviated as SMF (file extension: \*.MID or \*.KAR). The SMF (\*.MID) is the industry standard song format, used by Pa1X as its basic Song format when recording a new Song. A MIDI Karaoke File (\*.KAR) is an extension of the SMF format.



MPEG Layer-3 format, or MP3 (file extension: \*.MP3) – available with the EXBP-MP3 option installed. *Only assignable to one of the sequencers at a time.* This is a compressed audio file, that may be generated on any personal computer, or on the Pa1X itself.

**Note:** If starting an MP3 file's playback on a Sequencer, another MP3 file running on the other Sequencer will be stopped. You cannot play two MP3 files at the same time.

**Note:** If running an MP3 from a Data CD, and the CD is not spinning, it may take some time before the playback begins, since the CD needs a few seconds to start spinning again.



Audio CD Track – available with the CDRW-1 option installed. *Only assignable to one of the sequencers at a time*



*Only assignable to Sequencer 1.* A Jukebox file (file extension: \*.JBX) can be assigned to Sequencer 1, but its name is not shown in this area. The JBX icon appears, together with the name of the currently selected Song in the Jukebox list.

**Note:** To create or edit a Jukebox file, go to the Jukebox Edit page (see page 147).

## Song name

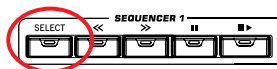
Displays the name of the Song assigned to the corresponding sequencer.

- If the sequencer is already selected (white background), press the Song name to open the Song Select window.
- If the sequencer is not selected (dark background), first select it, then press the Song name to open the Song Select window.

When the Song Select window appears, you can select a single Song or a Jukebox file (see “Song Select window” on page 74).

If you select another Song while a Song is in play within the same Sequencer, the old Song stops, and the new Song will be selected, ready to play.

To select a Song, you can also press the SELECT button (on the control panel) corresponding to the desired sequencer. Press SELECT a second time to select a Song by dialing in its ID number (see “Selecting a Song by its ID number” on page 75).



## Meter

*This parameter appears when a Standard MIDI File (or a Karaoke file) has been selected.*

Current Song meter.

## Measure number

*This parameter appears when a Standard MIDI File (or a Karaoke file) has been selected.*

Current measure number.

## Total time

*This parameter appears when an Audio CD Track or an MP3 file has been selected.*

Total length (in minutes:seconds) of the selected Audio CD Track or MP3 file.

## Elapsed time

*This parameter appears when an Audio CD Track or an MP3 file has been selected.*

Elapsed time (in minutes:seconds) of the Audio CD Track or MP3 file currently in play.

## Tempo

*This parameter appears when a Standard MIDI File (or a Karaoke file) has been selected.*

Metronome tempo. Select this parameter and use the TEMPO/VALUE controls to change the tempo. As an alternative, you don't need to select this parameter; just keep the SHIFT button pressed and use the DIAL to change the tempo of the selected sequencer.

**Note:** While in the main page, you can have the Tempo parameter of Sequencer 2 selected, while Sequencer 1 is selected. Use the DIAL to change Tempo for Sequencer 2, and SHIFT + DIAL to change Tempo for Sequencer 1.

## All Songs

*This checkbox appears when an Audio CD Track has been selected.*

Check this parameter to play all CD tracks, starting from the selected one.

## Performance/STS area

This is where the Performance or STS name is shown.



Selected Performance  
or STS

## Selected Performance or STS

This is the last selected Performance (PERF) or Single Touch Setting (STS).

Press the name to open the Performance Select window. As an alternative, use the PERFORMANCE/SOUND SELECT section to select a different Performance.

To select a different STS, use the four SINGLE TOUCH SETTING buttons under the display.

## Style area

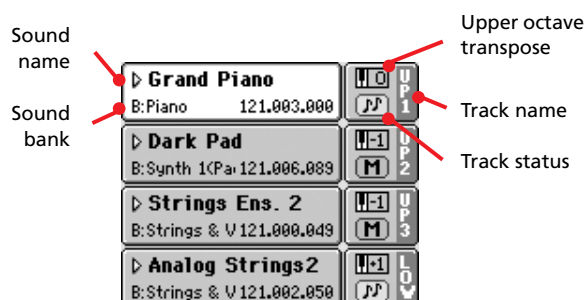
Currently selected Style. You can select a Style while playing Songs, to have it ready when switching to Style Play mode.

Press the Style name to open the Style Select window. As an alternative, use the STYLE SELECT section on the control panel. By selecting a different Style, you can also select a different set of STSSs.



## Keyboard tracks area

This is where Keyboard tracks are shown.



### Sound name

►PERF ►STS<sup>SB</sup>

Name of the Sound assigned to the corresponding Keyboard track.

- If the track is already selected (white background), press the Sound name to open the Sound Select window.
- If the track is not selected (dark background), first select it, then press the Sound name to open the Sound Select window.

### Sound bank

►PERF ►STS<sup>SB</sup>

Bank the current Sound belongs to.

### Program Change

►PERF ►STS<sup>SB</sup>

Program Change number. Shown only when the “Show Program Change number” parameter is turned on in Global mode. (See page 228).

## Keyboard track name

*Non editable.* Name of the corresponding track:

UP1	Upper 1
UP2	Upper 2
UP3	Upper 3
LOW	Lower

## Keyboard track octave transpose

►PERF ►STS<sup>SB</sup>

*Non editable.* Octave transpose of the corresponding track. To individually edit the octave transpose for each track, go to the “Mixer/Tuning: Tuning” edit page of the Song Play mode (see “Mixer/Tuning: Tuning” on page 84 for more details).

You can also transpose all Upper tracks by using the UPPER OCTAVE buttons on the control panel.

## Keyboard track status

►PERF ►STS<sup>SB</sup>

Play/mute status of the current track. Press this icon to change the status.

**Note:** You can save this setting into the Global-Song Play Setup (by choosing the “Write Global-Song Play Setup” command from the page menu), to leave the track status unchanged when selecting a different Standard MIDI File. This way, you can leave, for example, the bass track in mute, and let you bassist play it live.

However, the above is not true when reading a Standard MIDI File created with a Pa-Series instrument. These files do include special commands to force the Play/Mute status of each track.



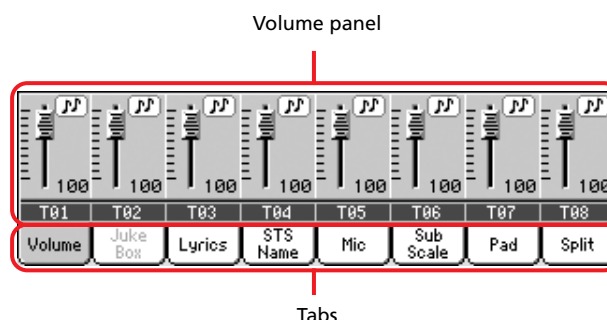
Play status. The track can be heard.



Mute status. The track cannot be heard.

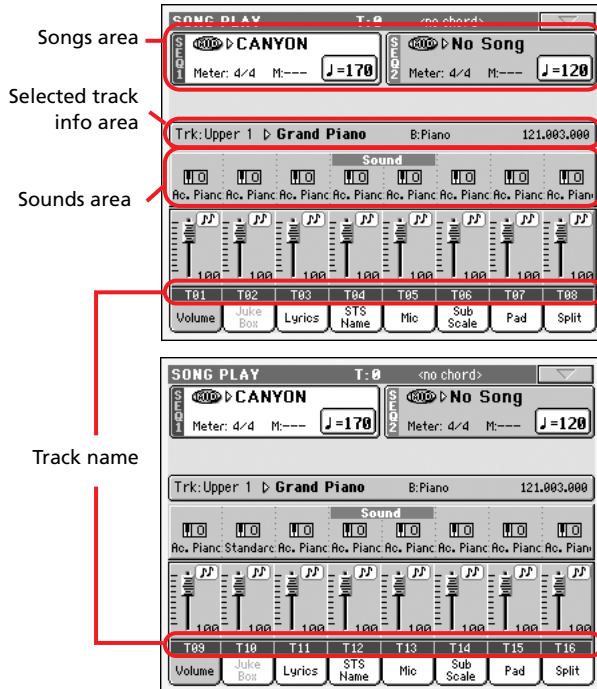
## Panels

The lower half of the main page contains the various panels, you can select by pressing the corresponding tabs. See more information in the relevant sections, starting from page 140.



## Song Tracks 1-8 and 9-16 pages

Repeatedly press the TRK. SEL. button to cycle between the Normal, Song Tracks 1-8 and Song Tracks 9-16 view. In Song Track views, the upper half of the main page changes, to show parameters for the Song tracks.



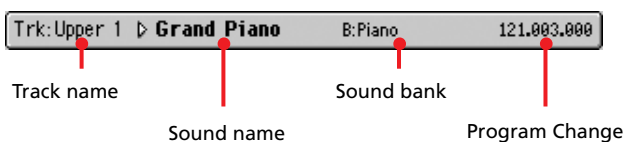
Press TRK. SEL. again to return to Normal view (Keyboard tracks). (See "Main page" on page 136).

### Songs area

Despite a different layout, it works as the Song area in the Normal view.

### Selected Track Info area

This line lets you see the Sound assigned to the selected track. Not only it is shown on the main page, but also in several edit pages.



#### Track name

Name of the selected track.

#### Sound name

Sound assigned to the selected track. Press anywhere in this area to open the Sound Select window, and select a different Sound.

#### Sound bank

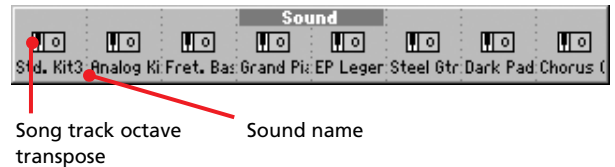
Bank the selected Sound belongs to.

### Program Change

Program Change number. Shown only when the "Show Program Change number" parameter is turned on. in Global mode (see page 228).

### Sounds area

This area lets you see Sounds and octave transposition for the eight tracks currently displayed.



### Song track octave transpose

*Non editable.* Octave transpose of the corresponding track. To edit the octave transpose, go to the "Mixer/Tuning: Tuning" edit page of the Song Play mode (see "Mixer/Tuning: Tuning" on page 84 for more details).

### Sound name

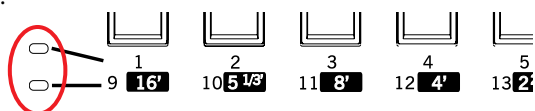
Name of the Sound assigned to the track. Touch a name a first time to select the corresponding track (detailed information are shown on the Selected Track Info area, see above). Touch it a second time to open the Sound Select window.

## Volume panel

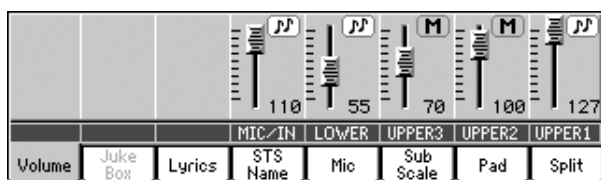
Press the Volume tab to select this panel. This is where you can set the volume of each track, and mute/unmute tracks.

Use the TRK. SEL. (TRACK SELECT) button to switch from Normal (Keyboard and Mic/In tracks) to Song Tracks 1-8 and Song Tracks 9-16 views.

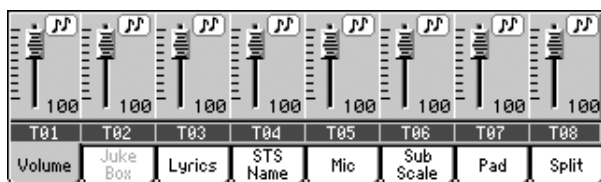
If the VOLUME LED above the SLIDER MODE button is turned on, the Assignable Sliders LEDs show which view is currently selected.



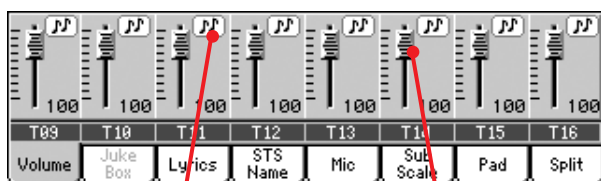
The **Normal view** shows grouped Style tracks, Mic/In controls, Keyboard tracks (upper sliders LED turned on):



The **Song Tracks 1-8 view** shows individual Song tracks 1-8 (third sliders LED turned on):



The **Song Tracks 9-16 view** shows individual Song tracks 9-16 (last sliders LED turned on):



Track status icon

Virtual slider

### Virtual sliders (track volume)

▶PERF ▶STS<sup>SB</sup>

Virtual sliders are a graphical display of each track's volume. Use the Assignable Sliders to change this value (provided the VOLUME LED is turned on above the SLIDER MODE button, see below).

As an alternative, press the track's area to select a track, and use TEMPO/VALUE controls to change the value.

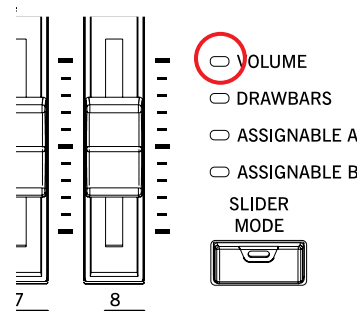
The volume of Keyboard tracks may be saved to a Performance.

### Assignable Sliders function

▶PERF ▶STS<sup>SB</sup>

Use the SLIDER MODE button to select the function assigned to the Assignable Sliders. When the VOLUME LED is turned on,

each Assignable Slider controls the volume of the corresponding track.



The assigned function may be saved to a Performance. Therefore, when selecting a Performance, the assigned function may change.

### Track status icons

▶PERF ▶STS<sup>SB</sup>

Play/mute status of the current track. Select the track, then press this area to change the track status. The status of Keyboard tracks may be saved to a Performance or STS.

See "Keyboard track status" on page 138 for more information.



Play status. The track can be heard.



Mute status. The track cannot be heard.

### Track names

Under the sliders, a label for each track is shown. Use the TRK. SEL button to switch between the various track views.

MIC/IN Audio inputs. [\*]

UPPER1...3 Upper tracks.

LOWER Lower track.

T01...T16 Song tracks. [\*]

[\*] Volume for these tracks is not memorized.

## Jukebox panel

When a Jukebox (JBX) file is assigned to Sequencer 1, you can use the list shown in this panel to browse the Jukebox list, and press the Select button in the display to select a Song to play. This way, you can select any Song in the list as your starting Song, and manually change the order of the Songs to play.

**Note:** A Jukebox file can be assigned to Sequencer 1 only.

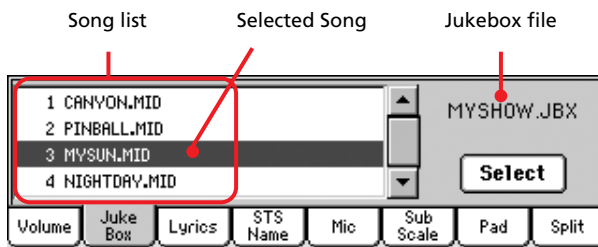
**Note:** This panel is only available after loading a Jukebox file.

**Hint:** To create or edit a Jukebox file, go to the Jukebox Edit page (see page 147).

**Warning:** Should you delete a Song included in the Jukebox list currently in play, the sequencer will stop, and the "No Song" message will appear. At this point, you can select the JukeBox tab to open the Jukebox panel, and select a different Song.

As an alternative, you can select the next Song by pressing SHIFT + >> (FAST FORWARD) in the SEQUENCER 1 section of the con-

trol panel, then press ■▶ (PLAY/STOP) in the SEQUENCER 1 section again.



### Song list

Use this list to browse through the Songs in the Jukebox list. Use the scrollbar to scroll the list.

### Selected Song

Name of the Song currently in play. You can select a different Song from the list, and press the Select button in the display to selected it for playback.

### Select button

Press this button to select the Song highlighted in the list, and assign it to Sequencer 1. If a Song is already playing, it will be stopped, and the selected Song will start playing back.

### Jukebox file

Name of the selected Jukebox file. To edit this file, see “Jukebox Editor” on page 147.

## Transport controls for the Jukebox

When you select a Jukebox file, Sequencer 1 transport controls work in a slightly different way than with single Songs.

<< and >> Pressed alone, these buttons are the Rewind and Fast Forward commands.

**(SHIFT)** Keep the SHIFT button pressed, and press these buttons to scroll to the previous or next Song in the Jukebox list.

**PAUSE** Pauses the Song at the current position. Press PAUSE or ■▶ (PLAY/STOP) to start the Song playing again.

■▶ (PLAY/STOP)

Starts or stops the current Song. When you stop the Song, the sequencer goes back to measure 1 of the current Song.

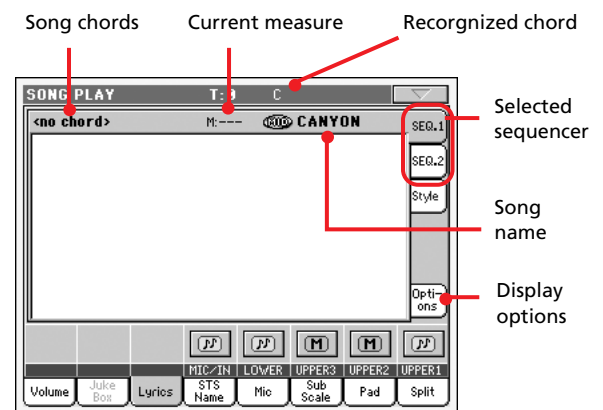
If the Jukebox panel is open, you can select the Song from which to start. See “Jukebox panel” above.

## Lyrics panel

This panel shows the lyrics and chord abbreviations included in a Song, or loaded as a “.TXT” file with the Song. You can see the following types of Lyrics:

- Lyrics included in Standard MIDI Files
- Lyrics included in Karaoke™ files
- Lyrics included in MP3 files (in ID3 format – see [www.id3.org](http://www.id3.org))
- Lyrics loaded as a “.TXT” file with a Standard MIDI File, Karaoke™ or MP3 file (see “Text files loaded with Standard MIDI Files and MP3 files” below)

Lyrics will be shown only if they are compatible with a standard format that Pa1X can understand.



While the Song is playing, the text flows in the display. Chord abbreviations (if any) will appear above the lyrics, in time with the music (depending on the “Show Chords” parameter status, under the Options side tab). Lyrics at the current position are highlighted.

### Song chords

Chords contained in the midfile (if any). This indicator may be easier to read than chords shown within the lyrics.

### Current measure

Current measure number.

### Recognized chord

Chords played on the keyboard, and recognized by the chord scanning engine.

### Selected sequencer (SEQ 1/SEQ 2)

Use these side tabs to select a sequencer whose Song to show.

**Note:** You can have Sequencer 2 selected in the Main page of the Song Play mode, and Sequencer 1 selected in the Lyrics page, or vice-versa. This way, you can select a Song whose lyrics to display on the external video monitor, while selecting a different sequencer for editing operations.

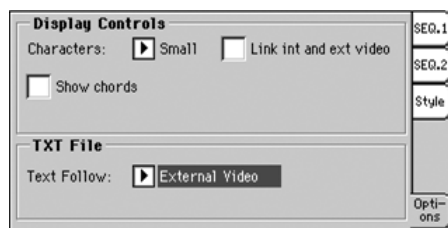
### Song name

Song assigned to the selected sequencer. Use the side tabs SEQ 1 and SEQ 2 to select a sequencer whose Song to show.



## Options

Press this side tab to access the Options panel, and adjust the various video settings (see details below).



## Display Controls

Use these parameters to define how lyrics are shown in the display.

### Characters

►GBL<sup>Sng</sup>

Size of fonts. You can choose between a smaller and a bigger font.

### Link int and ext video

►GBL<sup>Sng</sup>

When checked, settings for the internal display are automatically mirrored to the external video monitor.

### Show chords

►GBL<sup>Sng</sup>

If this parameter is checked, chords are shown above lyrics in the display – provided the midfile contains them.

### TXT File – Text Follow

►GBL<sup>Sng</sup>

When linking a “.TXT” file to a Song, you scroll the text by using the Text Down and Text Up assignable commands. Unlike the reading of Lyrics events contained in a Standard MIDI File, there is no automatic scrolling, that make the current verse start on top of the internal and the external display at the same time.

Therefore, text shown in the internal display and in the external video might begin with a different verse. This parameter lets you choose the internal or the external display as the one that must be perfectly lined.

**Int. Video** When pressing the control corresponding to the Text Down command, the first line of the current page of text is shown on top of the internal video. The external video might not be perfectly lined. Choose this option if you are reading verses from the internal display.

**Ext. Video** When pressing the control corresponding to the Text Down command, the first line of the current page of text is shown on top of the external video. The internal video might not be perfectly lined. Choose this option if your audience is reading verses from an external video.

**Note:** When this option is selected, the text scrollbar disappears from the internal display.

## Text files loaded with Standard MIDI Files and MP3 files

When a “.TXT” file exists in the same directory as a Standard MIDI File or MP3 file, and shares exactly the same name, it will be loaded with the “.MID” or “.MP3” file, and can be seen in the Lyrics page.

As an example, if the file “MYSONG.TXT” exists in the same directory as the “MYSONG.MID” or “MYSONG.MP3” file, it is loaded together with the matching “.MID” or “.MP3” file.

However, unlike ordinary Lyrics, the text will not scroll automatically while the Song is playing back. You must use an assignable switch or footswitch, with the Text Page Up or Text Page Down functions assigned, to scroll (respectively) to the previous or next text page.

**Note:** When a “.TXT” file is loaded with the Song, it overrides any included Lyrics data.

## STS Name panel

Select this panel to see the name of the four available STSs. See “STS Name panel” on page 80 for details.

## Mic panel

Select this panel to set parameters for the microphone input. See “Mic panel” on page 80 for details.

## Sub-Scale panel

Select this panel to select a secondary scale for the Keyboard tracks. See “Mixer/Tuning: Sub Scale” on page 84 for details.

## Pad panel

Select this panel to see which Hit or Sequence Pads are assigned to the four Pads. See “Pad panel” on page 81 for details.

## Split panel

Select this panel to adjust the split point for the Keyboard tracks. See “Split panel” on page 81 for details.

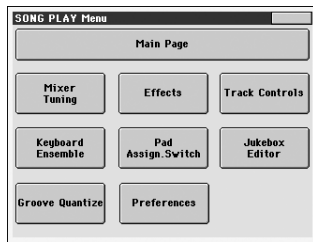


## Edit menu

From any page, press the MENU button to open the Song Play edit menu. This menu gives access to the various Song Play edit sections for the currently selected sequencer (see “Songs area” on page 139).

When in the menu, select an edit section, or press EXIT or SONG PLAY to exit the menu.

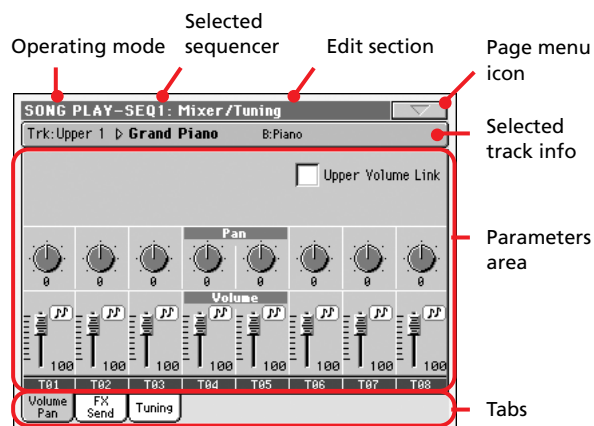
When in an edit page, press the EXIT or SONG PLAY button to go back to the main page of the Song Play operating mode.



Each item in this menu corresponds to an edit section. Each edit section groups various edit pages, that may be selected by pressing the corresponding tab on the lower part of the display.

## Edit page structure

All edit pages share some basic elements.



### Operating mode

This indicates that the instrument is in Song Play mode.

### Selected sequencer

Before entering edit, select one of the two sequencers, by using the Song area of the main page (see “Switching between sequencers during editing” below).

### Edit section

This identifies the current edit section, corresponding to one of the items of the edit menu (see “Edit menu” on page 143).

### Page menu icon

Press this icon to open the page menu (see “Page menu” on page 151).

### Parameters area

Each page contains various parameters. Use the tabs to select one of the pages. For detailed information on the various types of parameters, see sections starting from page 143.

### Tabs

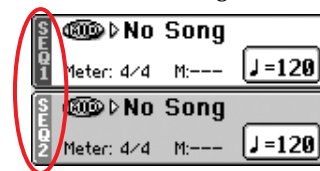
Use tabs to select one of the edit pages of the current edit section.

## Switching between sequencers during editing

When you enter Edit mode, you can edit the selected sequencer's parameters. The selected sequencer is always shown on the page header.



To select a sequencer, go to the main page of the Song Play mode, and select the sequencers you wish to edit. The selected sequencer is shown with a white background.



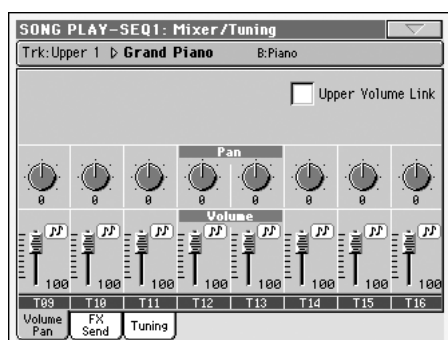
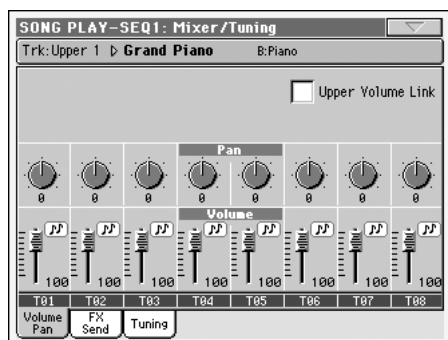
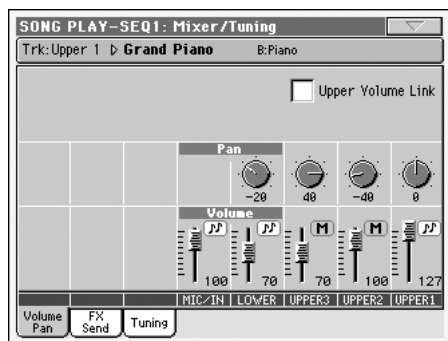
## Mixer/Tuning: Volume/Pan

This page lets you set the volume and pan for each of the Keyboard or Song tracks.

**Note:** Song parameters cannot be saved when saving to a Performance or STS.

**Note:** A muted track may be reset when selecting a different Song.

Use the TRK. SEL. button to switch from the Keyboard to the Song tracks, and vice versa.



## Upper Volume Link

►GBL<sup>Sty</sup>

This parameter allows you to define if changing the volume for one of the Upper tracks, proportionally changes also the volume for the other Upper tracks.

To save this parameter status, go to the Style Play mode, then select the Write Global-Style Play Setup from the page menu (see "Write Global-Song Play Setup dialog box" on page 151).

**Note:** This parameter is the same you can find in the "Preferences: Global Setup" page of the Style Play mode (see page 94).

**On** When changing volume to one of the Upper tracks, volume for the other Upper tracks changes in proportion.

**Off** When changing volume to one of the Upper tracks, only that track's volume is changed. Other Upper tracks are left unchanged.

## Pan

►PERF ►STS<sup>SB</sup>

Track position in the stereo field.

-64...-1 Left stereo channel.

0 Center.

+1...+63 Right stereo channel.

Off

If the track's output status is Left&Right (normal setting), the direct (unaffected) signal is not sent to the outputs; only the FX signal is heard for this track.

If the track is sent to a separate output, no FX is sent to any output.

To program the output status for each track, see "Audio Output: Seq1" and "Audio Output: Seq2" on page 233.

## Volume

►PERF ►STS<sup>SB</sup>

Track's volume.

0...127 MIDI value of the track's volume.

## Play/Mute icon

►PERF ►STS<sup>SB</sup> ►GBL<sup>Sng</sup>

Track's play/mute status. See "Keyboard track status" on page 138 for more information.



Play status. The track can be heard.



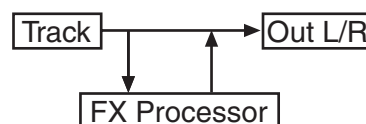
Mute status. The track cannot be heard.

## Mixer/Tuning: FX Send

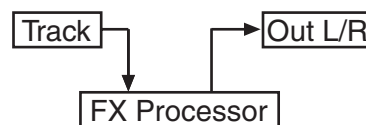
This page lets you set the level of the track's direct (unaffected) signal going to the Internal FX processors.

**Note:** Song parameters cannot be saved when saving to a Performance or STS.

The effect processors included in Pa1X are connected in parallel, so you can decide which percentage of the direct signal can be effected:



In case you do not want to send a track's direct signal to the output, but only the effected signal (as when using "insert" effects, like Rotary, Distortion, EQ...), just set the Pan to Off (see "Pan" above):



There are four Internal FX processors in Song Play mode. Usually, they are arranged as follows:

FX A Reverb processor for Sequencer 1 and 2.

FX B Modulating FX processor for Sequencer 1 and 2.

FX C Reverb processor for Keyboard tracks.

FX D Modulating FX processor for Keyboard tracks.

Depending on the status of the "Seq.2 FX Mode" parameter, Sequencer 2 might use the C/D effect pair (see page 150).

Furthermore, in Sequencer mode you can create Songs using all four effects (see "Effects: FX Select" on page 175).

Use the TRK. SEL. button to switch from Keyboard to Song tracks, and vice-versa.



**Note:** When you stop, then start the Song again, or select a different Song, the default Song track settings are selected again. You can, however, pause the Song, change the effects, then exit from pause and start the Song again. Edit the Song in Sequencer mode to permanently change the effects.

#### Send level (A...D) ▶PERF ▶STS<sup>SB</sup>

0...127      Level of the track (direct) signal sent to the effect processor.

#### Play/Mute icon ▶PERF ▶STS<sup>SB</sup> ▶GBL<sup>Sng</sup>

Track's play/mute status. See "Keyboard track status" on page 138 for more information.



Play status. The track can be heard.



Mute status. The track cannot be heard.

## Mixer/Tuning: Tuning

Parameters in this page let you set various tuning settings. See "Mixer/Tuning: Tuning" on page 84 for details.

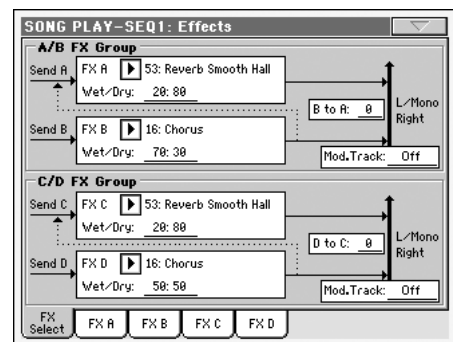
### Parameters

▶PERF ▶STS<sup>SB</sup>

**Note:** Song track values edited in this page are not saved, and are only intended for realtime use.

## Effects: FX Select

This page allows you to select effects to be assigned to the four Internal FX processors (A-D).



**Note:** When you stop the Song, or select a different Song, the default effects are selected again. You can, however, stop the Song, change the effects, then start the Song again. Edit the Song in Sequencer mode to permanently change the effects.

### FX A...D

▶PERF ▶STS<sup>SB</sup> ▶GBL<sup>Sng</sup>

Effects assigned to the corresponding effect processors. Usually, A and C are reverbs, while B and D are modulating effects (chorus, flanger, delay...). For a list of the available effects, see "Effects" on page 322.

### Wet/Dry

▶PERF ▶STS<sup>SB</sup> ▶GBL<sup>Sng</sup>

Mix between the effected (Wet) and direct (uneffected, Dry) signal.

Dry      Direct signal only.

Wet      Effected signal only.

nn:nn      Percentage of Wet/Dry signal.

### B to A, D to C

▶PERF ▶STS<sup>SB</sup> ▶GBL<sup>Sng</sup>

Amount of the B effect going back to the input of the A effect, or of the D effect going back to the input of the C effect.

### Mod.Track (Modulating Track)

▶PERF ▶GBL<sup>Sng</sup>

Source track for modulating MIDI messages. You can modulate an effect parameter with a MIDI message generated by a physical controller or a Song track.

## Effects in Song Play mode

Pa1X is equipped with four effect processors, or DSPs (Digital Signal Processors), to process MIDI tracks. In Song Play mode you can have two or four effects at the same time, depending on the midifile you are reading.

Effects A and B are usually reserved to both sequencers, while effects C and D are usually reserved to Keyboard tracks and Pads.

Depending on the status of the “Seq.2 FX Mode” parameter, each effect pair could be reserved to a different Sequencer (see page 150).

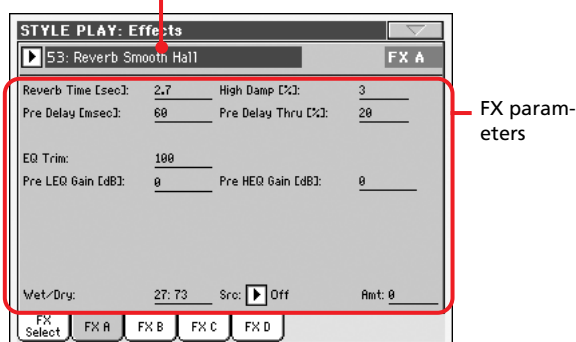
You can also create Songs that make use all four effects in Sequencer mode.

- A Song created on the Pa1X (in Sequencer mode) can use up to 4 effects (usually 2 reverbs + 2 modulating effects); each track may use the A/B or C/D pair.
- A Standard MIDI File or Karaoke™ file will only use 2 effects (usually 1 reverb + 1 modulating effect). This lets you use the remaining 2 effects for the Realtime tracks.
- When using both sequencers at the same time, and the “Seq.2 FX Mode” is set to “AB” mode (see page 150), they only use the A/B pair, while the C/D pair is reserved to the Keyboard tracks.
- When using both sequencers at the same time, and the “Seq.2 FX Mode” is set to “CD” mode (see page 150), Sequencer 1 uses the A/B pair, while Sequencer 2 uses the C/D pair, sharing it with Keyboard tracks.

## Effects: FX A...D

These pages contain the editing parameters for the four effect processors. Here is an example of the FX A page, with the Reverb Smooth Hall effect assigned.

Selected effect



### Selected effect

►PERF ►STS<sup>SB</sup> ►GBL<sup>Sng</sup>

Select one of the available effects from this pop-up menu. This is the same as the “FX A...D” parameters found in the “Effects: FX Select” page (see above).

### FX parameters

►PERF ►STS<sup>SB</sup> ►GBL<sup>Sng</sup>

Parameters may differ, depending on the selected effect. See “Effects” on page 322 for a list of available parameters for each effect type.

### Wet/Dry

►PERF ►STS<sup>SB</sup> ►GBL<sup>Sng</sup>

Mix between the effected (Wet) and direct (uneffected, Dry) signal. This is the same as the “Wet/Dry” parameters found in the “Effects: FX Select” page (see above).

### Src (Source)

►PERF ►STS<sup>SB</sup> ►GBL<sup>Sng</sup>

Modulation source. To select the track generating this message, see the “Mod.Track (Modulating Track)” parameters found in the “Effects: FX Select” page (see above). For a list of modulation source, see the “Effects” chapter.

## Track Controls: Mode

These parameters let you set the Internal/External, and the Poly/Mono status of Song tracks. See “Track Controls: Mode” on page 86.

### Parameters

►PERF ►STS<sup>SB</sup> ►GBL<sup>Sng</sup>

**Note:** These parameters can be saved to the Global-Song Play Setup, by selecting the Write Global-Song Play Setup command from the page menu.

## Track Controls: Drum Volume

These parameters let you adjust the volume for each percussive instrument family. See “Track Controls: Drum Volume” on page 146.

### Parameters

►PERF ►STS<sup>SB</sup>

**Note:** Song track values edited in this page are not saved, and are only intended for realtime use.

## Track Controls: Easy Edit

These parameters let you “fine-tune” edit parameters for Sounds assigned to the tracks. See “Track Controls: Easy Edit” on page 88.

### Parameters

►PERF ►STS<sup>SB</sup>

**Note:** Song track values edited in this page are not saved, and are only intended for realtime use.

## Keyboard/Ensemble: Keyboard Control

These parameters let you set parameters for the Keyboard tracks. See “Keyboard/Ensemble: Keyboard Control” on page 89.

### Parameters

►PERF ►STS<sup>SB</sup>

## Keyboard/Ensemble: Key/Velocity Range

These parameters let you select a note and velocity range for the Keyboard tracks. See “Keyboard/Ensemble: Key/Velocity Range” on page 89.

### Parameters

►PERF ►STS<sup>SB</sup>

## Keyboard/Ensemble: Ensemble

See “Keyboard/Ensemble: Ensemble” on page 90.

### Parameters

►PERF ►STS<sup>SB</sup>

## Pad/Switch: Pad

See “Pad/Switch: Pad” on page 92.

### Parameters

►PERF ►STS<sup>SB</sup>

## Pad/Switch: Assignable Switch

See “Pad/Switch: Assignable Switch” on page 92.

### Parameters

►PERF ►STS<sup>SB</sup>

## Jukebox Editor

The Jukebox function lets you play a list of Songs (127 max), at the simple touch of a button. You can play a Jukebox file by assigning it to Sequencer 1, after having selected it in the Song Select page, just as if it was an ordinary Song (see “Jukebox panel” on page 140).



In this page, you can create, edit and save a Jukebox file. A Jukebox list can contain Standard MIDI Files, Karaoke™ files, and MP3 files. (Note: MP3 files are only supported with the EXBP-MP3 option installed).

If a Jukebox file is already selected into a Sequencer, you will enter this page with that file ready to be edited. Otherwise, you will enter this page with an empty list.

To create a new Jukebox file, press Del All to remove all Songs or the current list. Add new Songs, then press Save and enter a different name before confirming. A new Jukebox file will be saved to disk.

### Move Up/Down

Use these buttons to move the selected item up or down in the list.

### Add

Adds a Song at the end of the current list. You can add up to 127 Songs in a list.

**Note:** A Jukebox list can include only Songs contained in the same folder.

**Hint:** Instead of a single Song, you can select a Jukebox file, and add its whole content to the current Jukebox list.

### Insert

Inserts a Song at the current position (i.e., between the selected item and the preceding one). All subsequent Songs are moved to the next higher-numbered slot. You can add up to 127 Songs in a list.

**Note:** A Jukebox list can include only Songs contained in the same folder.

**Hint:** Instead of a single Song, you can select a Jukebox file, and insert its whole content to the current Jukebox list.

### Delete

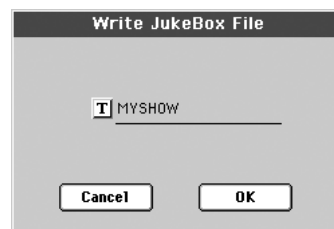
This command lets you delete the selected Song from the list.

### Del All

Select this command to delete the whole Jukebox list.

### Save

Press this button to save the Jukebox file to disk. The Save Jukebox File dialog box appears, allowing you to edit the name and save your file to disk.



Press the **T** (Text Edit) button to open the Text Edit window, and edit the name.

If you are editing an existing list, and do not change its name, the old file is overwritten. If you change it, a new file will be created on disk.

If you are saving a new list, the “NEWNAME.JBX” name is automatically assigned, and you can edit it.

**Note:** You can save your “.JBX” file only in the same folder as the Song files included in the list.

## Groove Quantize

You can apply a realtime “groove-quantization” to Sequencer 1. Groove-quantization is a way of changing the music groove during the playback, moving notes to the nearest axis of a rhythmic “grid”. Please feel free to experiment: this function is a great source of musical inspiration.

To enable groove quantize, you can either use the command in this page, or check the Groove Quantize Enable command in the page menu.



**Note:** Groove Quantize parameters are not saved, as they are only intended for realtime use.

### Enable

Enables/disables quantization. It is automatically set to Off each time the instrument is turned on, or when selecting a different Song.

**Hint:** You can enable/disable the Groove Quantize also by selecting the “Seq.1-Groove Quantize Enable” command from the page menu.

### Note Start

Enables/disables quantization of the Note On event (i.e. beginning of the note).

### Note Duration

Enables/disables quantization of the Note Off event (i.e. the length of the note).

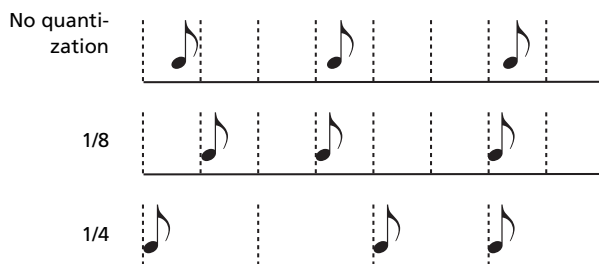
### Resolution

Coarse quantize grid resolution. This parameter is the main quantization value, to be varied with the Acc, Swing and Window values.

♫ (1/32)...♫ (1/4)

Grid resolution, in musical values (a “3” after the value means “triplet”). For example, when you select 1/8, all notes are moved to the nearest 1/8

division. When you select 1/4, all notes are moved to the nearest 1/4 division.



### Accuracy

Accuracy percentage of quantize. For example, if Acc=50, and the note is 20 tics away from the coarse grid, it is moved to the grid of only 10 tics.

0 No accuracy. The quantize is not executed.

100 Maximum accuracy. The note is moved exactly at the grid position.

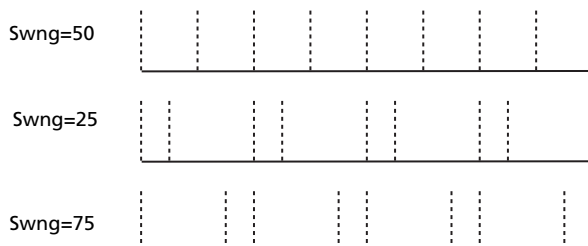
### Swing

Asymmetry of quantization. Grid axis are moved to the nearest grid axis.

0 Even-numbered axis are totally moved over the previous odd-numbered axis.

50 Axis are perfectly equidistant.

100 Even-numbered axis are totally moved over the following odd-numbered axis.

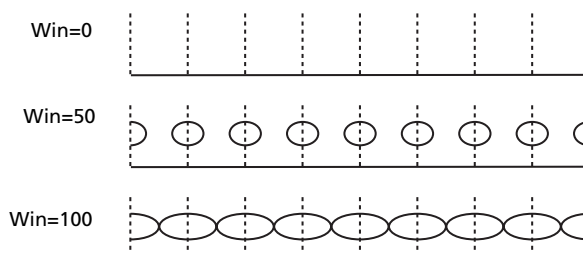


### Window

Area of quantize intervention, bordering the grid axis.

0 The quantize window corresponds to the axis. No quantization happens.

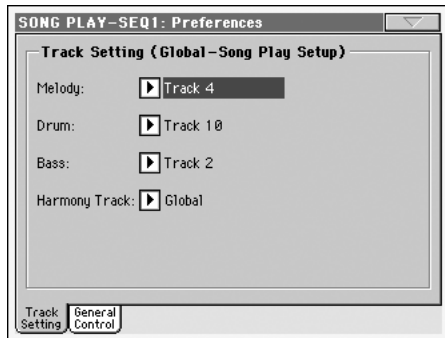
100 The quantize window extends to the nearest window; all events are quantized.





## Preferences: Track Settings

In this page, you can set various general parameters referred to Song tracks.



**Note:** These settings are stored in the Song Play Setup area of the Global file (together with all the other parameters marked with the ▶GBLSng abbreviation in the manual). After changing these settings, select the Write Global-Song Play Setup command from the page menu to save them to the Global.

### Melody

▶GBLSng

This parameter selects the Song's Melody track. This track can be muted using the "Melody Mute" function, assignable to an Assignable Switch, Footswitch or EC5 pedal.

### Drum

▶GBLSng

This parameter selects the Song's Drum track. This track is left set to play (together with the Bass track) when selecting the "Drum&Bass" function, assignable to an Assignable Switch, Footswitch or EC5 pedal.

### Bass

▶GBLSng

This parameter selects the Song's Bass track. This track is left set to play (together with the Drum track) when selecting the "Drum&Bass" function, assignable to an Assignable Switch, Footswitch or EC5 pedal.

### Harmony Track

▶GBLSng

The Voice Processor gets the chord notes (as well as Program Change messages) from the track selected with this parameter.

**Off** No track sends notes to the Harmony module of the Voice processor. Chords can still be received from the MIDI IN.

**Seq.1-Track 1...16**

Chords are sent from one of Sequencer 1 tracks.

**Seq.2-Track 1...16**

Chords are sent from one of Sequencer 2 tracks.

**Seq.1+2Track 1...16**

Notes are sent by a track with the same name from both Sequencer 1 and Sequencer 2.

**Warning:** If both sequencers are generating notes at the same time, the harmonizer will receive notes from both sequencers. Be warned that notes are sent to the harmonizer even when the BALANCE slider

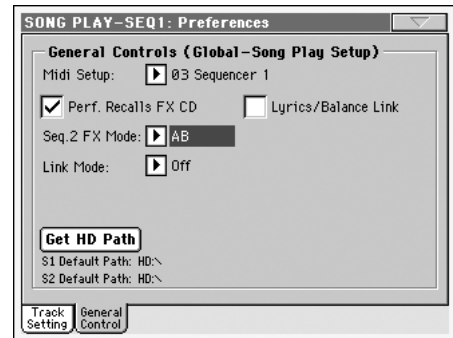
is totally moved away from a generating sequencer, and may interfere with the Song you are listening to.

Global

Chords are sent from the Chord Scanning area of the keyboard.

## Preferences: General Control

In this page, you can set various general parameters.



**Note:** These settings are stored in the Song Play Setup area of the Global file (together with all the other parameters marked with the ▶GBLSng abbreviation through the manual). After changing these settings, select the Write Global-Song Play Setup command from the page menu to save them to the Global.

### Midi Setup

▶GBLSng

MIDI channels for the Song Play mode can be automatically configured by selecting a MIDI Setup with this parameter. See "MIDI" on page 273 for more information on using MIDI Setups.

**Note:** To automatically select a MIDI Setup when entering the Song Play mode, select the Write Global-Song Play Setup command from the page menu.

For detailed information on MIDI Setup settings, see "MIDI Setup" on page 321.

**Note:** After selecting a MIDI Setup, you can go to the Global mode and apply any change to each channel setting. To store these changes to a MIDI Setup, while still in Global mode select the Write Global-Midi Setup command from the page menu. All MIDI Setups can be freely customized and overwritten.

**Hint:** To restore the original MIDI Setups, load the original Factory data again (downloadable from [www.korgpa.com](http://www.korgpa.com)).

### Performance recalls FX CD

▶GBLSng

This parameter selects the effects mode for the Performance.

**Off** When selecting a Performance, no effect is selected.

**On** The Performance selects the C/D effect pair.

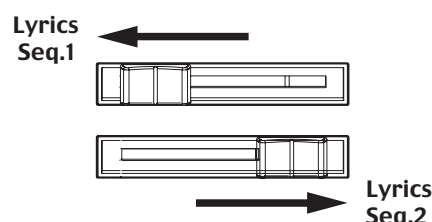
**Note:** When both this parameter and the "Seq.2 FX Mode" parameter are set to select the C/D effect pair, Sequencer 2 shares its effects with Keyboard tracks. Therefore, these effects can be changed either selecting a Song for Sequencer 2, or selecting a Performance.

## Lyrics/Balance Link

▶GBL<sup>Sng</sup>

This parameter allows you to use the BALANCE slider to select the Sequencer whose lyrics will be shown in the built-in display and on the external monitor (provided the optional VIF-3 video interface card is installed).

- Off** When moving the BALANCE cross-fader, only the Song will be selected. The shown lyrics remains unchanged.
- On** When moving the BALANCE slider fully to the left or the right, the corresponding Song will fade-in, and its lyrics will be selected and shown in the display and external monitor.



## Link Mode

▶GBL<sup>Sng</sup>

The two onboard Sequencers can work each with a different Tempo (Off), or use the same Tempo (Link modes).

**Note:** You can always start both sequencers simultaneously. Start both sequencers simultaneously by keeping SHIFT held down while pressing one of the ■▶ (PLAY/STOP) controls.

- Off** The sequencers Tempo are not linked. Each sequencer uses its own Tempo.
- Measure** The two sequencers Tempo are linked together. The Tempo data written into the Songs are ignored. Adjust the Tempo using the TEMPO/VALUE controls.
- Start one of the sequencers, by pressing its own ■▶ (PLAY/STOP) control. Then, start the other sequencer, by pressing the other ■▶ (PLAY/

STOP) control; the second sequencer starts at the next measure.

## Beat

The two sequencers Tempo are linked together. The Tempo data written into the Songs are ignored. Adjust the Tempo using the TEMPO/VALUE controls.

Start one of the sequencers, by pressing its own ■▶ (PLAY/STOP) control. Then, start the other sequencer, by pressing the other ■▶ (PLAY/STOP) control; the second sequencer starts at the next beat (quarter or octave, depending on the Song's Time Signature).

## Seq.2 FX Mode

▶GBL<sup>Sng</sup>

This parameter selects the effects mode for Sequencer 2. When a 4-effects Song is loaded, all four effects are used, independently from this setting.

- AB** The A and B effect pair is used. Sequencer 2 shares its effects with Sequencer 1.
- CD** The C and D effect pair is used.

**Note:** When this parameter is set to CD, Sequencer 2 shares its effects with Keyboard tracks, so these effects can be changed either selecting a Song for Sequencer 2, or selecting a Performance (unless the "Performance recalls FX CD" parameter is left unchecked – see above).

## Get HD Path

▶GBL<sup>Sng</sup>

Press this button to see the current path of each sequencer. This lets you know where currently selected Songs are located in the disks.

If you save these paths to the Global, by selecting the "Write Global-Song Play Setup" command from the page menu, the first time you will open the Song Select window, after turning the instrument on, the selected path will be selected by default.

## Page menu

Press the page menu icon to open the menu. Press a command to select it. Press anywhere in the display to close the menu without selecting a command.



### Write Performance

Select this command to open the Write Performance dialog box, and save most of the current control panel settings to a Performance.

See “Write Performance dialog box” on page 95 for more information.

### Write Global-Song Play Setup

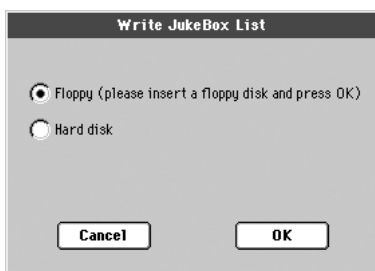
Select this command to open the Write Global-Song Play Setup dialog box, and save global settings that are unique to the Song Play mode.

See “Write Global-Song Play Setup dialog box” on page 151 for more information.

### Export Jukebox List

Select this command to save the current Jukebox list as a text file to a disk. Here is how it works.

1. While a Jukebox file is assigned to the sequencer, select the Export Jukebox List command from the page menu.
2. A dialog box will appear, asking you to select either a floppy disk or the hard disk.



3. Select an option.
  - If you select the floppy disk, insert a floppy disk in the disk drive, and press OK to confirm.
  - If you select the hard disk, just press OK to confirm.

**Note:** When saved, the text file will be named after the selected Jukebox file. For example, a Jukebox file named “Dummy.jbx” will generate a “Dummy.txt” file. A new, unnamed Jukebox file will generate a “New\_name.txt” file. If a file with the same name already exists on the floppy disk, it will be overwritten without waiting for any confirmation.

The list will include the progressive number assigned to each Song, file names in MS-DOS format (8.3), the total number of files in the list.

For the correct display and printing of the list on a personal computer, use a fixed size (i.e., non-proportional) character in your text editor.

### Seq.1-Groove Quantize Enable

Enables/disables the groove quantize (see “Groove Quantize” on page 148). It is automatically unchecked each time the instrument is turned on, or when selecting a different Song.

**Note:** Groove Quantize only works on Sequencer 1.

### Solo Track

Select the track to be soloed, and check this item. You will hear only the selected track, and the ‘Solo’ warning will flash on the page header.

Uncheck this item to exit the Solo function.

The Solo functions works in a slightly different way, depending on the selected track:

- **Keyboard track:** The selected Keyboard track is the only track you can hear when playing on the keyboard. All other Keyboard tracks are muted. Sequencer tracks are left in play status.
- **Song track:** The selected track is the only Song track you can hear. All other Song tracks are muted. Keyboard tracks are left in play status.

## Write Global-Song Play Setup dialog box

Open this dialog box by selecting the Write Global-Song Play Setup item from the page menu. Here, you can save various Song Preference settings (see “Preferences: Track Settings” on page 149), that are saved to the Global file.



Parameters saved in the Song Play Setup area of the Global are marked with the ►GBLSng symbol through the user’s manual.

## Playing back MP3 files

Playing back an MP3 is the same as playing a Standard MIDI File, with the following exceptions:

- You can play only one MP3 file at once.
- Tempo cannot be modified.
- Lyrics cannot be displayed.
- You need the EXBP-MP3 option to read MP3 files.

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## Playing back Audio CD tracks

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Playing back an Audio CD Track is the same as playing a Standard MIDI File, with the following exceptions:

- You can play only one Audio CD Track at once.
- Tempo cannot be modified.
- Lyrics cannot be displayed.
- You need the CDRW-1 option to read Audio CD Tracks.
- You can play a whole CD by selecting the All option while in the main page of the Song Play mode (see “All Songs” on page 137).

# SongBook

The SongBook is an onboard database that allows you to organize various “musical resources” (Style, Standard MIDI Files, KAR files, and – optionally – MP3 files) for easy retrieving.

The SongBook mode overlaps the Style Play and Song Play operating modes. When you select an entry from the database, the Style Play or Song Play mode is automatically selected, depending on the type of file associated with the entry.

In addition to helping you organize your shows, the SongBook allows you to associate up to four STSs to each Standard MIDI File or MP3, played back in Song Play mode. This way, it is easy to recall a complete setup for Keyboard tracks, effects, and the Voice Processor, for realtime playing over a midifile or MP3.

For more information on using the SongBook, see the Quick Guide (starting from page 54).

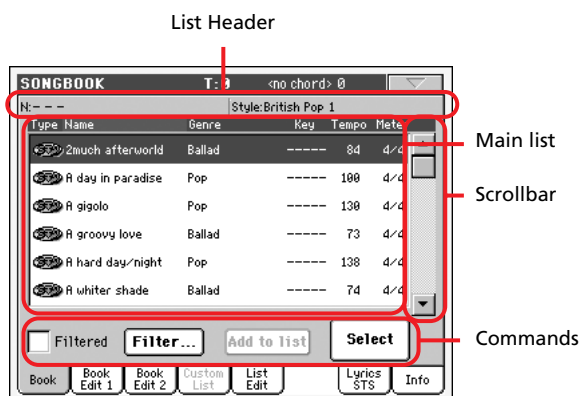
**Note:** SongBook entries do not include actual data, but only a pointer to a Style in memory, a Standard MIDI File, or an MP3 file. When you copy a SongBook file, referenced files are not copied with it.

**Warning:** If you load a SongBook list from disk (“SBD” file), the existing one in memory is deleted. Save your old SongBook list before loading a new one.

## Book

The Book page contains the full database of song entries. While in this page, you can select an entry, and press the Select button in the display to start playback.

If the “Enable List Edit” command is selected in the page menu (see above), the “Add to list” button becomes available, to let you add entries to the selected Custom List.



Each entry of this database may include the song’s author, name, genre, original key, tempo and meter. When selecting one of the entries, the associated Style, MP3 or Standard MIDI File is automatically recalled.

## List Header

The List Header may change, depending on the type of data associated with the selected entry.

- When a Style is associated to the entry, the currently selected entry’s name is shown on the left (“N:”), and the associated Style is shown on the right (“Style:”):

N: --- Style: Funky Ballad

- When a Standard MIDI File or MP3 is associated to the entry, the list header is split into two parts, with the left half referring to Sequencer 1, and the right one referring to Sequencer 2.

Information for the selected entry’s name (“N:”) and associated Standard MIDI File or MP3 (“S1:” or “S2:”) is given for each sequencer:

N: --- S1: CANYON N: --- S2: PINBALL

**Note:** If you select a different Style, Standard MIDI File or MP3, the entry’s name field (“N:”) returns blank (---), meaning the entry has been modified.

## Main list

Full list of the SongBook database. Use the scrollbar to browse through the list.

## Scrollbar

Use the scrollbar to scroll the entries.

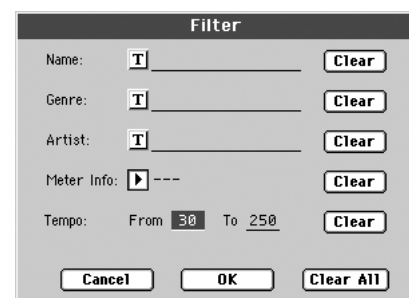
## Commands

### Filtered

When this box is checked, only entries matching the selected filter criteria are shown in the Main list. The box is automatically checked when you exit from the Filter dialog box by pressing OK (see below).

### Filter...

Press this button to open the Filter dialog box, and select one or more filter criteria, to show a restricted set of entries in the main list.



Press the **T** (Text Edit) button next to the search criteria you want to edit (Name, Genre, or Artist). You can also select a Meter, or a range of Tempo values.

Press the Clear button next to the search criterion you want to delete or set to a default value.

Press Clear All to reset all search criteria, excluding Tempo.

### Add to list

Select an entry, then press this button to add the selected entry to the current Custom List (see “Custom List” on page 157).

### Select

Press this button to confirm selection of the highlighted entry in the main list. After pressing this button, the name of the selected entry appears in the left upper corner of the display (“N:”).

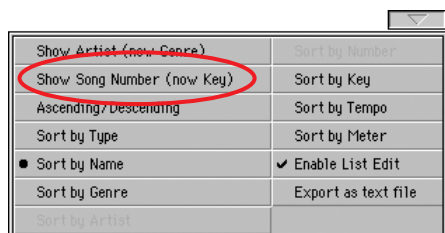
When you select a song in any of the SongBook lists, its name appears in reversed text, over a dark-blue background. While in this situation, the song is selected, but not yet in play.

When you press the Select button in the display, the song starts to play. The blue background turns to green, to show the Song is selected *and* currently in play.

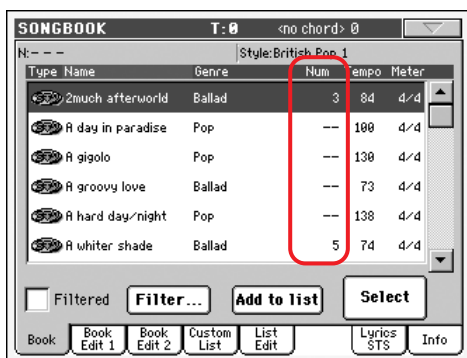
## Numeric selection of entries

When in SongBook mode, you can select a SongBook entry by means of an unique number. Numbers associated with each entry are added in the Book Edit 2 page (see “Book Edit 2” on page 156).

To see the numbers while in the Book page, select the “Show Song Numbers (now Key)” command from the page menu:



After you select this command, the “Num” column appears:



To see the “Key” column again, select the “Show Key (now Song Numbers)” command from the page menu.

To select a SongBook entry by entering its number, press the SONGBOOK button again while you are in any page of the SongBook mode. The numeric keypad will appear, allowing you to enter the number corresponding to the desired entry.

## Selecting SongBook entries via MIDI

SongBook entries can be selected via MIDI (through the special Control channel), by using the NRPN dedicated Control Change messages #99 (MSB, with value 2) and #98 (LSB, with value 64).

### Setting the special Control MIDI channel

First of all, go to the Global > MIDI > Setup/General Control page and select a MIDI Setup to be used when you will remotely select SongBook entries.

Then go to the Global > MIDI > Midi In Channel page, to assign a MIDI channel to the special Control channel. Assign the Control option to one of the sixteen available MIDI channels (usually one of the higher-numbered ones).

When done, save this setting to the current MIDI Setup by choosing the “Write Global-Midi Setup” command from the page menu.

If you plan to use a different MIDI channel for the Style Play and Song Play modes, repeat the above to create a second MIDI Setup.

### Assigning a MIDI Setup to the Style Play and Song Play modes

Since SongBook entries dynamically recall the Style Play or the Song Play modes, it is advisable to assign them the same MIDI Setup, or two different MIDI Setups with the Control channel assigned to the same MIDI channel. This way, the same MIDI channel will be used to select a SongBook entry in either the Style Play or Song Play mode.

When one of the operating modes is recalled, the MIDI Setup memorized in the Style Play Setup or in the Song Play Setup will be automatically selected, and MIDI channels will be automatically configured.

To assign a MIDI Setup to each of the two operating modes:

- In Style Play mode, go to the Style Play > Preferences > Style Setup page, and select a MIDI Setup. Select the Write Global-Style Setup command from the page menu.
- In Song Play mode, go to the Song Play > Preferences > General Control page, and select the same MIDI Setup assigned to the Style Play mode. Select the Write Global-Song Play Setup command from the page menu.

## Selecting SongBook entries via MIDI

When you are ready to remotely select SongBook entries, switch to the Style Play or Song Play mode.

At this point, Pa1X must receive on the special Control channel the NRPN Control Change messages #99 (MSB, with value 2) and #98 (LSB, with value 64) in fast succession, as an initialization string. This string must be sent only once, unless another NRPN control is sent on the same MIDI channel before selecting a different SongBook entry.

After the initialization string has been sent, you must send the selection string, made of two Control Change messages: CC#06 (Data Entry MSB) for the thousands and hundreds, and CC#38 (Data Entry LSB) for the tens and units. The range of the Data Entry controls, in this case, is 0~99 (instead of the typical 0~127).

The following examples show some typical situations.



- Send the following string to select SongBook entry #77:

Data 1	Data 2	
NRPN MSB	2	Initialization string (CC#99, 98)
NRPN LSB	64	
DataEnt MSB	0	Thousands and hundreds (00xx)
DataEnt LSB	77	Tens and units (xx77)

- Send the following string to select SongBook entry #100:

Data 1	Data 2	
NRPN MSB	2	Initialization string (CC#99, 98)
NRPN LSB	64	
DataEnt MSB	1	Thousands and hundreds (01xx)
DataEnt LSB	0	Tens and units (xx00)

- Send the following string to select SongBook entry #8563:

Data 1	Data 2	
NRPN MSB	2	Initialization string (CC#99, 98)
NRPN LSB	64	
DataEnt MSB	85	Thousands and hundreds (85xx)
DataEnt LSB	63	Tens and units (xx63)

## Book Edit 1

The Book Edit 1 page is where you to add or modify SongBook entries.

**Hint:** Use the Filter in the Book page, to quickly find an entry to be edited.

The Book Edit 1 page with a Style-based entry:

The Book Edit 1 page with a Song-based entry:

## Header

### Name

Name of the selected song entry. The name is assigned after you press the Write button to save the entry to the SongBook list.

### Resource

Style, Standard MIDI File or MP3 associated with the saved entry.

**Warning:** If you replace this resource with a different one, carrying the same disk path and name (in case of a Standard MIDI File or MP3) or memory location number (in case of a Style), the SongBook entry will no longer point to the right data. Be careful not to delete or move a Style or a file associated with a SongBook entry from the original location.

## Database Area

### Genre

Music genre associated with the entry.

### Artist

Name of the artist of the song associated with the entry.

### Key Info

Original key of the entry. The first field is the key name, the second one is the mode (major or minor).

### Tempo

Basic tempo of the Style, or starting tempo of the Standard MIDI File associated with the entry. This may change, if a Tempo Change event is included with the associated resource.

**Note:** Even if you can edit this value, the starting value of a Standard MIDI Files is always considered, and overrides this value.

**Note:** You can edit this value even if an MP3 is associated to the SongBook entry. However, this is just an indicative value, since you cannot change the MIDI Tempo of an MP3 file.

### Meter Info

Basic meter of the Style, or starting meter of the Standard MIDI File associated with the entry. This may change, if a Meter Change event is included with the associated resource.

### M.Transp. (Master Transpose)

Master Transpose. When the entry is selected, the Master Transpose for the whole instrument is automatically changed (unless the Master Transpose is locked).

**Note:** The Master Transpose value saved with the SongBook entry overrides any Master Transpose setting contained in the referenced Song.

## Resource Area

### Write Current Resource

When checked, a reference to the selected resource (the Style, SMF, KAR or MP3 file shown on the right of this parameter) is saved with the entry when pressing Write.

When unchecked, no new resource will be saved with the entry. The original resource associated with the entry will be preserved when pressing Write.

When pressing New Song to create a new, blank entry, this parameter is automatically checked, and cannot be modified. A reference to the associated resource will be saved with the new entry.

### Resource Name

Name of the currently selected Style, Standard MIDI File or MP3 file. It may differ from the name of the saved resource, shown on top of the page (see “Resource” above).

You can select a different resource, by just using the STYLE SELECT section, or the two SELECT buttons on the control panel, to select a different Style, Standard MIDI File or MP3 file.

As an alternative, you can exit to the Style Play or Song Play mode, and select resources from there. Then, press the SONG-BOOK button to return to the Book Edit page.

When you press Write, a link to the selected resource(s) is saved with the entry (provided “Write Current Resource” is selected when saving). The resource(s) will be recalled when you selected the entry it is associated to.

### Write STS

When checked, current Keyboard track and Voice Processor settings are saved to one of the four STSs available for each entry. You can also exit the SongBook, edit Keyboard tracks, then return to the SongBook and save the new settings to a different STS.

### STS Name

Name of the current STS. Press the **T** (Text Edit) button to open the Text Edit window, and modify the name.

### To STS Location

One of the four STS available for each entry, where you can save the current settings for Keyboard tracks and the Voice Processor.

## Buttons

### New Song

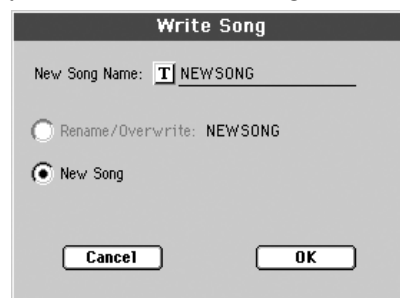
Press this button to create a new entry. Settings are copied from the currently selected Style, Standard MIDI File or MP3. The selected resource will be shown in the “Resource Name” field (see above).

### Del Song

Press this button to delete the current entry.

### Write

Press this button to open the Write Song dialog box, and save the current entry to the main list of the SongBook.



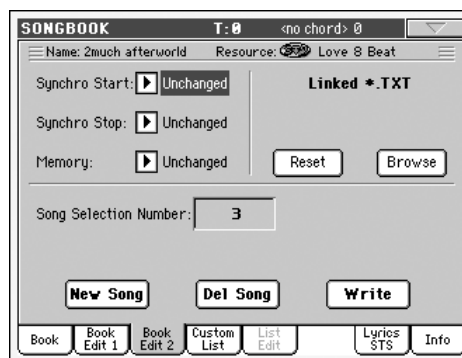
To assign a different name to the entry, press the **T** (Text Edit) button to open the Text Edit window.

Select an option to add the new entry to the SongBook:

- Select Rename/Overwrite to overwrite an existing entry, optionally changing its name. **Warning:** The older entry will be deleted!
- Select New Song to save a new entry to the SongBook database.

## Book Edit 2

The Book Edit 2 page is where you select Style options to be memorized, link a “.TXT” file, and assign a unique number to the current entry.



### Synchro Start / Synchro Stop / Memory

►SB

The status of these functions can be memorized in a SongBook entry.

**Note:** If the SongBook entry is based on a Song, Synchro Start and Synchro Stop appear in grey and cannot be modified, since they have no effect on a Song.

- |           |   |
|-----------|---|
| Unchanged | When selecting this SongBook entry, the status of the corresponding function is left unchanged. |
| Off       | When selecting this SongBook entry, the status of the corresponding function is turned off.     |
| On        | When selecting this SongBook entry, the status of the corresponding function is turned on.      |

## Linked .TXT

►SB

You can select a text (.TXT) file, and link it to the Style or Song associated with the current SongBook entry. When you select this entry, the text file is automatically loaded.

Text files can be seen in the display and in an external monitor (provided the VIF-3 Video Interface has been installed). Since there is no automatic synchronization between this kind of lyrics and the associated songs, you must scroll them manually. This can be accomplished in either of two ways:

- When a “.TXT” file is selected, a special vertical scrollbar appears in the Lyrics/STS page of the SongBook mode. Touch it to scroll through the text during the performance. See “Lyrics/STS” on page 159.
- Scrolling is also possible by means of the Text Page Down/Up command, that can be assigned to a Footswitch, EC Switch or Assignable Switch.

This section of the Book Edit 2 page contains two buttons:

- |        |  |
|--------|--|
| Reset  | Press this buttons to unlink the text file from the entry.   |
| Browse | Press this button to open a standard File Selector, and select a “.TXT” file to be linked to the current SongBook entry. |

## Song Selection Number

►SB

Here you can select a unique number (up to 9,999) to be associated to the current SongBook entry. By typing this number after pressing the SONGBOOK button again, you will be able to quickly recall an entry from the Book page (see “Numeric selection of entries” on page 154).

Assigning a number is not mandatory, but may help you to organize your entries. For example, you can use the different 100s to create a different way of categorizing your entries by genre or age.

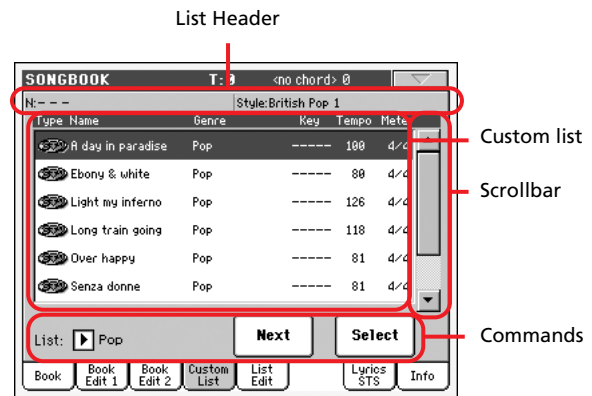
Each number can correspond only to a single entry. You cannot assign the same number to two or more different entries. Therefore, if you try to save a modified entry without first selecting a different Song Selection Number, and select the New Song option in the Write Song dialog box, the following error message will appear:

“This entry’s Song Selection Number has already been assigned. Please assign a different number”.

Should this happen, you will automatically be kept in the Book Edit 2 page. While there, assign a different number (while turning the Dial or pressing the UP/DOWN buttons, you are only allowed to select numbers that are still free) and try to save the entry again.

## Custom List

Use this page to select and use one of the available Custom Lists. Custom Lists are lists made of entries extracted from the main SongBook list (as seen in the Book page). They allow the use of smaller, customized SongBook lists, suitable for a single gig or your own music tastes.



### List header

See “List Header” on page 153.

### Custom list

List of files contained in the selected Custom List. Use the scrollbar to browse through the list.

### Scrollbar

Use the scrollbar to scroll the entries.

### Commands

#### List pop-up menu

Use this pop-up menu to select one of the available lists.

#### Next

Press this button to select the next entry in the list.

*Hint:* You can assign this command to an Assignable Switch or Assignable Footswitch.

#### Select

Press this button to confirm selection of the highlighted entry in the list. After pressing this button, the name of the selected entry appears in the left upper corner of the display (“N:”).

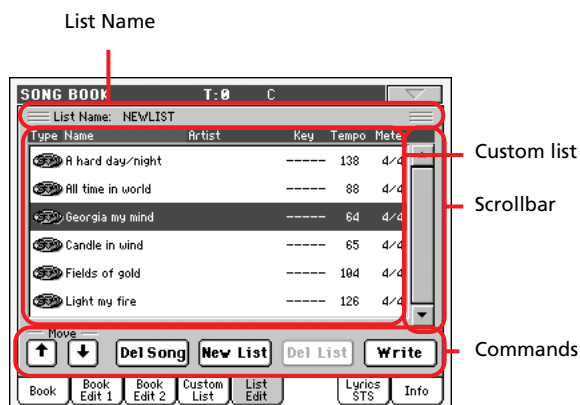
*Hint:* This command is useful to browse through the list, and select an entry different than the following one in the list.

## List Edit

This page is only available after checking the “Enable List Edit” command in the page menu (see page 160).

Use this page to edit the available Custom Lists. A Custom List is a set of SongBook entries, created by selecting items from the Main List.

To add entries to a Custom List, first create or select the list to be edited in this page. Then, go to the Book page, select the entry to be added, and press the “Add to list” button. When finished adding entries, return to this page and edit the selected list.



### List Name

Name of the selected list. To select a Custom List, go to the “Custom List” page and use the List pop-up menu.

### Custom list

List of songs contained in the selected Custom List. Use the scrollbar to browse through the list.

### Scrollbar

Use the scrollbar to scroll the entries.

## Commands

### Move

Use these buttons to move the selected song entry up or down in the list.

### Del Song

Press this button to delete the selected song entry from the list.

### New List

Press this button to create a new, empty Custom List.

### Del List

Press this button to delete the current list.

### Write

Press this button to save changes to the selected Custom List.



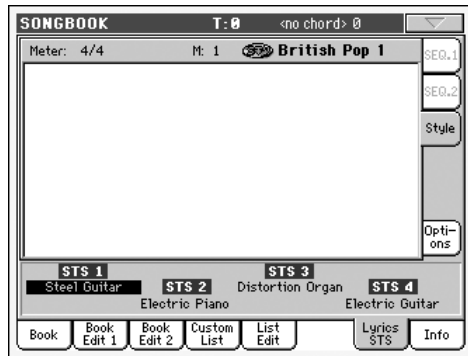
To assign a different name to the selected list, press the **T** (Text Edit) button to open the Text Edit window.

Select an option to save the edited Custom List:

- Select Rename/Overwrite to overwrite an existing list, optionally changing its name. **Warning:** The older list will be deleted!
- Select New List to save a new Custom List in memory. This list will be available in the “Custom List” page.

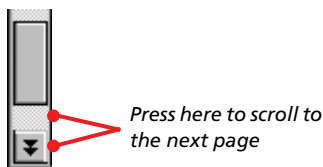
## Lyrics/STS

The Lyrics/STS page is where you can see Lyrics and select STSs.



When a “.TXT” file is associated to the current song, a vertical scrollbar appears, allowing you to scroll to the previous or former text page during the performance.

**Note:** You cannot scroll a single line of text at a time; you always scroll by a whole page of text, either if you press on the scrollbar or one of the small scrolling arrows.



## Lyrics as text files associated to a SongBook entry

Lyrics can be associated to each SongBook entry (either Style or Song-based) as a “.TXT” file. See “Linked .TXT” on page 157 for more information on this issue.

As a consequence, there are four ways of seeing Lyrics on the Pa1X:

- In Song Play mode, you can see lyrics contained in a Standard MIDI File as Lyrics events, or in an MP3 with Lyrics file. To see this kind of lyrics you must press the Lyrics tab in the Song Play mode.
- In SongBook mode, you can see lyrics contained in a Standard MIDI File as Lyrics events, or in an MP3 with Lyrics file. To see this kind of lyrics you must press the Lyrics/STS tab in the SongBook mode.
- In SongBook mode, you can see lyrics contained in a “.TXT” file associated with a Style-based SongBook entry. To see this kind of lyrics you must press the Lyrics/STS tab in the SongBook mode.
- In SongBook mode, you can see lyrics contained in a “.TXT” file associated with a Song-based SongBook entry. To see this kind of lyrics you must press the Lyrics/STS tab in the SongBook mode.

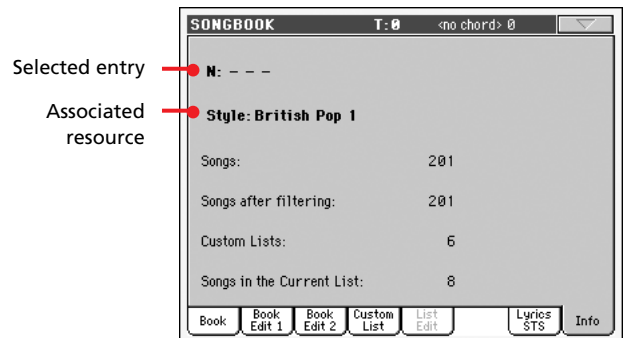
In the case of Song-based entries, this is the priority of lyrics data shown in the display:

- i) TXT file associated with the entry, *overriding*...
- ii) TXT file contained in the same folder as the Standard MIDI File or MP3 file, recalled by the entry, *overriding*...
- iii) Lyrics events contained in the Standard MIDI File or MP3 file.

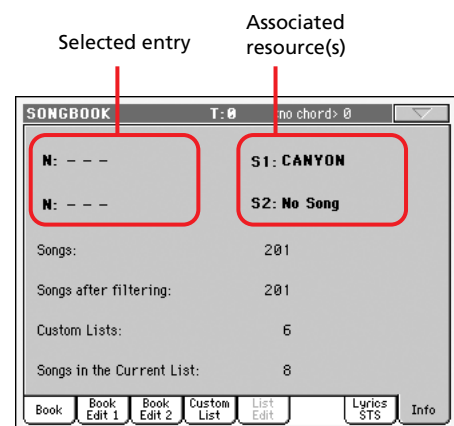
## Info

Use the Info page to see the name of the selected entry, the associated resource(s), the total number of Songs in the SongBook, the number of filtered entries, the number of available Custom Lists, and the number of Songs in the current list.

- In case of an entry based on a Style:



- In case of an entry based on Standard MIDI Files or MP3s:



### Selected entry

This parameter shows the currently selected entry. If it is blank (---), the latest selected entry has been modified, or no entry has been selected yet.

### Associated resource

Style, Standard MIDI File or MP3 associated to the selected entry.

### Song number

Total number of entries in the SongBook list.

### Filtered Song number

This parameter shows the number of entries shown in the Book page, after applying the selected filter. If no filter is selected, this matches the total number of entries in the SongBook list (see previous parameter).

### Custom List number

This parameter shows the number of available Custom Lists.

### Songs in the Current List

Number of entries in the selected Custom List.

## Page menu

Press the page menu icon to open the menu. Press a command to select it. Press anywhere in the display to close the menu without selecting a command.



Show Artist (now Genre)	Sort by Number
Show Song Number (now Key)	Sort by Key
Ascending/Descending	Sort by Tempo
Sort by Type	Sort by Meter
● Sort by Name	✓ Enable List Edit
Sort by Genre	Export as text file
Sort by Artist	

### Artist/Genre

Select this command to toggle between the Artist and Genre column on the SongBook list, appearing in the Book and Custom List page.

### Ascending/Descending

Select this command to toggle between the ascending and descending view order of the SongBook list. The sorting order is selected with one of the following commands.

### Sort by Type/Name/Genre/Artist/Key/Tempo/Meter

Select one of these command to select the sorting order. The selected option is shown in red above the entry list.

### Enable List Edit

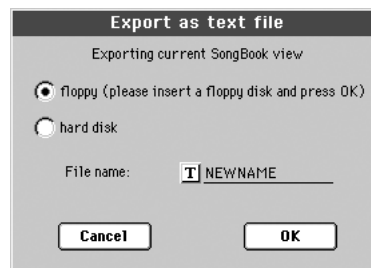
Select this command, and make the checkmark appear, to make the List Edit page available.

## Export as text file

Select this command to open the Export dialog box, and save the SongBook or Custom List as a text file. The selected filtering will be applied to the exported list, assuming the Filter button is checked.

The dialog box is a little different, depending on the page where you selected this command.

- Selected from the Book page:



- Selected from the Custom List page:



Press the **T** (Text Edit) button to open the Text Edit window and assign a name to the text file to be saved to disk.

Then, select either the floppy disk or the hard disk to save the file.

- If you select the floppy disk, insert a floppy disk in the disk drive, and press OK to confirm.
- If you select the hard disk, just press OK to confirm.



## Sequencer operating mode

The Sequencer operating mode is the full-featured onboard sequencer, where you can create a Song from scratch, or edit it. You can also use this mode to edit the initial parameters of a Standard MIDI File, either made with an external sequencer or with Pa1X's own sequencer.

You can save the new or edited Song as a Standard MIDI File (SMF, i.e., a file with the ".MID" extension), and play it back either in Song Play or Sequencer mode – or on any external sequencer.

### Transport controls

To play back a Song, use SEQUENCER 1 transport controls. While in Sequencer mode, Sequencer 1 is used for all functions. See "SEQUENCER 1 TRANSPORT CONTROLS" on page 10 for more information.

**Note:** When pressing the ■► (PLAY/STOP) button to stop the Song during playback, Song parameters are not reset.

### The Songs and the Standard MIDI File format

The native Song format for Pa1X is the Standard MIDI File.

When saving a Song as a SMF, an empty measure is automatically inserted to the beginning of the Song. This measure contains various Song initialization parameters.

When an SMF is loaded, the empty measure is automatically removed.

### Songs and Voice Processor Presets

You can use the Voice Processor while in Sequencer mode. For this, just two settings are needed:

- Select the Song track where you are recording chords to be sent to the Voice Processor (see "Harmony Track" on page 181).
- Go to the Voice Processor Preset section of the Global mode, and select the desired Voice Processor Preset.

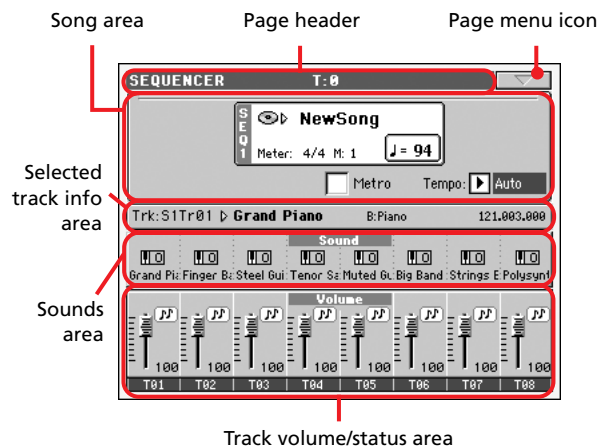
### Sequencer Play - Main page

Press SEQUENCER to access this page from another operating mode. In this page you can load a Song, and play it back using the transport controls for SEQUENCER 1 (see "Transport controls" above).

**Note:** When switching from Style Play to Sequencer mode, the Sequencer Setup is automatically selected, and various track parameters may change.

To return to this page from one of the Sequencer edit pages, press the EXIT or SEQUENCER button.

To switch between Song tracks 1-8 and 9-16, use the TRK. SEL. button.



### Page header

This line shows the current operating mode, transposition and recognized chord.



Operating mode name

Master Transpose (in semitones)

### Operating mode name

Name of the current operating mode.

### Master transpose



Master transpose value in semitones. This value can be changed using the TRANSPOSE buttons on the control panel.

**Note:** Transpose may be automatically changed when loading a Standard MIDI File generated with an instrument of the Korg Pa series.

To avoid transposing, "lock" the Master Transpose parameter in the Global (see "General Controls: Lock" on page 227), then write the Global to memory (see "Write Global - Midi Setup dialog box" on page 251).

## Page menu icon

Press the page menu icon to open the menu. See “Page menu” on page 182 for more information.



## Song area

This is where Song name is shown, together with its tempo and meter parameters, and the current measure.



### Song type icon

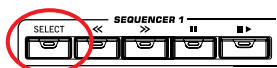
In Sequencer mode, only Standard MIDI Files (files with the “.MID” or “.KAR” extension) can be loaded.

### Song name

Displays the name of the selected Song. “No Song” means that a new (blank) Song is selected, and you can record it.

Touch the Song name to make the Song Select window appear, allowing for selection of a different Song (see “Song Select window” on page 74).

To select a Song, you can also press the SELECT button in the SEQUENCER 1 section of the control panel. Press SELECT a second time to select a Song by dialing in its ID number (see “Selecting a Song by its ID number” on page 75).



### Meter

Current Song meter.

### Measure number

Current measure number.

### Tempo

Metronome tempo. Select this parameter and use the TEMPO/VALUE controls to change the tempo. As an alternative, when a different parameter is selected, or you are in a different page, keep the SHIFT button pressed and use the DIAL to change the tempo of the sequencer.

### Metro

Check this box to turn the metronome on during playback.

### Tempo (Tempo mode)

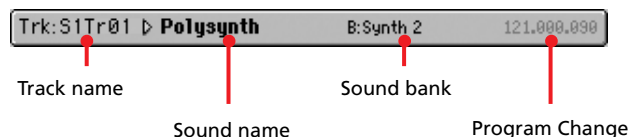
Use this menu to select the Tempo change mode.

**Manual** In this mode, you can change the Tempo using TEMPO/VALUE section controls. The Song will be played back using the manually selected tempo.

**Auto** The Tempo recorded to the Song will be used.

## Selected track info area

This line lets you see the Sound assigned to the selected track. Not only it is shown on the main page, but also in several edit pages.



### Track name

Name of the selected track.

### Sound name

Sound assigned to the selected track. Press anywhere in this area to open the Sound Select window, and select a different Sound.

### Sound bank

Bank the selected Sound belongs to.

### Program Change

Program Change number. Shown only when the “Show Program Change number” parameter is turned on in Global mode (see page 228).

## Sounds area

This area lets you see Sounds and octave transposition for the eight tracks currently displayed.



### Song track octave transpose

*Non editable.* Octave transpose of the corresponding track. To edit the octave transpose, go to the “Mixer/Tuning: Tuning” edit page (see page 175).

### Sound name

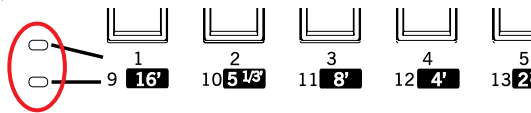
Name of the Sound assigned to the track. Touch a name a first time to select the corresponding track (detailed information are shown on the Selected Track Info area, see above). Touch it a second time to open the Sound Select window.

## Track volume/status area

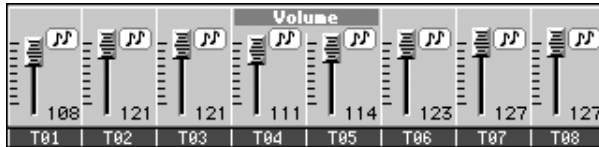
This area is where you can set the volume of each Song track, and mute/unmute tracks.

Use the TRK. SEL. (TRACK SELECT) button to switch between Song Tracks 1-8 and Song Tracks 9-16 views.

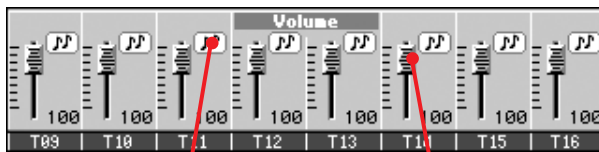
If the VOLUME LED above the SLIDER MODE button is turned on, the Assignable Sliders LEDs show which view is currently selected.



The **Song Tracks 1-8 view** shows individual Song tracks 1-8 (third sliders LED turned on):



The **Song Tracks 9-16 view** shows individual Song tracks 9-16 (last sliders LED turned on):



Track status icon

Virtual slider

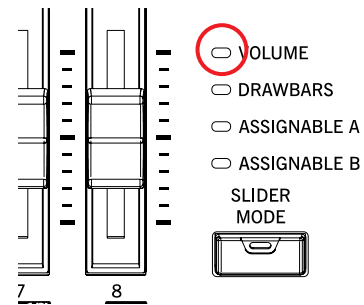
### Virtual sliders (track volume)

Virtual sliders are a graphical display of each track's volume. Use the Assignable Sliders to change this value (provided the VOLUME LED is turned on above the SLIDER MODE button, see below).

As an alternative, press the track's area to select a track, and use TEMPO/VALUE controls to change the value.

### Assignable Sliders function

Use the SLIDER MODE button to select the function assigned to the Assignable Sliders. When the VOLUME LED is turned on, each Assignable Slider controls the volume of the corresponding track.



**Note:** While in Sequencer mode, you cannot save the SLIDER MODE status to a Performance, since Performances are disabled while in this mode.

### Track status icons

► SONG ► GBL<sup>Seq</sup>

Play/mute status of the current track. Select the track, then press this area to change the track status. The status of Song tracks is saved when saving the Song.



Play status. The track can be heard.



Mute status. The track cannot be heard.

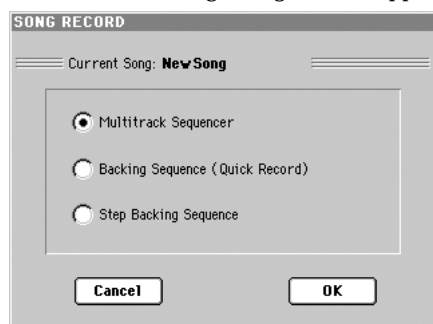
### Track names

Under the sliders, a label for each track is shown. Use the TRK. SEL button to switch between tracks 1-8 and 9-16.

T01...T16 Song tracks.

## Entering Record mode

To enter Record mode, press the REC button while you are in Sequencer mode. The following dialog box will appear:



Select one of the three available recording options and press OK (or Cancel if you don't want to enter Record mode).

### Multitrack Sequencer

Full-featured sequencer. Select this option for classic multitrack recording. (See "Record mode: Multitrack Sequencer page" on page 164).

### Backing Sequence (Quick Record)

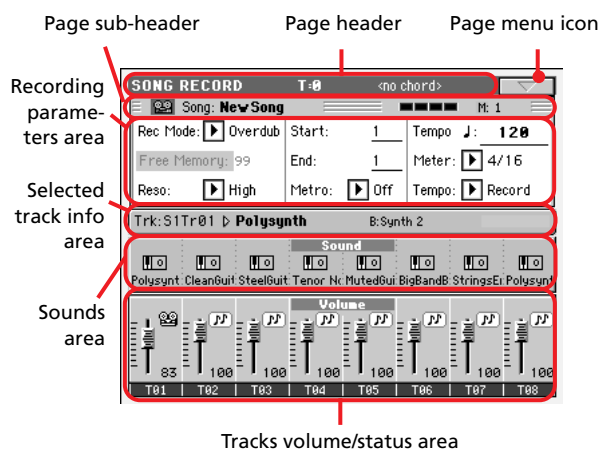
Easy way of recording. Just play with Styles, and record your realtime performance.

### Step Backing Sequence

Step-record. Enter chords and notes one at a time. Very useful if you are not a keyboard player.

## Record mode: Multitrack Sequencer page

While in Sequencer mode, press the REC button and select the "Multitrack Sequencer" option. The Multitrack Sequencer page appears.



See "Multitrack recording procedure" on page 166 for information on the record procedure.

### Page header

See "Page header" on page 161.

### Page menu icon

See "Page menu icon" on page 162.

### Page sub-header

This area shows some performing info on the Song.



### Song name

Name of the Song in record.

### Beat counter

This indicator shows the current beat inside the current measure.

### Measure number

Current measure you are recording.

## Recording parameters area

### Rec mode (Recording mode)

Set this parameter before starting record, to select a recording mode.

**Overdub** The newly recorded events will be mixed to any existing events.

- Overwrite** The newly recorded events will replace any existing events.
- Auto Punch** Recording will automatically begin at the “Start” position, and stop at the “End” position.  
*Note: The Auto Punch function will not work on an empty Song. At least one track must already be recorded.*
- PedalPunch** Recording will begin when pressing a pedal set to the “Punch In/Out” function, and will finish when pressing the same pedal again.  
*Note: The Pedal Punch function will not work on an empty Song. At least one track must already be recorded.*

**Free memory**

Remaining memory available for recording.

**Resolution**

Use this parameter to set the quantization during recording. Quantization is a way of correcting timing errors; notes played too soon or too later are moved to the nearest axis of a rhythmic “grid”, set with this parameter, thus playing perfectly in time.

**High** No quantization applied.

♪ (1/32) ... ♪ (1/8)

Grid resolution, in musical values. For example, when you select 1/16, all notes are moved to the nearest 1/16 division. When you select 1/8, all notes are moved to the nearest 1/8 division.

**Start/End**

Start and End locators. These parameters are available only when the “Auto Punch” recording mode is selected. They set the starting and ending points of the Punch recording.

**Metro (Metronome)**

This is the metronome heard during recording.

- Off** No metronome click will be heard during recording. A one-bar precount will be played before starting recording.
- On1** Metronome on, with a one-bar precount before starting recording.
- On2** Metronome on, with a two-bar precount before starting recording.

**Tempo**

Select this parameter, and use the TEMPO/VALUE controls to set the tempo.

*Note: You can always change the Tempo, when other parameters are selected, by keeping the SHIFT button pressed, and rotating the DIAL.*

*Note: The tempo is always recorded in overwrite mode (old data is replaced by the new data).*

**Meter**

This is the basic meter (or time signature) of the Song. You can edit this parameter only when the Song is empty, i.e., before you begin recording anything. To insert a meter change in the middle of the Song, use the “Insert Measure” function (see page 180).

**Tempo (Tempo mode)**

This parameter sets the way tempo events are read or recorded.

- Manual** Manual reading. The latest manual Tempo setting (made using the TEMPO/VALUE controls) is considered the current Tempo value. No Tempo change events will be recorded. This is very useful to record the Song much slower than its actual Tempo.
- Auto** Auto reading. The Sequencer plays back all recorded Tempo events. No Tempo change events are recorded.
- Record** All Tempo changes made during recording will be recorded to the Master Track.

**Selected track info area**

This line lets you see the Sound assigned to the selected track. See “Selected track info area” on page 162 for more information.

**Sounds area**

This area lets you see Sounds and octave transposition for the eight tracks currently displayed. See “Sounds area” on page 162 for more information.

**Track volume/status area**

This area is where you can set the volume of each Song track, and change track status. See “Track volume/status area” on page 162.

**Track status icons**

Play/mute/record status of the current track. Select the track, then press this area to change its status.



Play status. The track can be heard.



Mute status. The track cannot be heard.



Record status. After pressing ■▶ (PLAY/STOP) to start recording, the track will receive notes from the keyboard and the MIDI IN connector.

## Multitrack recording procedure

Here is the general procedure to follow for the Multitrack Recording.

1. Press SEQUENCER to enter Sequence mode.
2. Press the REC button, and select the “Multitrack Sequencer” option to enter the Multitrack Record mode. Now you can prepare your recording parameters. (For more details, see “Record mode: Multitrack Sequencer page” on page 164).
3. Be sure the Overdub or Overwrite recording options is selected (see “Rec mode (Recording mode)” on page 164).
4. Set the tempo. There are two ways of changing tempo:
  - Keep the SHIFT button pressed, and use the TEMPO/VALUE controls to change the tempo.
  - Move the cursor to the “Tempo” parameter, and use the TEMPO/VALUE controls to change tempo.
5. Use the TRK. SEL. button to switch between Song Tracks 1-8 and Song Tracks 9-16, and assign the right Sound to each track (see “Sound name” on page 162).
6. Select the track to record. Its status icon will automatically change to Record (see “Track status icons” on page 165).
7. Press ■▶ (PLAY/STOP) to start recording. Depending on the Metro option you selected, a 1- or 2-bars precount may play before the recording actually begins. When it begins, play freely.
  - If you selected the Auto Punch recording mode, the recording will begin only when reaching the Start point.
  - If you selected the Pedal Punch recording mode, press the pedal when you want to begin recording. Press it again to finish recording.

**Note:** The Punch functions will not work on an empty Song. At least one track must already be recorded.
8. When finished recording, press ■▶ (PLAY/STOP) to stop the sequencer. Select a different track, and go on recording the whole Song.
9. When finished recording the new Song, either press the REC button, or select the “Exit from Record” command from the page menu (see page 182).

**Warning:** Save the Song to disk, to avoid it is lost when turning the instrument off.

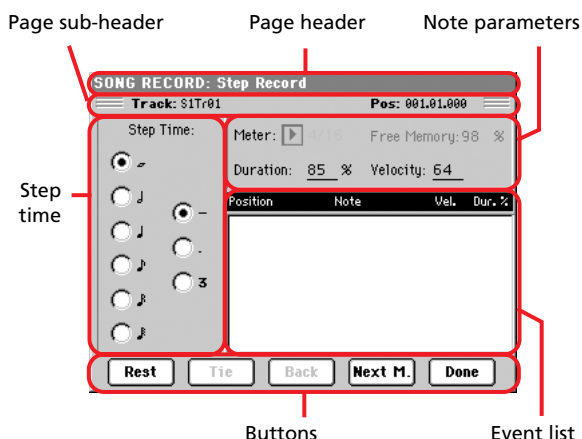
**Note:** When exiting the Record mode, the Octave Transpose is automatically reset to “0”.
10. If you wish, edit the new Song, by pressing the MENU button, and selecting the various edit pages.

## Record mode: Step Record page

The Step Record allows you to create a new Song by entering single notes or chords to each track. This is very useful when transcribing an existing score, or needing a higher grade of detail, and is particularly suitable to create drum and percussion tracks.

To access this page, select the “Overdub Step Recording” or “Overwrite Step Recording” command from the page menu.

In Overdub Step Recording mode you will add to existing events, while in Overwrite Step Recording mode you will overwrite all existing events.



See “Step Record procedure” below, for information on the record procedure.

### Page header

This line shows the current operating mode.

### Page sub-header

#### Track

Name of the selected track in record.

S1Tr01...Tr16

Sequencer 1 track. In Sequencer mode, you always work with Sequencer 1.

#### Pos (Position)

This is the position of the event (note, rest or chord) to be inserted.

### Step Time area

#### Step Time

Length of the event to be inserted.

o ... ♪ Note value.

Standard (–) Standard value of the selected note.

Dot (.) Augments the selected note length by one half of its value.

Triplet (3) Triplet value of the selected note.



## Note parameter area

### Meter

Meter of the current measure. This parameter cannot be edited. You can set a Meter change by using the Insert function of the Edit menu, and inserting a new series of measures with a different Meter (see “Song Edit: Cut/Insert Measures” on page 180).

### Free Memory

Available memory for recording.

### Duration

Relative duration of the inserted note. The percentage is always referred to the step value.

50%	Staccato.
85%	Ordinary articulation.
100%	Legato.

### Velocity

Set this parameter before entering a note or chord. This will be the playing strength (i.e., velocity value) of the event to be inserted.

Kbd	Keyboard. You can select this parameter, by turning all counter-clockwise the dial. When this option is selected, the playing strength of the played note is recognized and recorded.
1...127	Velocity value. The event will be inserted with this velocity value, and the actual playing strength of the note played on the keyboard will be ignored.

## Event list area

### List of inserted events

Previously inserted events. You may delete the last of these events, and make it ready for a new event, by pressing the Back button in the display.

Position	Position where the event has been inserted. The value is shown in the “measure.beat.tick” format.
Note/RX Noise	Name of the inserted Note or RX Noise. When entering a chord, a series of dots is shown after the name of the root note.
Vel.	Velocity of the inserted event.
Dur.%	Percentage duration of the inserted event.

## Buttons

### Rest

Press this button to insert a rest.

### Tie

Press this button to tie the note to be inserted to the previous one. A note with the same pitch, and the specified length, will be created, and tied to the previous one.

### Back

Goes to the previous step, erasing the inserted event.

### Next M. (Next Measure)

Goes to the next measure, and fills the remaining space with rests.

### Done

Exits the Step Record mode.

## Step Record procedure

Here is the general procedure to follow for the Step Recording.

1. Press SEQUENCER to enter Sequencer mode.
2. Press the REC button, and select the “Multitrack Sequencer” option to enter the Multitrack Record mode. From the page menu, select the “Overdub Step Recording” or “Overwrite Step Recording” mode. At this point, the Step Record window will appear in the display.
3. The next event will be entered at the position shown by the Pos indicator in the upper right corner of the display.
  - If you don’t want to insert a note at this position, insert a rest instead, as shown in step 5.
  - To jump to the next measure, filling the remaining beats with rests, press the Next M. button in the display.
4. To change the step value, use the Step Time parameters.
5. Insert a note, rest or chord at the current position.
  - To insert a single note, just play it on the keyboard. The inserted note length will match the step length. You may change the velocity and relative duration of the note, by editing the Velocity and Duration parameters. See “Velocity” and “Duration” on page 167.
  - To insert a rest, just press the Rest button in the display. Its length will match the step value.
  - To tie the note to be inserted to the previous one, press the Tie button in the display. A note will be inserted, tied to the previous one, with exactly the same pitch. You don’t need to play it on the keyboard again.
  - To insert a chord or a second voice, see “Chords and second voices in Step Record mode” on page 107 of the “Style Record mode” chapter.
6. After inserting a new event, you may go back by pressing the Back button in the display. This will delete the previously inserted event, and set the step in edit again.
7. When finished recording, press the Done button in the display. The main page of the Multitrack Recording mode will appear again.
8. From the main page of the Multitrack Recording mode, either select the “Exit from Record” command from the page menu, or press the REC button to exit the Record mode. While in the main page of the Sequencer mode, you may press the ■► (PLAY/STOP) button in the SEQUENCER 1 section to listen to the Song, or select the Save Song command from the page menu to save the Song to disk (see “Save Song window” on page 183).

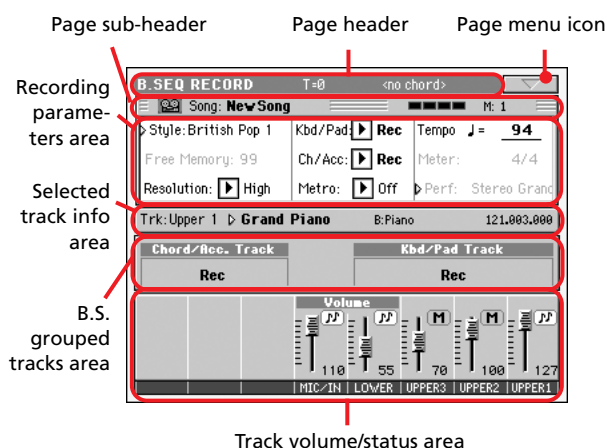
## Chords and second voices

With Pa1X, you are not obliged to insert single notes in a track. There are several ways to insert chords and double voices. For more information, see “Chords and second voices in Step Record mode” on page 107 of the “Style Record mode” chapter.

## Record mode: Backing Sequence (Quick Record) page

Backing Sequence (Quick Record) mode allows you to quickly record your live performance with the Styles. To make things easier, just two grouped tracks are provided: *Kbd/Pad* (Keyboard and Pads) to record keyboard and pads, and *Ch/Acc* (Chords/ Accompaniment) to record Style commands and chords played on the keyboard.

While in Sequencer mode, press the REC button and select the “Backing Sequence (Quick Record)” option. The Backing Sequence (Quick Record) page appears.



See “Backing Sequence (Quick Record) recording procedure” on page 170 for information on the record procedure.

### Page header

See “Page header” on page 161.

### Page menu icon

See “Page menu icon” on page 162.

### Page sub-header

See “Page sub-header” on page 164.

## Recording parameters area

### Style

This parameter shows the selected Style. Either press it, or press one of the STYLE buttons, to open the Style Select window and select a different Style (see “Style Select window” on page 73).

### Free memory

Remaining memory for recording.

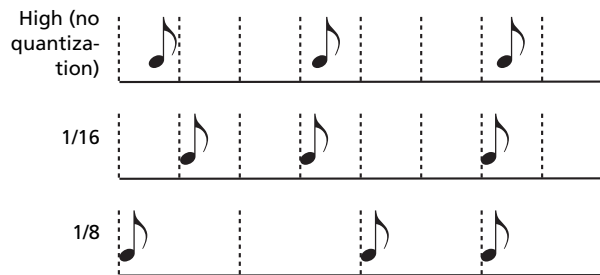
### Resolution

Use this parameter to set the quantization during recording. Quantization is a way of correcting timing errors; notes played too soon or too later are moved to the nearest axis of a rhythmic “grid”, set with this parameter, thus playing perfectly in time.

High                      No quantization applied.

♪ (1/32)...♪ (1/8)

Grid resolution, in musical values. For example, when you select 1/8, all notes are moved to the nearest 1/8 division. When you select 1/4, all notes are moved to the nearest 1/4 division.



### Kbd/Pad, Ch/Acc

These parameters let you define grouped track status during recording. This status is reflected by the big status indicator above the track sliders.

**RT/Pads:** This Backing Sequence track includes the four Keyboard tracks and the four Pads. After finishing recording, they will be saved as Song tracks 1-8, as in the following table:

RT/Pad track	Song track/Channel
Upper 1	1
Upper 2	2
Upper 3	3
Lower	4
Pad 1	5
Pad 2	6
Pad 3	7
Pad 4	8

**Ch/Acc:** This Backing Sequence track groups all Style tracks, together with recognized chords and Style controls and Style Elements selection. After finishing recording, they will be saved as Song tracks 9-16.

Play	The Backing Sequence track is set to play. If there are recorded data, they will be heard while recording the other Backing Sequence track.
Mute	The Backing Sequence track is muted. If this tracks has already been recorded, it will not be heard during recording of the other Backing Sequence track.
Rec	The Backing Sequence track is in record. All previously recorded data will be deleted. After pressing ■► (PLAY/STOP) to start recording, the track will receive notes from the keyboard and the MIDI IN connector.

### Metro (Metronome)

This parameter sets the metronome mode during recording.

Off	No metronome click will be heard during recording. A one-bar precount will be played before starting recording.
On1	Metronome on, with a one-bar precount before starting recording.

On2	Metronome on, with a two-bar precount before starting recording.
-----	--

### Tempo

Metronome tempo. Select this parameter and use the TEMPO/VALUE controls to change the tempo. As an alternative, when a different parameter is selected, or you are in a different page, keep the SHIFT button pressed and use the DIAL to change the tempo of the sequencer.

### Meter

(Non-editable). This parameter shows the meter of the selected Style for reference.

### PERF or STS (Performance or STS)

This parameter shows the selected Performance or STS (depending on the last item selected).

To select a Performance, either press it, or press one of the PERFORMANCE/SOUND buttons (provided the PERFORMANCE SELECT LED is turned on), to open the Style Select window and select a different Performance (see “Style Select window” on page 73).

To select an STS, use the four SINGLE TOUCH SETTING buttons under the display.

## Backing Sequence grouped tracks area

### Grouped tracks status indicators

These giant indicators show the status of the Backing Sequence grouped tracks. They reflect the status of the Kbd/Pad and Ch/Acc parameters (see “Kbd/Pad, Ch/Acc” above).

### Selected track info area

This line lets you see the Sound assigned to the selected track. See “Selected track info area” on page 162 for more information.

### Track volume/status area

This area is where you can set the volume of each single Keyboard track, and mute/unmute tracks.

### Virtual sliders (track volume)

Graphical display of each track’s volume. See “Virtual sliders (track volume)” on page 163 for more information.

### Assignable Sliders function

See “Assignable Sliders function” on page 163 for more information.

### Individual track status icons

While you can change the status of all Keyboard tracks at once, by using the Kbd/Pad Backing Sequence track, you can also change the status of each single track. Press this icon to change the status of the corresponding individual track.



Play status. The track can be heard.



Mute status. The track cannot be heard.

## Track names

Under the sliders, a label for each track is shown. Use the TRK.SEL button to switch between the various track views.

MIC/IN      Audio inputs.

UPPER1...3    Upper tracks.

LOWER      Lower track.

## Backing Sequence (Quick Record) recording procedure

Here is the general procedure to follow for the Backing Sequence (Quick) Recording.

1. Press SEQUENCER to enter the Song mode.
2. Press the REC button, and select the “Backing Sequence (Quick Record)” option to enter the Backing Sequence (Quick Record) mode. Now you can prepare your recording parameters. (For more details, see “Record mode: Backing Sequence (Quick Record) page” on page 168).
3. The last selected Style is currently selected. Should it not be the right one, select a different Style to start recording with. (See “Style Select window” on page 73).
4. The last selected Performance or STS is currently selected. If you prefer, select a different Performance or STS. (See “Performance Select window” on page 72, and “STS Select” on page 73).
5. Select the status of the Backing Sequence grouped tracks, using the Kbd/Pad and Ch/Acc parameters. (Kbd/Pad stays for Keyboard and Pads; Ch/Acc stays for Chord and Accompaniment, i.e. the Style tracks). To record all you play on the keyboard, plus the automatic accompaniment, leave their status to REC (see “Track status icons” on page 165).

**Warning:** Tracks set to REC are automatically overwritten when starting recording. Set a track to the PLAY or MUTE status, when you don't want to delete it. For example, if you are recording a keyboard part on an existing Style track, set the Ch/Acc parameter to PLAY, and the Kbd/Pad track to REC.

6. Start recording by pressing the left ■▶ (PLAY/STOP) button or the START/STOP button.

- By pressing the left ■▶ (PLAY/STOP) button (or the START/STOP button), you can record a keyboard intro with no Style playing. After a count-in (see “Metro (Metronome)” on page 169), you can start recording.

Play a solo intro, then start the auto-accompaniment by pressing the START/STOP button.

- By pressing the START/STOP button you can start the Style right at the beginning of the Song.

Since you can use any Style control, you could start with the usual combinations (INTRO, ENDING, FILL... see “Selecting and playing a Style” on page 38 for more information).

**Note:** While in Backing Sequence mode, you can't record the SYNCHRO, TAP TEMPO/RESET, MANUAL BASS, ACCOMPANIMENT VOLUME controls.

7. Play your music. You can even stop the Style by pressing START/STOP. If you stop the Style while recording, start it again with the START/STOP button.
8. When finished recording your performance, press the ■▶ (PLAY/STOP) button in the SEQUENCER 1 section. The REC LED will turn off, and you will go back to the Sequencer Play Main page (see “Sequencer Play - Main page” on page 161).

At this point, you may press the ■▶ (PLAY/STOP) button in the SEQUENCER 1 section to listen to the new Song.

You may also edit the Song by pressing the MENU button (see “Edit menu” on page 173).

9. Save the song to disk (see “Save Song window” on page 183).

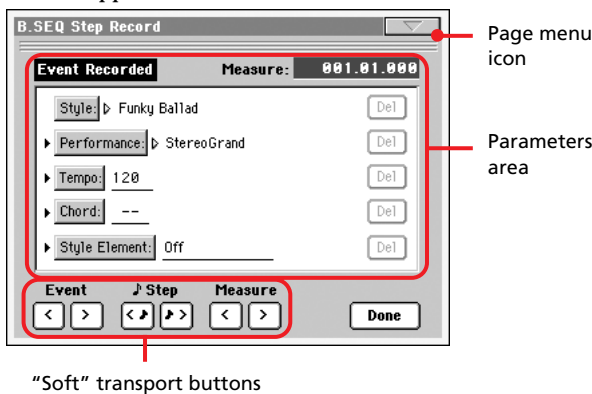
**Warning:** The recorded Song is in RAM (Random Access Memory), and will be deleted when turning the instrument off, switching to the Style Play or Song Play mode, or entering Record again. If you wish to preserve it, save the Song to disk.

## Record mode: Step Backing Sequence page

The Step Backing Sequence mode allows you to enter single chords, to create or edit the Style (Chord/Acc) part of a Song. This mode lets you enter chords even if you are not a keyboard player, or fix any error made playing chords or selecting Style controls, during a Backing Sequence (Quick Record) recording.

In this mode, you can only edit Songs created on the Pa1X. When saving a Song created using the Backing Sequence (Quick Record) recording mode, all Chord/Acc data is preserved, and can be loaded later, to be edited again by using the Step Backing Sequence mode.

While in Sequencer mode, press the REC button and select the “Step Backing Sequence” option. The Step Backing Sequence window appears.



“Soft” transport buttons

See “Step Backing Sequence procedure” on page 173 for information on the record procedure.

### Page menu icon

Press the page menu icon to open the menu. See “Step Backing Sequence page menu” on page 172 for more information.

### Parameters area

#### Side arrow (↔)

The small arrow next to a parameter means that its value is effective at the current position. For example, if you are at the “003.01.000” position, and an arrow lights up next to the Chord parameter, this means that a chord change happens at the “003.01.000” position.

#### Measure

This parameter shows the current position of the Step Editor. To go to a different position within the Song, use one of the following systems:

- Select this parameter, then use the TEMPO/VALUE controls to go to a different measure.
- Use the Measure buttons in the display to move to a different measure. Use the Step buttons in the display to move in steps of 1/8 (192 ticks). Use the Event buttons in the display to jump to the next event.

The locator value is shown in the “measure.beat.tick” format.

Measure	Measure or bar number.
Beat	Divider in the Time Signature ratio (e.g., a quarter in a 3/4 time).
Tick	Smallest position value. Both Pa1X internal sequencers feature a resolution of 384 ticks per quarter.

### Style

This is the last selected Style. To insert a Style change at the current position, touch the Style name to open the Style Select window, or follow the standard selecting procedure using the buttons of the STYLE SELECT section.

**Note:** Any Style Change inserted after the beginning of the measure (i.e., to a position other than Mxxx.01.000) will be effective at the following measure. For example, if a Style Change event has been inserted at M004.03.000, the selected Style will be effectively selected at M005.01.000. (This works exactly as in Style Play mode).

**Note:** When inserting a Style Change, you may also insert a Tempo Change at the same position. A Style Change will not automatically insert the Style's Tempo.

### Performance

This is the last selected Performance. Select a Performance to recall the Style it links to. To insert a Performance change at the current position, touch the Performance name to open the Performance Select window, or follow the standard selecting procedure using the PERFORMANCE/SOUND SELECT section.

**Note:** The STYLE CHANGE LED is automatically turned on when entering the Chord/Acc Step Mode. This means that selecting a Performance automatically selects the Style memorized in the Performance.

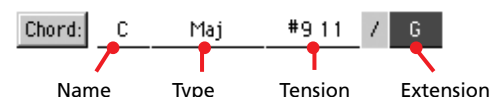
The SINGLE TOUCH and STS buttons are automatically disabled, meaning that you can't change Keyboard tracks while in Chord/Acc Step Mode.

### Tempo

This is the Tempo Change parameter. To insert a Tempo Change event at the current position, select this parameter and use the TEMPO/VALUE controls to change its value.

### Chord

The chord parameter is divided in four separate parts:



Select one of the parts, then use the TEMPO/VALUE controls to modify it. As an alternative, you can play a chord, and it will be automatically recognized. While recognizing a chord, the status of the BASS INVERSION button will be considered.

The lack of a chord (--) means that the accompaniment will not play at the current position (apart for the Drum and Percussion tracks). To select the “--” option, select the Name part of the Chord parameter, then use TEMPO/VALUE controls to select the very last value (C...B, Off).



**Note:** If you replace a chord with a different one, please remember that the Lower track (if recorded) will not be automatically changed, and may cause a dissonance against the accompaniment.

### Style Element

This is the Style Element (i.e., a Variation, Fill, Intro, or Ending). The length of the selected Style Element is always shown by the “Length” parameter (see below).

“Off” means that the accompaniment will not play at the selected position – only Keyboard and Pad tracks will play.

**Hint:** Insert a Style Element Off event exactly where the automatic accompaniment must stop (at the end of the Song).

### Length

This parameter will let you know where to place the following Style Element Change. For example, if you inserted an Intro event lasting for 4 measures, you can insert 4 empty measure after this event, and a Variation event at the end of the Intro, beginning at the 4th empty measure.

### Del (Delete) button

When a side arrow (►) is shown next to a parameter, there is an event at the current position. You can press the Del button next to it, to delete the event at the current position.

**Hint:** To delete all events starting from the current position, select the “Delete from selected” command from the page menu (see below).

## “Soft” transport buttons



### Previous or Next Event

Use these buttons to move to the previous or next recorded event.



### Previous or Next Step

Use these buttons to go to the previous or next step (1/8, or 192 ticks). If an event is located before the previous or next step, the locator stops on that event. For example, if you are positioned on M001.01.000, and no event exists before M001.01.192, the > button moves to the M001.01.192 location. If an event exists on M001.01.010, the > button stops to the M001.01.010 location.

These commands are effective even if the Measure parameter is not selected.



### Previous or Next Measure

Use these buttons to move to the previous or following measure. These commands are effective even if the Measure parameter is not selected.

## Done button

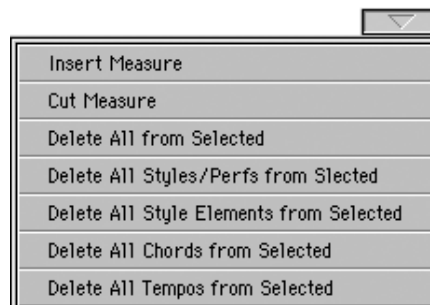
### Done

Press this button to exit the Step Backing Sequence mode. All changes will be saved to memory.

**Hint:** Save the Song to disk, by selection the “Save Song” command from the page menu, to avoid losing it when turning the instrument off.

## Step Backing Sequence page menu

Press the page menu icon to open the menu. Press a command to select it. Press anywhere in the display to close the menu without selecting a command.



### Insert Measure

Use this command to insert an empty measure starting from the current measure. All Chord/Acc events contained in the current measure will be moved to the following measure. The event at the Mxxx.xx.000 position (i.e., exactly at the beginning of the measure, like a Time Signature or Style change) will not be moved.

### Cut Measure

Use this command to delete the current measure. All Chord/Acc event contained in the following measures will be moved one measure back.

### Delete All from Selected

Use this command to delete events of all types, starting from the current position.

**Note:** All events on the very first tick (M001.01.000), like Perf, Style, Tempo, Chord, Style Element selection, cannot be deleted.

### Delete All Styles/Perfs from Selected

### Delete All Style Elements from Selected

### Delete All Chords from Selected

### Delete All Tempos from Selected

Select one of these commands to delete all events of the corresponding type, starting from the current position to the end of the Song. To delete all events of the same type from the whole Song, go back to the M001.01.000 position, and select one of these commands.

**Note:** All events on the very first tick (M001.01.000), like Perf, Style, Tempo, Chord, Style Element selection, cannot be deleted.



## Step Backing Sequence procedure

Here is the general Step Backing Sequencer recording procedure.

**Hint:** Before entering Step Backing Sequence mode to edit an existing Song, select the “Save Song” command from the page menu, and save the Song to disk. This way, you will have a copy of the Song, in case you don’t like the results of your editing.

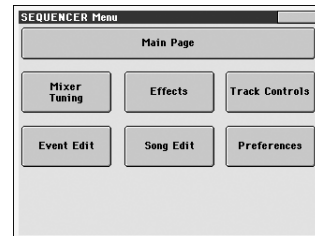
1. While in Sequencer mode, press the REC button, and choose the “Step Backing Sequence” recording option.
2. Select the Measure parameter, and go to the desired position in the Song, by using the TEMPO/VALUE controls. Alternatively, you can move the locator using the “soft” transport buttons in the display. See ““Soft” transport buttons” on page 172.
3. Select the parameter type (Style, Performance, Tempo...) to insert, edit or delete at the current position. If an arrow (▶) appears next to a parameter, the shown event has been inserted at the current position.
4. Use the TEMPO/VALUE controls to modify the selected event. Delete it by pressing the Del button next to the event. When editing a parameter without the arrow (▶) next to it, a new event is inserted at the current position.
5. Exit the Step Backing Sequence recording mode, by pressing the Done button in the display.
6. Press ■▶ (PLAY/STOP) in the SEQUENCER 1 section to listen to the consequence of your editing. If they are fine, save the Song to disk.

## Edit menu

From any page, press the MENU button to open the Sequencer edit menu. This menu gives access to the various Sequencer edit sections.

When in the menu, select an edit section, or press EXIT to exit the menu.

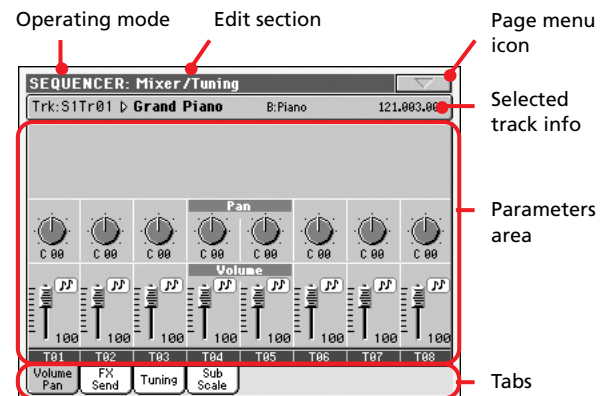
When in an edit page, press EXIT or the SEQUENCER button to go back to the main page of the Sequencer operating mode.



Each item in this menu corresponds to an edit section. Each edit section groups various edit pages, that may be selected by pressing the corresponding tab on the lower part of the display.

## Edit page structure

All edit pages share some basic elements.



### Operating mode

This indicates that the instrument is in Sequencer mode.

### Edit section

This identifies the current edit section, corresponding to one of the items of the edit menu (see “Edit menu” on page 173).

### Page menu icon

Press this icon to open the page menu (see “Page menu” on page 182).

### Parameters area

Each page contains various parameters. Use the tabs to select one of the pages. For detailed information on the various types of parameters, see sections starting from page 174.

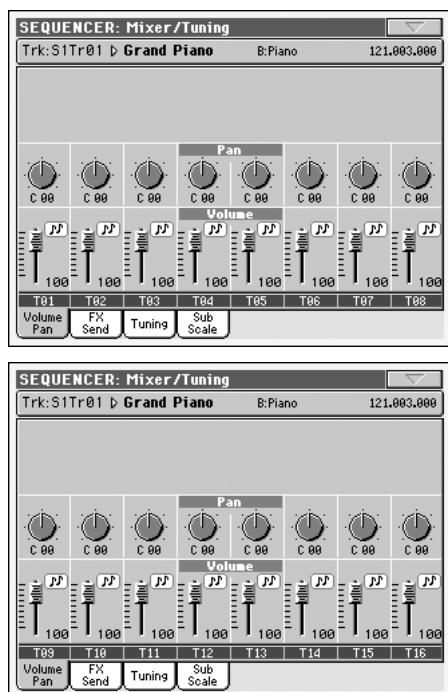
### Tabs

Use tabs to select one of the edit pages of the current edit section.

## Mixer/Tuning: Volume/Pan

This page lets you set the volume and pan for each Song track.

Use the TRK. SEL. button to switch between Song tracks 1-8 and 9-16.



### Pan

► SONG

Track position in the stereo field.

L-64...L-1 Left stereo channel.

C 00 Center.

R+1...R+63 Right stereo channel.

Off If the track's output status is Left&Right (normal setting), the direct (unaffected) signal is not sent to the outputs; only the FX signal is heard for this track.

If the track is sent to a separate output, no FX is sent to any output.

To program the output status for each track, see "Audio Output: Sty/Kbd" on page 233.

### Volume

► SONG


Track's volume.


0...127 MIDI value of the track's volume.

### Play/Mute icon

► SONG

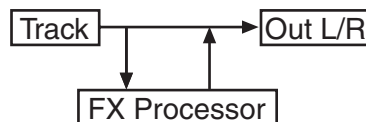
Track's play/mute status.

 Play status. The track can be heard.

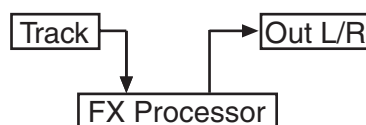
 Mute status. The track cannot be heard.

## Mixer/Tuning: FX Send

This page lets you set the level of the track's direct (unaffected) signal going to the Internal FX processors. The effect processors included in Pa1X are connected in parallel, so you can decide which percentage of the direct signal can be effected:

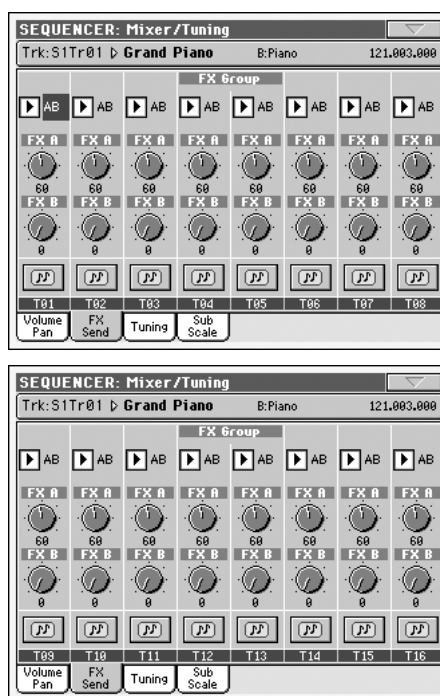


In case you do not want to send a track's direct signal to the output, but only the effected signal (as when using "insert" effects, like Rotary, Distortion, EQ...), just set the Pan to Off (see "Pan" above):



There are four Internal FX processors in Sequencer mode, grouped in two pairs (AB and CD). Usually you will create Songs with only a pair (preferably AB), but you can create Songs using both FX pairs. We suggest to use A and C as reverb processors, and B and D as modulating effect processors.

Use the TRK. SEL. button to switch between Song tracks 1-8 and 9-16, and vice-versa.



### FX Groups

► SONG

Use this pop-up menu to select one of the two FX groups (AB or CD).

### Send level

► SONG

0...127 Level of the track (direct) signal sent to the effect processor.

**Play/Mute icon**

► SONG

Track's play/mute status.



Play status. The track can be heard.



Mute status. The track cannot be heard.

## Mixer/Tuning: Tuning

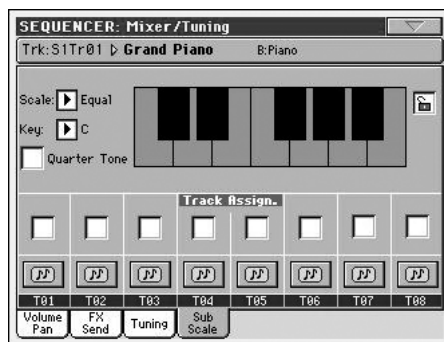
**Parameters**

► SONG

See "Mixer/Tuning: Tuning" on page 84.

## Mixer/Tuning: Sub Scale

This page lets you program an alternative scale for the selected tracks (via the "Track Assign" parameter). The remaining tracks (if any) use the basic scale set in Global mode (see "Main Scale" on page 226).



**Note:** Quarter Tone selection and activation of the Sub-Scale on each track of a Song, can be received by MIDI (i.e., by an external sequencer or controller). Conversely, selection of Quarter Tone settings, or activation of the Sub-Scale on each track of the Song, can be sent by the Pa1X to an external MIDI recorder as System Exclusive data.

**Parameters**

► SONG

See "Mixer/Tuning: Sub Scale" on page 84.

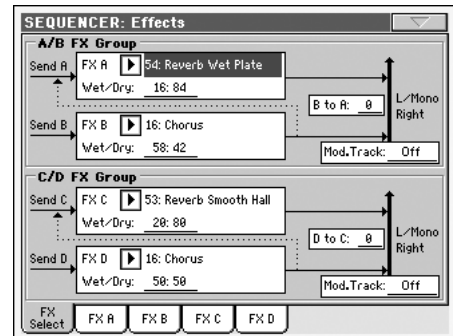
**Track Assign**

► SONG

Check the parameter corresponding to each track where the Sub-Scale must be used.

## Effects: FX Select

This page allows you to select effects to be assigned to the four Internal FX processors (A-D).



**Note:** When you stop the Song, or select a different Song, the default effects are selected again. You can, however, stop the Song, change the effects, then start the Song again. Save the Song to permanently change the effects.

**FX A...D**

► SONG

Effects assigned to the corresponding effect processors. Usually, A and C are reverbs, while B and D are modulating effects (chorus, flanger, delay...). For a list of the available effects, see "Effects" on page 322.

**Wet/Dry**

► SONG

Mix between the effected (Wet) and direct (uneffected, Dry) signal.

Dry Direct signal only.

Wet Effected signal only.

nn:nn Percentage of Wet/Dry signal.

**B to A, D to C**

► SONG

Amount of the B effect going back to the input of the A effect, or of the D effect going back to the input of the C effect.

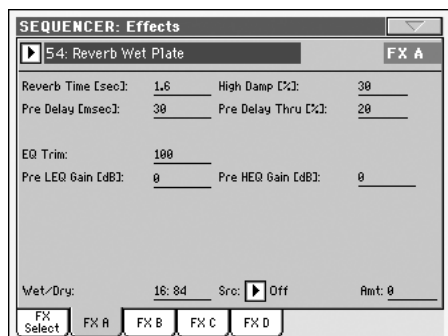
**Mod.Track (Modulating Track)**

► SONG

Source track for modulating MIDI messages. You can modulate an effect parameter with a MIDI message generated by a physical controller.

## Effects: FX A...D

These pages contain the editing parameters for the four effect processors. Here is an example of the FX A page, with the Reverb Smooth Hall effect assigned.



### Selected effect

► SONG

Select one of the available effects from this pop-up menu. This is equivalent to the “FX A...D” parameters found in the “Effects: FX Select” page (see above).

### Parameters

► SONG

Parameters may differ, depending on the selected effect. See “Effects” on page 322 for a list of available parameters for each effect type.

## Track Controls: Mode

### Parameter

► SONG

See “Track Controls: Mode” on page 86.

## Track Controls: Drum Volume

### Parameter

► SONG

See “Track Controls: Drum Volume” on page 176.

## Track Controls: Easy Edit

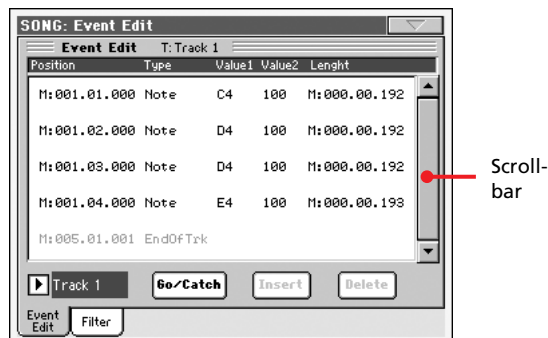
### Parameter

► SONG

See “Track Controls: Easy Edit” on page 88.

## Event Edit: Event Edit

The Event Edit is the page where you can edit each single MIDI event of the selected track. You can, for example, replace a note with a different one, or change its playing strength. See also “Event Edit procedure” on page 177 for more information on the event editing procedure.



### Position

Position of the event, expressed in the form ‘aaa.bb.ccc’:

- ‘aaa’ is the measure
- ‘bb’ is the beat
- ‘ccc’ is the tick (each quarter beat = 384 ticks)

You can edit this parameter to move the event to a different position. You can edit a position in either of the following ways:

- select the parameter, and use the TEMPO/VALUE controls to change the value, or
- select the parameter, then touch it again; the numeric keypad will appear. Enter the new position by dialing in the three parts of the number, separated by a dot. Zeroes at the beginning can be omitted, as well as the least important parts of the number. For example, to enter position 002.02.193, dial “2.2.193”; to enter position 002.04.000 dial “2.4”; to enter position 002.01.000, simply dial “2”.

### Type

Type of the event shown in the display. To edit it, select the parameter and use the TEMPO/VALUE controls to change its value.

### Value 1 and 2

Values of the event shown in the display. Depending on the selected event, the value may change. This parameter also shows the (non-editable) “End Of Track” marking, when the end of the track is reached.

Here are the events contained in ordinary tracks (1-16).

Type	First value	Second value
Note	Note name	Velocity
RX Noise	Note name	Velocity
Prog	Program Change number	–
Ctrl	Control Change number	Control Change value
Bend	Bending value	–
Aftt	Mono (Channel) After-touch value	–

Type	First value	Second value
PAft	Note to which the After-touch is applied	Poly Aftertouch value

And here are the events contained in the Master track.

Type	First value	Second value
Tempo	Tempo change	–
Volume	Master Volume value	–
Meter	Meter change <sup>(a)</sup>	–
Scale	One of the available pre-set Scales	Root note for the selected Scale
UScale (User Scale)	Altered note	Note alteration <sup>(b)</sup>
QT (Quarter Tone)	Altered note	Note alteration (0, 50) <sup>(b)</sup>
QT Clear (Quarter Tone Clearing)	Reset of all Quarter Tone (QT) changes	–
FXType	One of the four available FX processors	Effect number <sup>(c)</sup>
FXSend	Feedback Send (B>A or D>C)	Feedback send level

(a). Meter changes can't be edited or inserted separately from a measure. To insert a Meter change, use the Insert function in the Edit section and insert a series of measures with the new meter. Existing data can then be copied or entered to these measures

(b). To edit User Scale and Quarter Tone settings, select the first value, then select the scale's degree to edit. Edit the second value to change the tuning of the selected note of the scale.

(c). When selecting a different effect number during this edit, default settings will be assigned to this event.

To edit the event Type and Values, select the parameter and use the TEMPO/VALUE controls to change their value. In case of numeric values, you can also press them twice to open the numeric keypad.

### Length

Length of the selected Note event. The value format is the same as the Position value. Edit it in the same way.

**Note:** If you change a length of "000.00.000" to a different value, you can't go back to the original value. This rather uncommon zero-length value may be found in the drum and percussion tracks of Songs made in Backing Sequence mode.

### Track

Use this pop-up menu to select the track to edit.

Track 1...16	One of the ordinary tracks of the Song. These tracks contains musical data, like notes and controllers.
Master	This is a special track, containing Tempo changes, Meter changes, Scale and Transpose data, and the effect parameters.

### Scrollbar

Use the scrollbar to browse the event through the list.

### Go/Catch

This is a dual-function command.

• While the sequencer is not running, it works as a Go to Measure command. Press it to open the Go to Measure dialog box:



When in this dialog box, select a target measure, and press OK. The first event available in the target measure will be selected.

• While the sequencer is running, it works as a Catch Locator command. Press it to show the event that is currently playing.

### Insert

Press the Insert button in the display to insert a new event at the current shown Position. The default values are Type = Note, Pitch = C4, Velocity = 100, Length = 192.

**Note:** You can't insert new events in an empty, non-recorded Song. To insert an event, you must first insert some empty measures by using the Insert Measure function (see "Song Edit: Cut/Insert Measures" on page 180).

### Delete

Press the Delete button in the display to delete the event selected in the display.

**Note:** The "End of Track" event cannot be deleted.

## Event Edit procedure

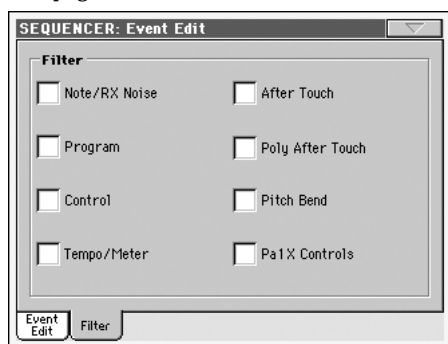
Here is the general event editing procedure.

1. While in the Event Edit page, press **►** (PLAY/STOP) in the SEQUENCER 1 section to listen to the Song. Press it again to stop the Song.
2. Select the Filter page, and turn "Off" the filter for the event types you wish to see in the display (see "Event Edit: Filter" on page 178 for more information).
3. Return to the Event Edit page.
4. Use the "Track" pop-up menu to select the track to edit. The list of events contained in the selected track will appear in the display.  
For more information on the event types and their values, see above.
5. Select the "Position" parameter. Use the TEMPO/VALUE controls (or press the parameter again to open the numeric keypad) to change the event's position.
6. Select the "Type" parameter and use the TEMPO/VALUE controls to change the event type. Select the "Value 1 and 2" parameters and use the TEMPO/VALUE controls (or press the parameter again to open the numeric keypad) to modify the selected value.
7. In the case of a Note event, select the Length parameter, and use the TEMPO/VALUE controls (or press the parameter again to open the numeric keypad) to change the event's length.  
  
• While the sequencer is not running, you may press the Go/Catch button in the display to go to a different measure (see "Go/Catch" above)

- While the sequencer is running, you may use the Go/Catch button in the display to see the currently playing event in the display (see “Go/Catch” above).
  - Use SEQUENCER 1 transport controls to listen to the Song.
- Press the insert button in the display to insert an event at the Position shown in the display (a Note event with default values will be inserted). Press the Delete button in the display to delete the selected event.
  - When the editing is complete, you may select a different track (go to step 4).
  - When finished editing the whole Song, select the Save Song command from the page menu to save the Song to disk. See “Save Song window” on page 183 for more information on saving a Song.

## Event Edit: Filter

This page is where you can select the event types to be shown in the Event Edit page.



Turn On the filter for all event types you do not wish to see in the Event Edit page.

Note/RX Noise

Notes and RX Noises.

Program

Program Change events.

Control

Control Change events.

Tempo/Meter

Tempo and Meter changes (Master Track only).

After Touch

Mono (Channel) Aftertouch events.

Poly After Touch

Poly Aftertouch events.

Pitch Bend

Pitch Bend events.

Pa1X Controls

Controls exclusive of the Pa1X, like the FX and Scale settings. These controls are recorded to the Master Track, and saved as System Exclusive data.

## Song Edit: Quantize

The quantize function corrects any rhythm error after recording.



After setting the various parameters, press Execute to start the operation.

### Track

Use this parameter to select a track.

All

Quantize will apply to all tracks.

Track 1...16

Quantize will apply only to the selected track.

### Resolution

This parameter sets the quantization value. For example, when you select 1/8, all notes are moved to the nearest 1/8 division. When you select 1/4, all notes are moved to the nearest 1/4 division.

No quantization



1/8



1/4



♩ (1/32)...♪ (1/4)

Grid resolution, in musical values. A “b...f” character added after the value means swing-quantization. A “3” means triplet.

### Start / End Tick

Use these parameters to set the starting and ending points of the range to be quantized.

If you wish to select a four-measure sequence starting at the beginning of the Song, the Start will be positioned at 1.01.000, and the End at 5.01.000.

### Bottom / Top Note

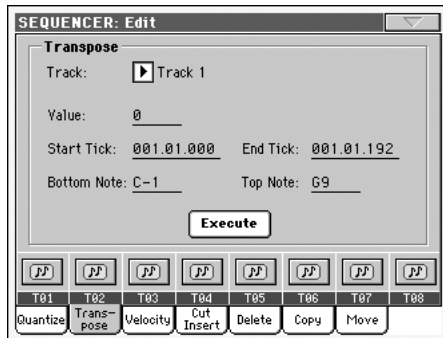
Use these parameters to set the bottom and top note of the keyboard range to quantize. If you select the same note as the Bottom and Top parameters, you can select a single percussive instrument in a Drum track.

**Note:** These parameters are available only when a Drum track is selected.



## Song Edit: Transpose

Here you can transpose the Song, a track or a part of a track.



After setting the various parameters, press Execute to start the operation.

### Track

Use this parameter to select a track.

All All tracks selected (apart for Drum tracks).

Track 1...16 Selected track.

### Value

Transpose value ( $\pm 127$  semitones).

### Start / End Tick

Use these parameters to set the starting and ending points of the range to transpose.

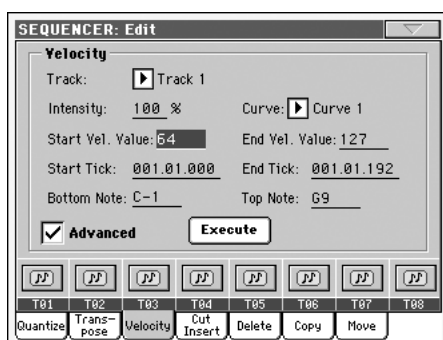
If you wish to select a four-measure sequence starting at the beginning of the Song, the Start will be positioned at 1.01.000, and the End at 5.01.000.

### Bottom / Top Note

Use these parameters to set the bottom and top of the keyboard range to transpose. If you select the same note as the Bottom and Top parameters, you can select a single note, or a single percussive instrument in a Drum track.

## Song Edit: Velocity

Here you can change the Velocity value for the notes. An Advanced mode is available, allowing you to select a velocity curve for the selected range. This is useful to create fade-ins or fade-outs.



After setting the various parameters, press Execute to start the operation.

### Track

Use this parameter to select a track.

All All tracks selected.

Track 1...16 Selected track.

### Value

Velocity change value.

### Start / End Tick

Use these parameters to set the starting and ending points of the range to edit.

If you wish to select a four-measure sequence starting at the beginning of the Song, the Start will be positioned at 1.01.000, and the End at 5.01.000.

### Bottom / Top Note

Use these parameters to set the bottom and top of the keyboard range to edit. If you select the same note as the Bottom and Top parameters, you can select a single percussive instrument in a Drum track.

### Advanced

When this checkbox is checked, the “Intensity”, “Curve”, “Start Velocity Value” and “End Velocity Value” parameters can be edited.

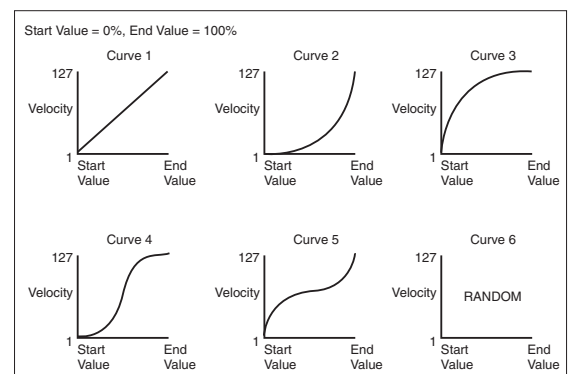
### Intensity

(Only available in Advanced mode). Use this parameter to specify the degree to which the velocity data will be adjusted toward the curve you specify in “Curve”.

0...100% Intensity value. With a setting of 0 [%], the velocity will not change. With a setting of 100 [%], the velocity will be changed the most.

### Curve

(Only available in Advanced mode). Use this parameter to select one of the six curves, and to specify how the velocity will change over time.



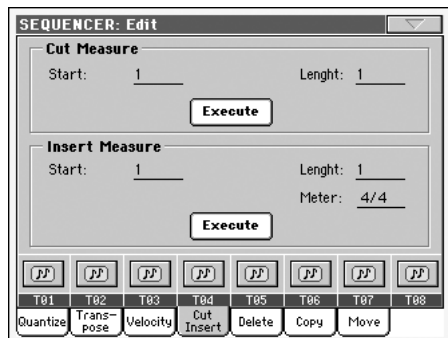
### Start / End Vel. Value

(Only available in Advanced mode). Velocity change at the starting and ending ticks of the selected range.

0...100 Velocity change in percentage.

## Song Edit: Cut/Insert Measures

In this page you can cut or insert measures from the Song.



After selecting the Start and Length parameters, press Execute to start the operation.

After the Cut, the following measures are moved back, to fill the cut measures.

After the Insert, the following measures are pushed forward to accommodate the inserted measures.

### Start

First measure where to begin cutting/inserting.

### Length

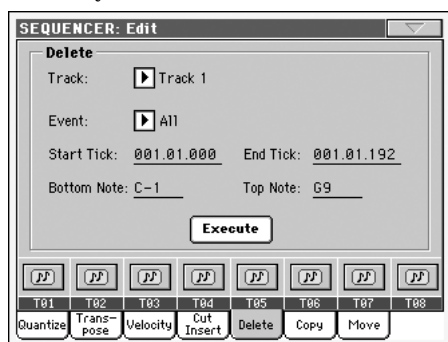
Number of measures to be cut/inserted.

### Meter

Meter of the measures to be inserted.

## Song Edit: Delete

This page is where you can delete MIDI events from the Song.



After setting the various parameters, press Execute to start the operation.

### Track

Use this parameter to select a track.

All All tracks selected.

Track 1...16 Selected track.

Master Master track. This is where the Tempo, Scale and Effect events are recorded.

### Event

Type of MIDI event to delete.

All All events. Measures will not be removed from the Song, and will remain empty.

Note All notes in the selected range.

Dup.Note All duplicate notes. When two notes with the same pitch are encountered on the same tick, the one with the lowest velocity is deleted.

After Touch After Touch events.

Pitch Bend Pitch Bend events.

Prog.Change Program Change events, excluding the bundled Control Change #00 (Bank Select MSB) and #32 (Bank Select LSB).

Ctl.Change All Control Change events, for example Bank Select, Modulation, Damper, Soft Pedal...

CC00/32...CC127

Single Control Change events. Double Control Change numbers (like 00/32) are MSB/LSB bundles.

### Start / End Tick

Use these parameters to set the starting and ending points of the range to edit.

If you wish to select a four-measure sequence starting at the beginning of the Song, the Start will be positioned at 1.01.000, and the End at 5.01.000.

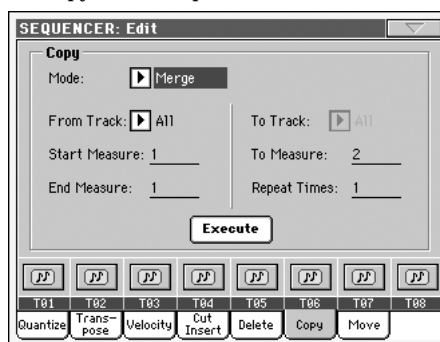
### Bottom / Top Note

Use these parameters to set the bottom and top of the keyboard range to delete. If you select the same note as the Bottom and Top parameters, you can select a single note, or a single percussive instrument in a Drum track.

**Note:** These parameters are available only when the All or Note options are selected.

## Song Edit: Copy

Here you can copy tracks or phrases.



After setting the various parameters, press Execute to start the operation.

**Note:** If you copy too many events on the same "tick", the "Too many events!" message appears, and the copy operation is aborted.

## Mode

Use this parameter to select the Copy mode.

**Merge** Copied data are merged with the data at the target position.

**Overwrite** Copied data replace all data at the target position.

**Warning:** Deleted data cannot be recovered!

## From Track... To Track

Use these parameters to select the source and target track to copy.

**All** All tracks. The target track cannot be selected.

**Track 1...16** Selected source and target tracks.

## Start Measure... End Measure

These parameters are the starting and ending measure to copy. For example, if From Measure=1 and To Measure=4, the first four measures are copied.

## To Measure

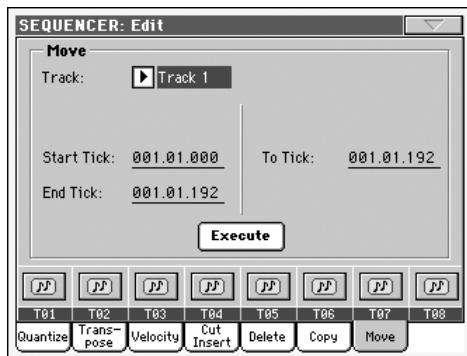
This parameter is the first of the target measures.

## Repeat Times

Number of times the copy must be executed. Copies will be consecutive.

# Song Edit: Move

Here you can shift a track forward or backward by just a few ticks or whole measures.



After setting the various parameters, press Execute to complete the operation.

## Track

Use these parameters to select the track you want to move.

**Track 1...16** Selected track.

## Start / End Tick

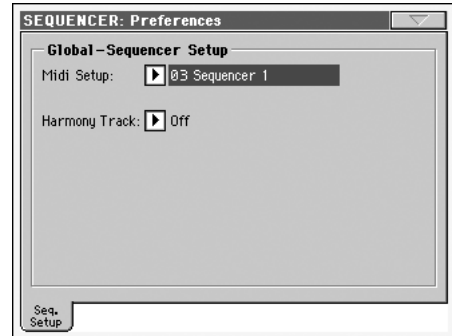
These parameters set the starting and ending point of the range to move.

## To Tick

This parameter allows you to set the target starting point of the moved track.

# Preferences: Global Setup

In this page, you can select a MIDI Setup and the Harmony track for the Sequencer mode.



**Note:** These settings are stored in the Sequencer Setup area of the Global file. (Parameter of this kind are marked with the ►GBLSeq abbreviation through the manual). After changing these settings, select the Write Global-Sequencer Setup command from the page menu to save them to the Global.

## Midi Setup

►GBLSeq

MIDI channels for the Sequencer mode can be automatically configured by selecting a MIDI Setup with this parameter. See "MIDI" on page 273 for more information on using MIDI Setups.

**Note:** To automatically select a MIDI Setup when entering the Sequencer mode, select the Write Global-Sequencer Setup command from the page menu.

For detailed information on MIDI Setup settings, see "MIDI Setup" on page 321.

**Note:** After selecting a MIDI Setup, you can go to the Global mode and apply any change to each channel setting. To store these changes to a MIDI Setup, while still in Global mode select the Write Global-Midi Setup command from the page menu. All MIDI Setups can be freely customized and overwritten.

**Hint:** To restore the original MIDI Setups, load the original Factory data again (downloadable from [www.korgpa.com](http://www.korgpa.com)).

## Harmony Track

►GBLSeq

The Voice Processor gets the chord notes from the track selected with this parameter.

**Hint:** Go to the Voice Processor Preset section of the Global mode to try different Voice Processor Presets while creating or editing a Song.

**Off** No track sends notes to the Harmony module of the Voice processor. Chords can still be received from the MIDI IN.

**Seq.1-Track 1...16**

Chords are sent from one of Sequencer 1 tracks.

## Page menu

Press the page menu icon to open the menu. Press a command to select it. Press anywhere in the display to close the menu without selecting a command.



### Write Global-Seq. Setup

Select this command to open the Write Global-Seq. Setup dialog box, and save global settings that are unique to the Sequencer mode. (See “Write Global-Sequencer Setup dialog box” on page 182).

### Load Song

Select this command to open the Song Select window, and load a Song to the sequencer. (See “Song Select window” on page 182).

Please note that in Sequencer mode the file is loaded to memory – contrary to Song Play mode, where Songs are read directly from disk.

### Save Song

Select this command to save the new or edited Song to disk as a Standard MIDI File. The file is automatically added the “.MID” extension. After selecting this command, the Save Song page appears (see “Save Song window” on page 183).

**Warning:** Turning the instrument off will delete the Song from memory. Save your Song to disk to avoid losing it.

**Warning:** The Song is also lost when switching from Sequencer to Style Play or Song Play mode, without previously saving the Song to disk.

### Undo

When selecting this command, the latest operation is canceled, and data are reverted to the previous situation.

### Overdub Step Recording

*Only available in Record mode.* Select this command to enter Overdub Step Record mode. This recording mode lets you enter events one at a time, adding events to the existing events. (See “Record mode: Step Record page” on page 166).

### Overwrite Step Recording

*Only available in Record mode.* Select this command to enter Overwrite Step Record mode. This recording mode lets you

enter events one at a time, overwriting all existing events. (See “Record mode: Step Record page” on page 166).

### Delete Song

Select this command to delete the Song and create a new, blank Song.

### Delete Current Track

Select this command to delete the track currently selected in the Track area (see “Track volume/status area” on page 165).

### Solo Track

Select the track to be soloed, and check this item. You will hear only the selected track, and the ‘Solo’ warning will flash on the page header.

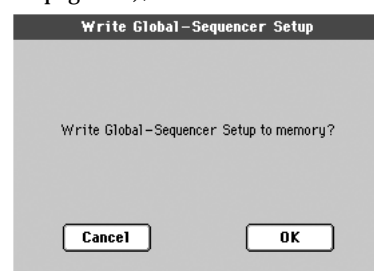
Uncheck this item to exit the Solo function.

### Exit from Record

*Only available in Record mode.* Select this command to exit the Record mode, and go back to the Main page of the Sequencer Play mode (see “Sequencer Play - Main page” on page 161).

## Write Global-Sequencer Setup dialog box

Open this window by selecting the Write Global-Song Setup item from the page menu. Here, you can save MIDI Setups (see “Midi Setup” on page 181), that are saved to the Global file.



Parameters saved in the Sequencer Setup area of the Global are marked with the ►GBL<sup>Seq</sup> symbol through the user’s manual.

## Song Select window

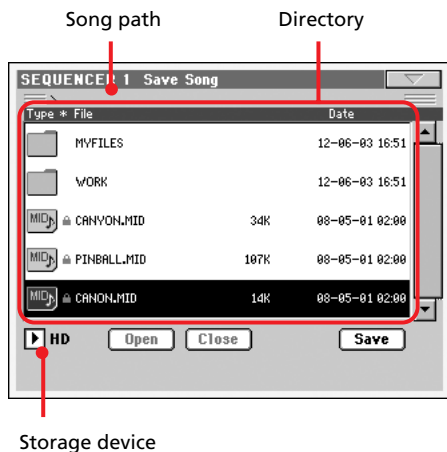
This window appears when you select the “Load Song” command from the page menu, or press the SELECT button in the SEQUENCER 1 sections on the control panel. See “Song Select window” on page 74 for details.

## Save Song window

The recorded Song is contained in RAM, and is lost when turning the instrument off. The Song is also lost when you overwrite it in Record mode, or if you confirm the warning message when switching to the Style Play or Song Play mode. You must save to disk any Song you wish to preserve.

This window appears when you select the “Save Song” command from the page menu.

Press EXIT to exit from this page and go back to the main page of the Sequencer operating mode without saving the Song.

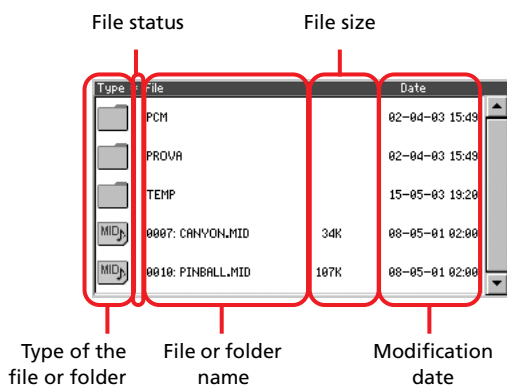


### Song path

This line shows the path of the location where you are saving the Song.

### Directory

This is the list of the selected device's content.



Use the scrollbar to scroll the list items.

As an alternative, you can select one of the items, and use the TEMPO/VALUE controls to scroll.

Keep the SHIFT button pressed, and press DOWN or UP, to jump to the previous or next alphabetical section.

### Storage device

Use this pop-up menu to select one of the available storage devices where to save the Song.

Device	Type
FD	Floppy disk
HD	Hard disk (optional on the Pa1X with speakers)

### Open

Opens the selected folder (item whose icon looks like this: ).

### Close

Closes the current folder, returning to the parent (“upper”) folder.

### Save

Press this button to open the Save Song dialog box, and save the Song to the current directory.



- If no file has been selected in the display, prior to pressing Save, the “NewSong” default name will be automatically assigned to the Song.

**Note:** If a file is selected, just touch the storage device name to deselect it.

- If a file has been selected in the display, prior to pressing Save, the name of the selected file will be automatically assigned to the Song.

In any of the above situations, press the **T** (Text Edit) button to edit the Song name.

**Warning:** If a file with the same name is already in the current directory, a message will warn you. If you confirm, the existing file will be overwritten. Select a file before saving only if you want to overwrite it (i.e., in case you are saving changes to an existing file).

## Empty measure at the beginning of the Standard MIDI File

When saving a Song as an SMF, an empty measure is automatically inserted to the beginning of the Song. This measure contains various Song initialization parameters.

## Play/Mute status saved with the Song

When saving a Song, the Play/Mute status is saved with the Song. This status is preserved also when playing back the same Song in Song Play mode.

## Master Transpose saved with the Song

When saving a Song, the Master Transpose value is saved with the Song. Since this value is saved as System Exclusive data, it is preserved also when playing back the Song in Song Play mode.

**Hint:** Since the Master Transpose is a global parameter, loading a Song with a non-standard transposition may result in unwanted transposing when loading other Songs that do not contain their own transposition data. To transpose a Song it is advisable to use the Transpose function in the Edit section of the Sequencer mode (see “Song Edit: Transpose” on page 179).

You may also lock the Master Transpose, to avoid unwanted transposition. See “General Controls: Lock” on page 227 of the Global chapter.

As a general rule, you should use the Master Transpose (TRANSPPOSE buttons on the control panel) when you need to transpose Keyboard tracks together with the Song. You should use the Edit mode Transpose function (see “Song Edit: Transpose” on page 179) when only the Song has to be transposed.

**Note:** The Master Transpose value is always shown on the page header:

SEQUENCER

T:0

## Save Song procedure

1. If you are in Record mode, stop the sequencer and exit from the Record mode. Then go back to the main page of the Sequencer Play mode (see “Sequencer Play - Main page” on page 161).
2. Select the Save Song command from the page menu. The Save Song page appears.
3. Select the folder where you want to save the Song into. Use the Open and Close commands to browse open or close folders. Use the scrollbar to browse through the files.
4. When you are in the directory where you want to save your Song to, press the Save button in the display.
  - To **overwrite** an existing file, select it before pressing Save.
  - To **create** a new file, do not select any file before pressing Save. The “NewSong” (“NEWSONG.MID” on disk) name will be automatically assigned to the Song.
5. After pressing the Save button, the Save Song dialog box will appear.
6. If you like, press the **T** (Text Edit) button to edit the name.
7. Press OK to confirm saving, or Cancel to stop the Save operation.



## Sound operating mode

The Sound operating mode is where you can listen to individual Sounds, and edit them.

To select a Sound, see the “Basic operations” chapter.

In this mode, the selected Sound can always be played across the full keyboard range.

While in a different operating mode, you can easily select the Sound to be edited when switching to the Sound mode. Just select the track the Sound to be edited is assigned to, then keep the SHIFT button pressed while pressing the SOUND button.

**Hint:** This is useful to see the Bank Select/Program Change numbers when programming a Song on an external sequencer.

**Note:** The Sound uses the same Scale of the latest selected Performance or STS.

## The MIDI channel

In Sound mode, Pa1X receives and transmits on the same channel of the Upper 1 track. If the Global channel is assigned, notes can be received also on this channel. See “MIDI: MIDI In Channels” on page 232 and “MIDI: MIDI Out Channels” on page 232 for more information.

## How to select oscillators

While in an edit page requiring an oscillator to be selected for editing, use the vertical row of buttons on the right (1...5) to select one of the available oscillators. The number of available oscillators depends on the “Oscillator Mode” parameter (see page 188).

When oscillators cannot be select, since the parameter contained in the current page are global and valid for the whole Sound, these buttons are greyed out, and cannot be selected.



## Sounds, Drum Kits, Digital Drawbars

Pa1X features three different kinds of Sounds:

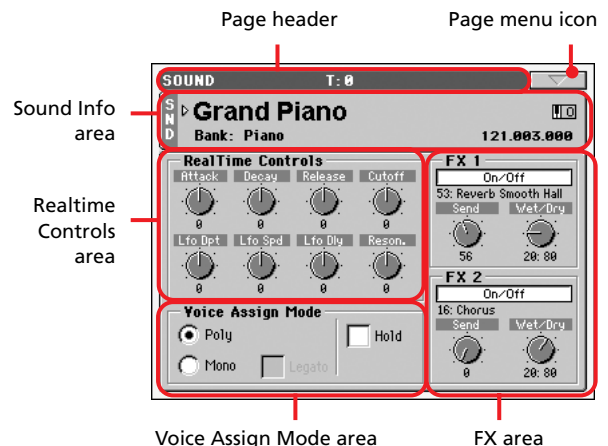
- Ordinary Sounds. These are normal instrument Sounds, like pianos, strings, basses.
- Drum Kits. These are drum and percussion kits, where each note of the keyboard is a different percussive instrument. You can find Drum Kits in the DRUM & PERC and USER DK banks.
- Digital Drawbars. These are Sounds with a very complex structure, and a special usage. See “Digital Drawbars page” on page 187 for more information.

Before pressing MENU to enter the edit environment, you should select a Sound of the type you wish to edit or create.

**Note:** Notes pointing to special Drum Kit features are marked by the **DRUM** icon.

## Main page

Here is the main page of the Sound operating mode.



## Page header

This line shows the current operating mode and transposition.



Operating mode name

Master Transpose (in semitones)

## Operating mode name

Name of the current operating mode.

## Master transpose

Master transpose value in semitones. This value can be changed using the TRANSPOSE buttons on the control panel.

## Page menu icon

Press the page menu icon to open the menu. See “Page menu” on page 206 for more information.



## Sound Info area

This is where basic details for the Sound are shown. Press anywhere in this area to open the Sound Select window.

## Sound name

Name of the Sound assigned to the corresponding Keyboard track.

## Bank

Bank the current Sound belongs to.

## Bank Select / Program Change sequence

Bank Select MSB / Bank Select LSB / Program Change numbers, in the form “CC00.CC32.PC”.

CC00	This section shows the value of the Control Change (CC) 00 message (or Bank Select MSB) for the selected Sound.
CC32	This section shows the value of the Control Change (CC) 32 message (a.k.a. Bank Select LSB) for the selected Sound.
PC	This section shows the value of the Program Change (PC) message for the selected Sound. Values are in the standard 0-127 MIDI numbering format.

**Note:** Some manufacturers could use the 1-128 numbering system; when connecting your Pa1X to an instrument of this kind, increment the PC value by 1 unit.

## Octave Transpose icon

Non editable. Octave transpose value.

## Realtime Controls area

Controls in this area allow you to edit the main parameters of the Sounds assigned to each track.

While in this page, Assignable Sliders are linked to the corresponding Realtime Controls (a.k.a. Easy Sound Edit parameters).

Assignable Slider	Realtime Control	Assignable Slider	Realtime Control
1	Attack	5	LFO Depth
2	Decay	6	LFO Speed
3	Release	7	LFO Delay
4	Cutoff	8	Resonance

**Note:** All values refer to the original values of the Sound.

**Note:** When selecting the Write Sound command from the page menu, current parameter values, after editing the Realtime Controls, are saved with the Sound. After saving, Realtime Controls are set back to the default position.

**Note:** After selecting a different Sound, Realtime Control values are automatically set to zero.

Attack	Attack time. This is the time during which the sound goes from zero (at the moment when you strike a key) to its maximum level.
Decay	Decay time. Time to go from the final Attack level to the beginning of the Sustain.
Release	Release time. This is the time during which the sound goes from the sustaining phase, to zero. The Release is triggered by releasing a key.
Cutoff	Filter cutoff. This sets the sound brightness.
LFO Depth	Intensity of the Vibrato (LFO).
LFO Speed	Speed of the Vibrato (LFO).
LFO Delay	Delay time before the Vibrato (LFO) begins, after the sound starts.

Resonance Use the Filter Resonance to boost the cutoff frequency.

## Voice Assign Mode

### Poly

The Sound will play polyphonically, allowing you play chords.

### Mono

The Sound will play monophonically, producing only one note at a time.

### Hold

Use this parameter to keep the notes sustained even after releasing the keys.

**Note:** Please remember the Hold must be On before playing the note to be held.

### Legato

This parameter is available when the Mono option is selected.

**Note:** If “Legato” is On, certain multisamples or keyboard locations may produce an incorrect pitch.

On Legato is on. When multiple note-on's occur, the first note-on will retrigger the sound, and the second and subsequent note-on's will not retrigger.

When legato is on, multiple note-on's will not retrigger the voice. If one note is already on and another note is turned on, the first voice will continue sounding. The oscillator sound, envelope, and LFO will not be reset, and only the pitch of the oscillator will be updated. This setting is effective for wind instrument sounds and analog synth-type sounds.

Off Legato is off. Notes will always be retriggered when note-on occurs.

When legato is off, multiple note-on's will retrigger the voice at each note-on. The oscillator sound, envelope, and LFO will be reset (and retriggered) according to the settings of the Sound.

## FX Area

In Sound mode, the Sound uses its own effects instead of relying on A-D effects. Two effect processors (FX1 and FX2) are available.

### On/Off

Use this button to turn on or off the corresponding effect.

**Note:** When an effect parameter is edited, this parameter is automatically set to On.

**Note:** If the FX1 and FX2 effects have been set to Off, FX Send values are set to zero when saving the Sound.

### Selected Effect

Non editable. This shows the effect assigned to the corresponding FX processor. To select a different effect, see “FX1/2” on page 205.

## Send

Use this knob to adjust the level of the corresponding effect.

## Wet/Dry

Use this knob to adjust the mix between the wet (effected) and dry (unaffected) signal for the corresponding effect.

## Digital Drawbars page

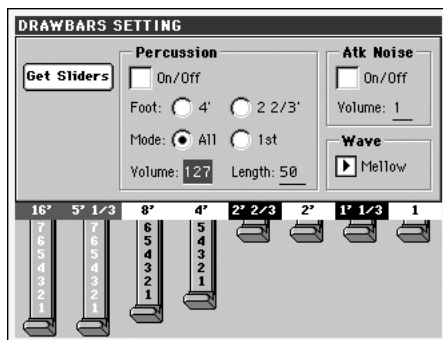
DIGITAL DRAWBARS are different from ordinary Sounds. Their parameters are not saved as a new Sound, but can be saved to a Performance. Therefore, when entering the Digital Drawbars page, the MENU button is disabled.

**Note:** In Style Play and Backing Sequence mode, only a Digital Drawbar Sound is available for the Keyboard tracks, and one for the Style tracks. Save them to a Performance (see "Write Performance dialog box" on page 95).

**Note:** In Song Play mode, there is a Digital Drawbars Sound for the Keyboard tracks, one for Song tracks 1-8, another one for Song tracks 9-16.

**Note:** In Sequencer mode there is a Digital Drawbars Sound for Song tracks 1-8, one for Song tracks 9-16.

When you select the DIGITAL DRAWBARS bank, the Digital Drawbar page appears, and the current setting is assigned to the selected track.



When entering this page, the SLIDER MODE button is automatically set to DRAWBARS, so you can use the sliders to change each foot volume. As an alternative, touch a foot and use TEMPO/VALUE controls to change its value.

Each foot refers to the pipe length in a pipe organ, in which the sound is produced by pipes of different length. Longer pipes mean a lower sound; therefore, the 16' drawbar produces the lowest pitched sound, while the 1' drawbar produces the highest pitched sound.

## Percussion

The percussion adds a percussive sound to the attack segment of the organ sound.

## On/Off

Use this parameter to turn percussion on or off.

## Foot

Use this parameter to select a percussion register.

4' Percussion added to the 4' foot.

2<sup>2</sup>/<sub>3</sub>' Percussion added to the 2<sup>2</sup>/<sub>3</sub>' foot.

## Mode (Percussion Mode)

This parameters lets you decide if the percussion sound has to be triggered on the first note of a group of held notes, or to all notes.

All The percussive attack is played on all notes of a chord.

1st The percussive attack is played only on the first note of a chord or a group of held notes. Release all notes to trigger the percussion again.

## Volume (Percussion Volume)

Level of the percussive sound.

0...99 Level.

## Length (Percussion Length)

Decay speed of the percussive sound.

0...99 Decay time.

## Atk Noise (Attack Noise)

### On/Off

Turns the noise component of the percussive attack on of off.

### Volume

Level of the attack noise (from 0 to 7).

## Wave (Drawbar Wave)

Waveshape of the drawbars.

Mellow A mellow-sounding synthetic wave.

Hard A harder-sounding synthetic wave.

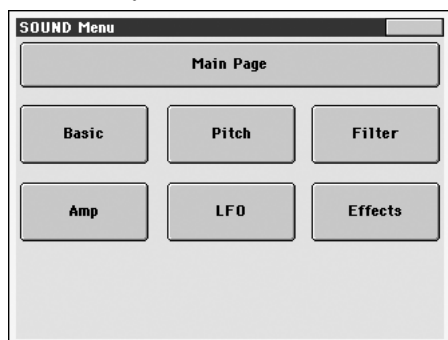
## Edit menu

From any page, press the MENU button to open the Sound edit menu. This menu gives access to the various Sound edit sections.

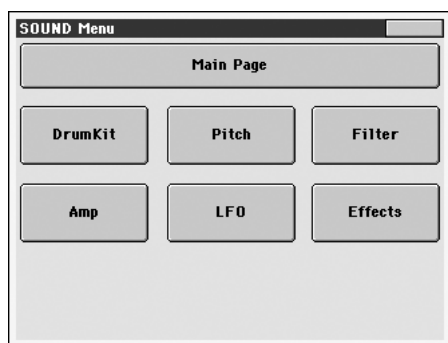
When in the menu, select an edit section, or press EXIT or SOUND to exit the menu and return to the main page. To return to the main page, you can also select the Main Page menu item.

When in an edit page, press EXIT or the SOUND button to return to the main page of the Sound operating mode.

- When an ordinary Sound is selected:



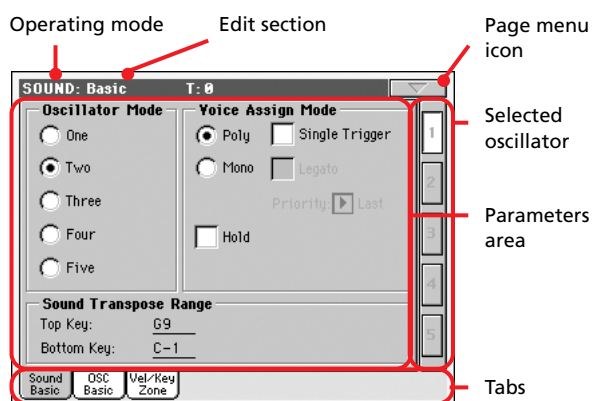
- When a Drum Kit is selected, the "Basic" section is replaced by the "DrumKit" section:



Each item in this menu corresponds to an edit section. Each edit section groups various edit pages, that may be selected by pressing the corresponding tab on the lower part of the display.

## Edit page structure

All edit pages share some basic elements.



### Operating mode

This indicates that the instrument is in Sound mode.

### Edit section

This identifies the current edit section, corresponding to one of the items of the edit menu (see "Edit menu" on page 188).

### Page menu icon

Press this icon to open the page menu (see "Page menu" on page 206).

### Selected oscillator

Use these buttons to select the oscillator to edit.

### Parameters area

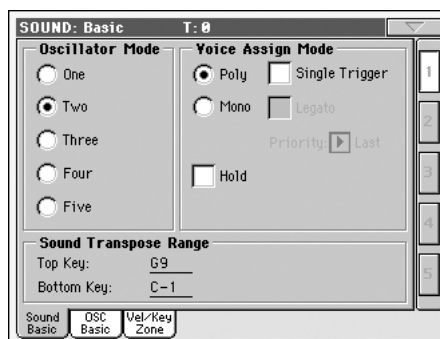
Each page contains various parameters. Use the tabs to select one of the available pages. For detailed information on the various types of parameters, see sections starting from page 188.

### Tabs

Use tabs to select one of the edit pages of the current edit section.

## Basic: Sound Basic

Here you can make basic settings for the Sound, such as basic oscillator settings, the oscillator count, and the polyphonic mode.



### Oscillator Mode

Use these radio buttons to specify the basic Sound type; whether it will use one or more oscillators (up to five).

The total amount of polyphony varies depending on the number of oscillators used by the Sound (a maximum of 62 with only 1 oscillator, or a maximum of 12 with 5 oscillators).

### Voice Assign Mode

This is the polyphonic mode of the Sound.

**Poly** The Sound will play polyphonically, allowing you play chords.

**Mono** The Sound will play monophonically, producing only one note at a time.

### Single Trigger

This parameter is available when the selected mode is Poly.

- On** When the same note is played repeatedly, the previous note will be silenced before the next note is sounded, so that the notes do not overlap.
- Off** When the same note is played repeatedly, the previous note will not be silenced before the next note is sounded.

### Legato

This parameter is only available when the selected mode is Mono. It is the same found on the main page of the Sound mode.

See “Legato” on page 186 for information on this parameter.

### Priority

This parameter is available when the selected mode is Mono. It specifies which note will be given priority to play when two or more notes are played simultaneously.

- Low** Lowest note will take priority.
- High** Highest note will take priority.
- Last** Last note will take priority.

### Hold

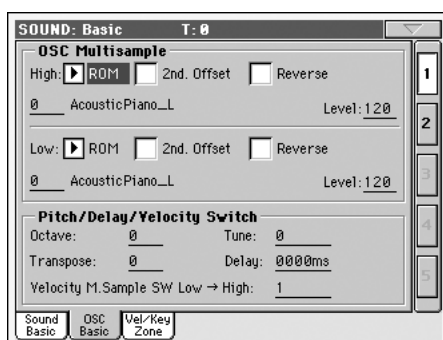
Use this parameter to keep the notes sustained even after releasing the keys.

### Sound Transpose Range

Use these parameters to set a range for transposition. Inside this range notes are transposed. Outside this range, they are not transposed. This is useful to avoid RX Sounds being transposed when transposing a Sound.

## Basic: OSC Basic

The multisample(s) on which the Sound will be based can be selected here for each of the five oscillators. Each oscillator can use 1 or 2 multisamples, each one assigned to the High or Low layer.



## OSC Multisample

### High/Low Bank/Num

Use these parameters to select a different multisample for each of the High and Low layers. You can use velocity to switch between the two multisamples. Offset, Reverse and Level can be adjusted independently for the High and Low multisamples.

The High and Low pop-up menus is where you select the bank (ROM, RAM or EXB), while the numeric field under it is for selecting the multisample inside the selected bank. The Sound name appears on its right.

The multisample you select for the High layer will be triggered by velocities higher than the value of the “Velocity Multisample Switch Low-High” parameter (see page 190). If you do not wish to use velocity switching, set the switch to a value of 001, and select only the High multisample.

**ROM** The Flash-ROM bank. The internal Flash-ROM contains 445 different multisamples (preset multisamples), supplied by Korg as standard.

**RAM** RAM multisample, read from the RAM. These are user-loaded or created multisamples.

**Note:** If you create a new Sound based on a RAM multisample, the RAM samples must be loaded from disk. See “PCM Autoload” and “Load PCM button” on page 266 (Disk mode) for information on loading PCM samples, either at startup or with a dedicated command.

**EXB1, EXB2** EXB1 or EXB2 multisample, loaded from the corresponding optional EXB board (if installed).

**Note:** Each multisample has an upper note range limit, and cannot produce sound when played above that limit.

### 2nd Offset

These parameters specify the point where the multisample(s) will begin to play. For some multisamples this parameter will not be available.

- On** The sound will begin from the offset location pre-determined for each multisample.
- Off** The sound will start from the beginning of the multisample waveform.

### Reverse

The multisample will be played in reverse. In the case of Flash-ROM or optional (RAM or EXB) multisamples that were originally specified to loop, the multisample will be played back in “one-shot” reverse mode. If the multisample was originally set to reverse, it will playback without change.

- On** The multisample will playback in reverse.
- Off** The multisample will play back normally.

### Level

These parameters specify the level of each multisample.

0...127 Multisample level.

**Note:** Depending on the multisample, high settings of this parameter may cause the sound to distort when a chord is played. If this occurs, lower the level.

## Pitch/Delay/Velocity Switch

### Octave

Use this parameter to adjust the pitch of the selected oscillator in octave units. The normal octave of the multisample is “0”.

-2...+1 Octave transposition.



## Transpose

Use this parameter to adjust the pitch of the selected oscillator in semitone steps over a range of  $\pm 1$  octave.

-12...+12 Transposition in semitones.

## Tune

Use this parameter to adjust the pitch of the sample in one-cent steps (a semitone is 100 cents) over a range of  $\pm 1$  octave.

-1200...+1200

Fine-tune value in cents.

## Delay

This parameter sets a delay time from the note-on to the real beginning of the sound. With a setting of KeyOff, the sound will begin when note-off occurs. This is useful to create sounds such as the “click” that is heard when a harpsichord note is released. In this case, set the “Sustain” parameter to 0 (see page 199).

Key Off The sound will begin when the note is released.

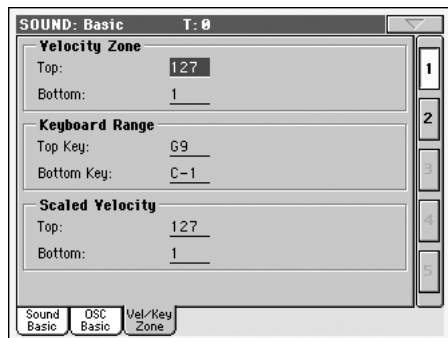
0...5000ms Delay time in milliseconds.

## Velocity Multisample Switch Low-High

This is the velocity value dividing the High and Low layers for the selected oscillator. Notes struck harder than this value will be played by the High multisample.

## Basic: Vel/Key Zone

Here you can set a note and velocity range “window” for the selected oscillator.



## Velocity Zone

Here you can specify the velocity range for the selected oscillator.

**Note:** You cannot set the Bottom Velocity higher than the Top Velocity, nor the Top Velocity lower than the Bottom Velocity.

0...127 Assigned velocity.

## Keyboard Range

Here you can specify the note range for the selected oscillator.

**Note:** You cannot set the Bottom Key higher than the Top key, nor the Top Key lower than the Bottom key.

C-1...G9 Assigned note.

## Scaled Velocity

Use these parameters to scale velocity values received by the oscillator. By using the “Velocity Zone” function (see above), an oscillator may be limited to a restricted range (say, 10 to 20), that may result in weak dynamics when the associated sample is triggered.

By assigning a different value to these parameters, the restricted range will be converted to a wider range (for example, the lowest range value of 10 may be converted to a Scaled Velocity value of 0, and the highest range value of 20 may be converted to a Scaled Velocity value of 127). All values included between the minimum and maximum value are scaled accordingly.

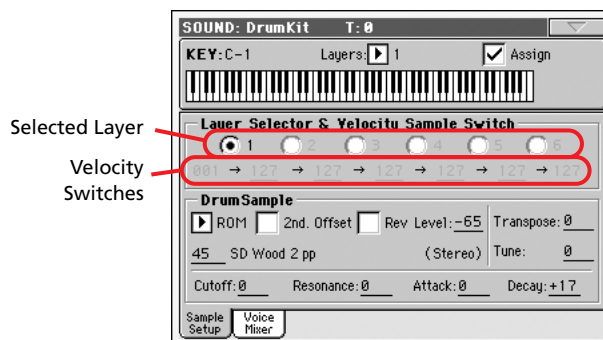
As a consequence, you can create an RX Sound of guitar, by assigning the guitar fret noise to the 10~20 velocity range. When a dynamics value between 10~20 is received, the real velocity value is scaled to the Scaled Velocity values, and plays louder.

0...127 Assigned velocity value.

## DrumKit: Sample Setup (Drum Kits)

This page appears when you edit a Drum Kit. Here you can select a different percussive sample for each key and layer.

**DRUM** Drum Kits use only one oscillator.



## Key

### Key

Key in edit. You can press a key on the keyboard, while this parameter is selected, to select a key.

### Layers

Number of layers assigned to the selected key. Depending on the number of selected layers, you can have a different number of velocity switches.

### Assign

Use this parameter to turn the sample on/off.

On The sample is assigned to the selected key.

Off The sample is not assigned. The sample assigned to the next highest assigned key is used instead.



## Layer Selector & Velocity Sample Switch

### Selected Layer

Use these radio buttons to select the layer to edit. The available layers depends on the “Layers” parameter.

### Velocity Switches

Each of these values separates the two adjacent layers for the selected sample/key. Notes stricken harder than a velocity switch will be played by the layer on the right, while notes stricken softer are played by the layer on the left.

The first and last values are not editable, and are always 001 and 127 (respectively).

## Drum Sample

### Bank/Num

Use these parameters to select a different Drum Sample for each layer. You can use velocity to switch between the available samples. Offset, Reverse and Level can be adjusted independently for the various multisamples.

The pop-up menu is where you select the bank (ROM, RAM or EXB), while the numeric field under it is for selecting the sample inside the selected bank. The sample name appears on its right.

The sample you select for the current layer will be triggered by velocities higher than the value of the “Velocity Switches” parameter (see page 191). If you do not wish to use velocity switching, assign just one layer to the selected key, and assign a sample only to Layer 1.

**ROM** The Flash-ROM bank. The internal Flash-ROM contains 445 different samples (preset samples), supplied by Korg as standard.

**RAM** RAM sample, read from the RAM. These are user-loaded or created samples.

***Note:** If you create a new Drum Kit based on a RAM sample, the RAM samples must be loaded from disk. See “PCM Autoload” and “Load PCM button” on page 266 (Disk mode) for information on loading PCM samples, either at startup or with a dedicated command.*

**EXB1, EXB2** EXB1 or EXB2 sample, loaded from the corresponding optional EXB board (if installed).

***Note:** Each sample has an upper note range limit, and may not produce sound when played above that limit.*

### 2nd Offset

These parameters specify the point where the sample will begin to play. For some samples this parameter will not be available.

**On** The sound will begin from the offset location pre-determined for each sample.

**Off** The sound will start from the beginning of the sample.

### Reverse

The sample will be played in reverse. For more information see “Reverse” on page 189.

### Level

This parameter specifies the level of the sample. For more information, see “Level” on page 189.

### Mono/Stereo indicator

Non editable. This indicator tells if the selected sample is mono (one voice per note) or stereo (two voices per note).

### Transpose

This parameter transposes the selected sample. Use it to change the pitch of the selected key.

**0** No transposition applied.  
**-64...+63** Transpose value in semitones.

### Tune

Use this parameter to fine-tune the assigned sample.

**0** No fine-tuning.  
**-99...+99** Fine-tuning value in cents (1/100 of a semitone).

### Cutoff

This parameter sets the cutoff frequency for the filter applied to the selected sample.

### Resonance

This parameter sets the resonance for the filter applied to the selected sample.

### Attack

This parameter is an offset to the selected sample's EG Attack.

### Decay

This parameter is an offset to the selected sample's EG Decay.

## DrumKit: Voice Mixer (Drum Kits)

This page appears when you edit a Drum Kit. Here you can set various parameters for the different percussive sample assigned to the selected key and layer.



### Key

See “Key” on page 190.

## Voice Assign Mode

### Single Trigger

Use this parameter to set the sample as a single-triggered one.

- On** When the same key (note) is played repeatedly, the previous note will be stopped before the new note is triggered, so that they will not overlap.
- Off** When the same key (note) is played repeatedly, the previous note will not be stopped before the new note is triggered.

### Exclusive Group

Exclusive Groups are sets of mutually exclusive keys, stopping each other. For example, if the Open Hi-Hat and Closed Hi-Hat are assigned the same Exclusive Group, playing an Open Hi-Hat will stop the Closed Hi-Hat playing.

- None** No Exclusive Group assigned. The selected key will not be stopped by any other key.
- 1...127** Exclusive Groups assigned to the selected key. When you play this key, all other keys assigned to the same Exclusive Group will be stopped, and this key will be stopped by other keys assigned to the same Exclusive Group.

### Enable Note On Receive

Use this parameter to enable/disable the reception of the Note On (Key On) message.

- On** The Note On message is normally received.
- Off** The Note On message is not received. Therefore, the corresponding key is muted.

### Enable Note Off Receive

Use this parameter to enable/disable the reception of the Note Off (Key Off) message.

- On** The sound will stop as soon as you release the key.
- Off** The sound will continue playing up to the end of the sample. The Note Off message is ignored.

## Mixer

### Pan

This parameter sets the position in the stereo panorama of the selected key.

### Send FX1

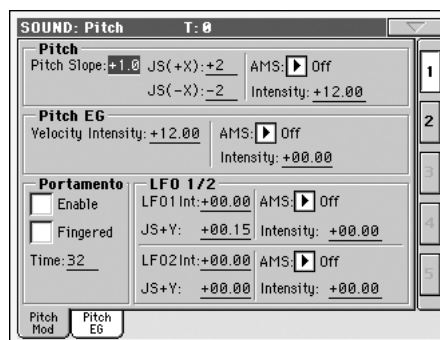
This parameter sets the FX1 send level for of the selected key.

### Send FX2

This parameter sets the FX2 send level for of the selected key.

## Pitch: Pitch Mod

Here you can make pitch settings for each oscillator. These settings specify how keyboard location will affect the pitch of each oscillator, and select the controllers that will affect the oscillator pitch and specify the depth of control. You can also specify the amount of pitch change produced by the Pitch EG and by LFO1 and LFO2, switch portamento on/off and specify how it will apply.



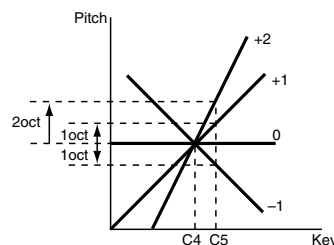
## Pitch

### Pitch Slope

Normally you will leave this parameter at +1.0. Positive (+) values will cause the pitch to rise as you play higher notes, and negative (–) values will cause the pitch to fall as you play higher notes.

With a value of 0, there will be no change in pitch, and the C4 pitch will sound regardless of the keyboard location you play.

The diagram shows how the Pitch Slope and pitch are related:



-1.0...+2.0 Pitch slope value.

### JS (+X)

This parameter specifies how the pitch will change when the joystick is moved all the way to the right. A setting of 12 produces 1 octave of change.

For example if you set this to +12 and move the joystick all the way to the right, the pitch will rise one octave above the original pitch.

-60...+12 Maximum pitch change in semitones.

### JS (–X)

This parameter specifies how the pitch will change when the joystick is moved all the way to the left. A setting of 12 produces 1 octave of change.

For example, if you set this to -60 and move the joystick all the way to the left, the pitch will fall five octaves below the original

pitch. This can be used to simulate the downward swoops that a guitarist produces using the tremolo arm.

-60...+12 Maximum pitch change in semitones.

### AMS (Alternate Modulation Source)

This parameter selects the source that will modulate the pitch of the selected oscillator. See “AMS (Alternate Modulation Source) list” on page 208.

### Intensity

This parameter specifies the depth and direction of the effect produced by “AMS”. With a setting of 0, no modulation will be applied. With a setting of 12.00, the pitch will change up to one octave.

For example, if you set “AMS” to After Touch and apply pressure to the keyboard, the pitch will rise if this parameter is set to a positive (+) value, or fall if this parameter is set to a negative (–) value. The range is a maximum of one octave.

-12.00...+12.00

Parameter value.

## Pitch EG

The Pitch EG (Envelope Generator) is unique to all oscillators.

### Velocity Intensity

This parameter specifies the depth and direction of the modulation that the pitch EG specified on “Pitch: Pitch EG” will apply to the pitch. With a setting of 12.00, the pitch will change a maximum of  $\pm 1$  octave.

-12.00...+12.00

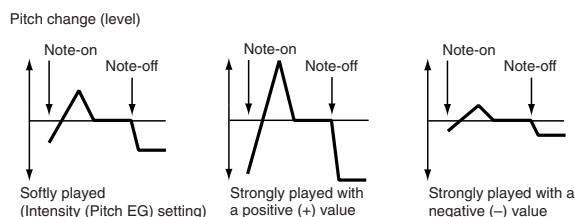
Parameter value.

### Pitch EG AMS (Alternate Modulation Source)

This parameter selects the source that will modulate the pitch EG of the selected oscillator. See “AMS (Alternate Modulation Source) list” on page 208).

### Pitch EG Intensity

This parameter specifies the depth and direction of the effect that “AMS” will have. For example, if you set “AMS” to Velocity and set this value to +12.00, the velocity will control the range of pitch change produced by the pitch EG in a range of  $\pm 1$  octave. As you play more softly, the pitch change will draw closer to the pitch EG levels.



**Note:** “Intensity” (Pitch EG) and AMS will be added to determine the depth and direction of the pitch modulation applied by the pitch EG.

## Portamento

### Enabled

This parameter turns the portamento effect (smooth change in pitch from one note to the next) on/off, and specifies how it will be applied.

**Note:** Portamento will also be switched when CC#65 (Portamento SW) is received.

On Portamento will be applied.

Off Portamento will not be applied.

### Fingered

This parameter specifies whether the portamento effect restarts or not with each note played.

On Portamento will restart with each note.

Off Portamento will not restart with each note.

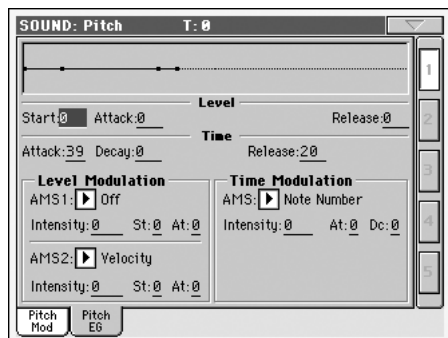
### Time

This parameter sets the portamento time. Increasing the value will produce a slower change in pitch.

000...127 Portamento time in MIDI value.

## Pitch: Pitch EG

Here you can make settings for the pitch EG, which creates time-variant changes in the pitch of the oscillators. The depth of pitch change produced by these EG settings on the oscillators is adjusted by the “Intensity (AMS1/2 Intensity)” parameter (see page 194).



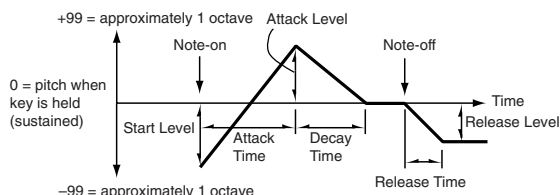
## Diagram

The diagram on top of the page shows the Pitch envelope line.

## Level

These parameters specify the amount of pitch change. The actual amount of pitch change will depend on the “Intensity (AMS1/2 Intensity)” parameter (see below). For example, with an “Intensity” setting of +12.00, a “Level” setting of +99 would raise the pitch one octave, and a “Level” setting of -99 would lower the pitch one octave.

Time-varying pitch settings (when Pitch EG Intensity = +12.00)



### Start Level

Specifies the amount of pitch change at note-on.

-99...+99 Parameter value.

### Attack Level

Specifies the amount of pitch change when the attack time has elapsed.

-99...+99 Parameter value.

### Release Level

Specifies the amount of pitch change when the release time has elapsed.

-99...+99 Parameter value.

## Time

These parameters specify the time over which the pitch change will occur.

See diagram above.

### Attack Time

Specifies the time over which the pitch will change from note-on until it reaches the pitch specified as the attack level.

0...99 Parameter value.

### Decay Time

Specifies the time over which the pitch will change after reaching the attack level until it reaches the normal pitch.

0...99 Parameter value.

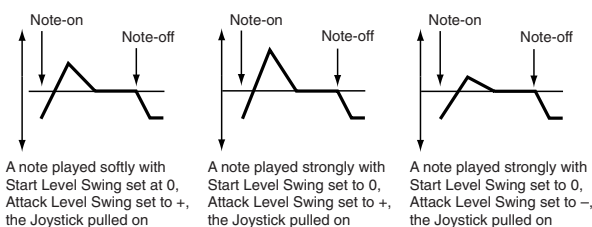
### Release Time

Specifies the time over which the pitch will change from note-off until it reaches the pitch specified as the release level.

0...99 Parameter value.

## Level Modulation

Pitch EG change (level) (AMS=JS-Y/Velocity, Intensity= positive (+) value



### AMS1/2 (Alternate Modulation Source 1/2)

These parameters select the source that will control the pitch EG “Level” parameters (“AMS (Alternate Modulation Source) list” on page 208).

### Intensity (AMS1/2 Intensity)

These parameters specify the depth and direction of the effect applied by “AMS1”. With a setting of 0, the levels specified by “Level” will be used.

For example if “AMS1” is After Touch, pressing the keys to turn it on will change the “Level” parameters of the Pitch EG. As the absolute value of “Intensity” is increased, the pitch EG levels will change more greatly when the key pressure is released. The direction of the change is specified by “St (Start Level Swing)” and “At (Attack Level Swing)”. When the key pressure is released, the pitch EG levels will return to their own settings.

If “AMS1” is set to Velocity, increasing the absolute value of “Intensity” will produce increasingly wider change in pitch EG levels for strongly-played notes. The direction of the change is specified by “St (Start Level Swing)” and “At (Attack Level Swing)”. As you play more softly, the pitch change will draw closer to the pitch EG levels.

-99...+99 Parameter value.

### St (Start Level Swing)

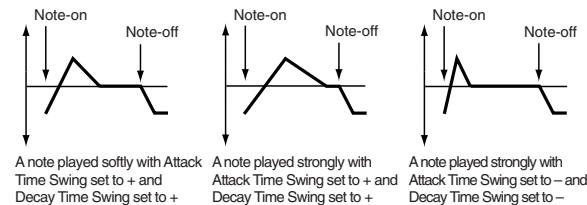
This parameter specifies the direction of change in “Start Level” caused by “AMS1/2”. If “Intensity” is a positive (+) value, a setting of + will raise the EG level, and a setting of - will decrease it. With a setting of 0 there will be no change.

## At (Attack Level Swing)

This parameter specifies the direction of change in “Attack Level” caused by “AMS1/2”. If “Intensity” is a positive (+) value, a setting of + will raise the EG level, and a setting of – will decrease it. With a setting of 0 there will be no change.

## Time Modulation

Pitch EG changes (Time) (AMS = Velocity, Intensity = positive (+) value)



## AMS (Alternate Modulation Source)

This parameter selects the source that will control the “Time” parameters of the pitch EG (see “AMS (Alternate Modulation Source) list” on page 208).

## Intensity (AMS Intensity)

This parameter specifies the depth and direction of the effect that “AMS” will have on the “Time” parameters. With a setting of 0, the pitch EG times will be just as specified by the “Time” settings.

The alternate modulation value at the moment that the EG reaches each point will determine the actual value of the EG time that comes next.

For example, the decay time will be determined by the alternate modulation value at the moment that the attack level is reached.

When this parameter is set to values of 16, 33, 49, 66, 82, or 99, the specified EG times will speed up as much as 2, 4, 8, 16, 32, or 64 times respectively (or slowed down to 1/2, 1/4, 1/8, 1/16, 1/32, or 1/64 of the original time).

For example if “AMS” is set to Velocity, increasing the absolute value of “Intensity” will allow strongly-played notes to increase the changes in pitch EG “Time” values. The direction of the change is specified by “At (Attack Time Swing)” and “Dc (Decay Time Swing)”. As you play more softly, the pitch EG times will more closely approach the actual settings of the pitch EG.

-99...+99 Parameter value.

## At (Attack Time Swing)

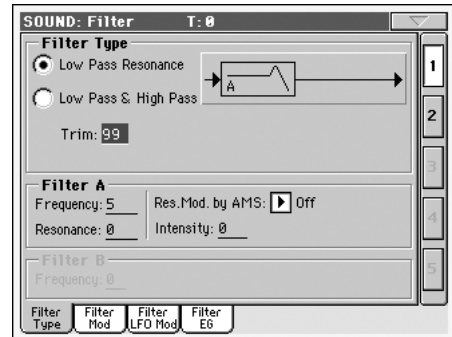
This parameter specifies the direction in which “AMS” will affect the “Attack Time” parameter. With positive (+) values of “Intensity”, a setting of + will cause the time to be lengthened, and a setting of – will cause the time to be shortened. With a setting of 0 there will be no change.

## Dc (Decay Time Swing)

Specify the direction in which “AMS” will affect the “Decay Time”. With positive (+) values of “Intensity”, a setting of + will cause the time to be lengthened, and a setting of – will cause the time to be shortened. With a setting of 0 there will be no change.

## Filter: Filter Type

Here you can make settings for the filters that will be used by the oscillators. You can select either a 24 dB/octave low pass filter with resonance, or a series connection of a 12 dB/octave low pass filter and a 12 dB/octave high pass filter.



## Filter Type

This parameter selects the type of filter (Low Pass Resonant, Low Pass & High Pass) for the selected oscillator.

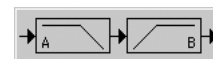
### Low Pass Resonance

When the Low Pass filter type is selected, only filter A will be activated.



### Low Pass & High Pass

When the Low Pass & High Pass filter type is selected, the filter B will be activated.



## Trim

Use this parameter to adjust the level at which the audio signal output from the selected oscillator is input to filter A.

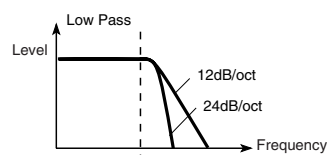
**Note:** If this value is raised, the sound may distort if Resonance is set to a high value or when you play a chord.

00...99 Trim level.

## Filter A

### Frequency (Cutoff Frequency A)

This parameter specifies the cutoff frequency of filter A.



This is a filter that cuts the high-frequency region above the cutoff frequency. This is the most common type of filter, and is used to cut part of the overtone components, making an originally bright timbre sound more mellow (darker). When the “Filter Type” is Low Pass Resonance, the cutoff will have a steeper slope.

00...99 Cutoff frequency value.



## Resonance (Resonance A)

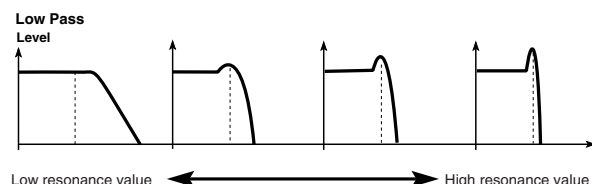
The resonance emphasizes the overtone components that lie in the region of the cutoff frequency specified by “Frequency”, producing a more distinctive sound. Increasing this value will produce a stronger effect.

00...99 Resonance value.

## Res. Mod. by AMS (Resonance modulated by AMS)

Selects the source that will control the “Resonance” level. See “AMS (Alternate Modulation Source) list” on page 208.

The effect of resonance



## Intensity (AMS Intensity)

This parameter specifies the depth and direction of the effect that “Res. Mod. by AMS (Resonance modulated by AMS)” will have on the resonance level specified by “Resonance (Resonance A)”.

For example if Velocity has been selected, changes in keyboard velocity will affect the resonance.

With positive (+) values, the resonance will increase as you play more strongly, and as you play more softly the resonance will approach the level specified by the “Resonance” setting.

With negative (–) values, the resonance will decrease as you play more strongly, and as you play more softly the resonance will approach the level specified by the “Resonance” setting.

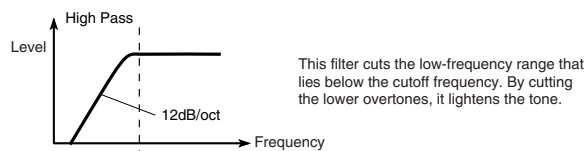
The resonance level is determined by adding the “Resonance” and “Intensity (AMS Intensity)” values.

–99...+99 Parameter value.

## Filter B

### Frequency (Cutoff Frequency B)

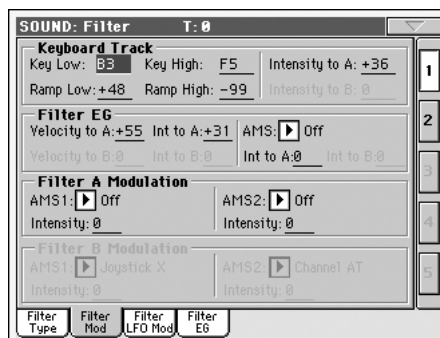
This parameter specifies the cutoff frequency of filter B. This parameter will be displayed when “Filter Type” is set to Low Pass & High Pass.



00...99 Cutoff frequency value.

## Filter: Filter Mod

These settings let you apply modulation to the cutoff frequency (“Frequency”) of the filter for the selected oscillator to modify the tone.



When “Filter Type” is Low Pass Resonance, parameters for filter B will not be editable (greyed out).

## Keyboard Tracking

### Key Low/High

These settings specify keyboard tracking for the cutoff frequency of the filter for the selected oscillator. The way in which the cutoff frequency is affected by the keyboard location you play can be specified by the “Key Low”, “Key High”, “Ramp Low” and “Ramp High” parameters.

Keyboard tracking will apply to the range below the specified Low note number, and above the specified High note number.

C–1...G9 Lowest/Highest note in the range.

### Ramp Low/High

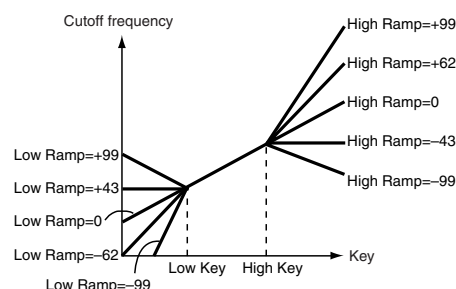
These parameter specifies the angle of keyboard tracking.

If “Intensity to A” and “Intensity to B” are set to +50, “Ramp Low” is set to –62 and “Ramp High” is set to +62, the angle of the change in cutoff frequency will correspond to the keyboard location (pitch). This means that the oscillation that occurs when you increase the “Resonance (Resonance A)” will correspond to the keyboard location.

If you set “Ramp Low” to +43 and “Ramp High” to –43, the cutoff frequency will not be affected by keyboard location. Use this setting when you do not want the cutoff frequency to change for each note.

–99...+99 Angle value.

Here is how cutoff frequency is affected by keyboard location and the Ramp setting (“Intensity to A” and “Intensity to B” = +50):





## Tracking to A/B

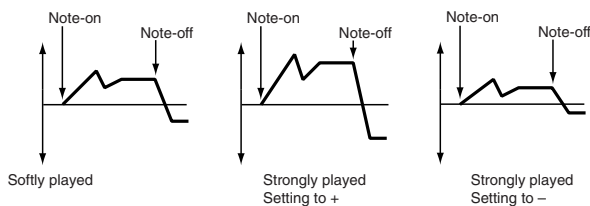
These parameters specify the note numbers at which keyboard tracking will begin to apply, and set the “Intensity to A” and “Intensity to B” parameters to specify the depth and direction of the change applied to filters A and B.

For the range of notes between “Key Low” and “Key High”, the cutoff frequency will change according to the keyboard location (pitch).

-99...+99      Parameter value.

## Filter EG

Changes in cutoff frequency



## Velocity to A

This parameter specifies the depth and direction of the effect that velocity will have on the time-varying changes created by the filter EG (as set on “Filter: Filter EG”) to control the filter A cutoff frequency.

With positive (+) values, playing more strongly will cause the filter EG to produce greater changes in cutoff frequency. With negative (-) values, playing more strongly will also cause the filter EG to produce greater changes in cutoff frequency, but with the polarity of the EG inverted.

99...+99      Value of the Velocity to A parameter.

## Velocity to B

This parameter specifies the depth and direction of the effect that velocity will have on the time-varying changes created by the filter EG to control the filter B cutoff frequency (see “Velocity to A”).

99...+99      Value of the Velocity to B parameter.

## Int to A (Intensity to A)

Specifies the depth and direction of the effect that the time-varying changes created by the filter 1 EG will have on the filter A cutoff frequency.

With positive (+) settings, the sound will become brighter when the EG levels set by Filter EG “Level” and “Time” parameters are in the “+” area, and darker when they are in the “-” area.

With negative (-) settings, the sound will become darker when the EG levels set by Filter EG “Level” and “Time” parameters are in the “+” area, and brighter when they are in the “-” area.

-99...+99      Parameter value.

## Int to B (Intensity to B)

Specifies the depth and direction of the effect that the time-varying changes created by the filter EG will have on the filter B cutoff frequency (see “Int to A (Intensity to A)”).

-99...+99      Parameter value.

## AMS (EG Alternate Modulation Source)

Selects the source that will control the depth and direction of the effect that the time-varying changes produced by the filter EG will have on the cutoff frequency of filters A and B. See “AMS (Alternate Modulation Source) list” on page 208.

## Int to A (Intensity to A)

Specifies the depth and direction of the effect that “AMS” will have on filter A. For details on how this will apply, refer to “Int to A (Intensity to A)”.

## Int to B (Intensity to B)

Specifies the depth and direction of the effect that “AMS” will have on filter B. For details on how this will apply, refer to “Int to A (Intensity to A)”.

**Note:** The sum of the settings for “Velocity to A/B”, “Intensity to A/B”, and “(AMS) Intensity to A/B” will determine the depth and direction of the effect produced by the filter EG.

## Filter A/B Modulation

### AMS1 (Alternate Modulation Source 1 for filter A/B)

Selects the source that will control modulation of the filter A cutoff frequency. See “AMS (Alternate Modulation Source) list” on page 208.

**Note:** The filter B parameters will be displayed when “Filter Type” on page 195 is Low Pass & High Pass.

### Intensity (Intensity to AMS1)

Specifies the depth and direction of the effect that “AMS1” will have.

When “AMS1” is JS X, a positive (+) value for this parameter will cause the cutoff frequency to rise when the joystick is moved toward the right, and fall when the joystick is moved toward the left. With a negative (-) value for this parameter, the opposite will occur.

This value is added to the setting of the Filter A “Frequency”.

### AMS2 (Alternate Modulation Source 2 for filter A/B)

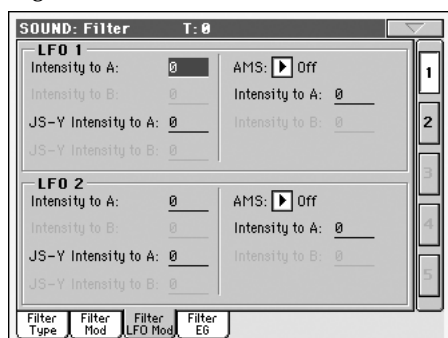
Selects the source that will control modulation of the filter A cutoff frequency (see “AMS (Alternate Modulation Source) list” on page 208).

### Intensity (Intensity to AMS2)

Specifies the depth and direction of the effect that the selected source will have (see “Intensity (Intensity to AMS1)” on page 197).

## Filter: Filter LFO

Here you can use the filter LFO to apply cyclic modulation to the cutoff frequency of the filter (for the selected oscillator) to create cyclical changes in tone.

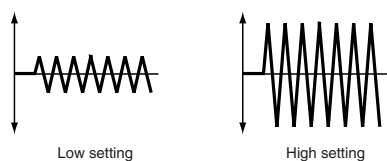


### LFO 1

#### Intensity to A

Specifies the depth and direction of the modulation that LFO1 (set on "LFO: LFO1") will have on the cutoff frequency of filter A. Negative (–) settings will invert the phase.

Change in cutoff



–99...+99      Parameter value.

#### Intensity to B

Specify the depth and direction of the modulation that LFO1 will have on the cutoff frequency of filter B (see "Intensity to A").

–99...+99      Parameter value.

#### JS (Joystick) –Y Intensity to A

By moving the joystick in the Y direction (toward yourself), you can control the depth at which LFO1 modulates the cutoff frequency of filter A. This parameter specifies the depth and direction of the control.

Higher settings of this parameter will produce greater increases in the effect of LFO1 on the filter when the joystick is moved toward yourself.

–99...+99      Parameter value.

#### JS (Joystick) –Y Intensity to B

By moving the joystick in the Y direction (toward yourself), you can control the depth at which LFO1 modulates the cutoff frequency of filter B. This parameter specifies the depth and direction of the control (see "JS (Joystick) –Y Intensity to A").

#### AMS (Filter LFO1 Alternate Modulation Source)

Select a source that will control the depth and direction of cutoff frequency change for both filters A and B. See "AMS (Alternate Modulation Source) list".

#### Intensity to A

Specifies the depth and direction of the effect that "AMS" will have on filter A.

For example if "AMS" is After Touch, higher settings of this parameter will allow greater change to be applied to LFO1 when you apply pressure to the keyboard.

–99...+99      Parameter value.

#### Intensity to B

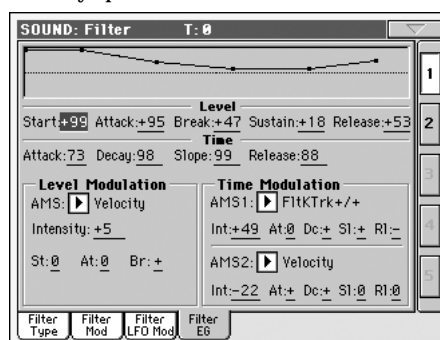
Specifies the depth and direction of the effect that "AMS" will have on filter B (see "Intensity to A").

### LFO 2

Adjusts the depth of the cyclic modulation applied by LFO2 (set on "LFO: LFO2") to the cutoff frequency of filters A and B. For more information on the parameters see "LFO 1" above.

## Filter: Filter EG

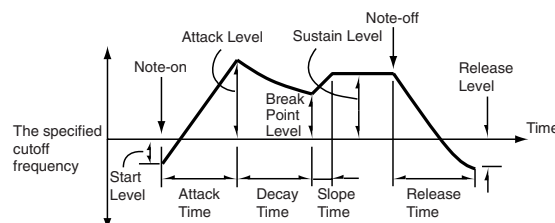
Here you can make settings for the EG that will produce time-varying changes in the cutoff frequency of filters A and B for the selected oscillator. The depth of the effect that these settings will have on the filter cutoff frequency is determined by the "Velocity" and "Intensity" parameters.



### Diagram

The diagram on top of the page shows the Filter envelope line.

### Filter envelope



### Level

These are the envelope segment levels. The result will depend on the filter that was selected in "Filter Type". For example, with the Low Pass Resonance filter, positive (+) values of EG Intensity will cause the tone to be brightened by positive (+) levels, and darkened by negative (–) levels.

## Start

This parameter specifies the change in cutoff frequency at the time of note-on.

-99...+99 Level value.

## Attack

This parameter specifies the change in cutoff frequency after the attack time has elapsed.

-99...+99 Level value.

## Break (Break Point)

This parameter specifies the change in cutoff frequency after the decay time has elapsed.

-99...+99 Level value.

## Sustain

This parameter specifies the change in cutoff frequency that will be maintained from after the slope time has elapsed until note-off occurs.

-99...+99 Level value.

## Release

This parameter specifies the change in cutoff frequency that will occur when the release time has elapsed.

-99...+99 Level value.

## Time

These parameters specify the time over which the filter change will occur.

## Attack

This parameter specifies the time over which the level will change from note-on until the attack level is reached.

0...99 Time value.

## Decay

This parameter specifies the time over which the level will change from the attack level to the break point level.

0...99 Time value.

## Slope

This parameter specifies the time over which the level will change after the decay time has elapsed until the sustain level is reached.

0...99 Time value.

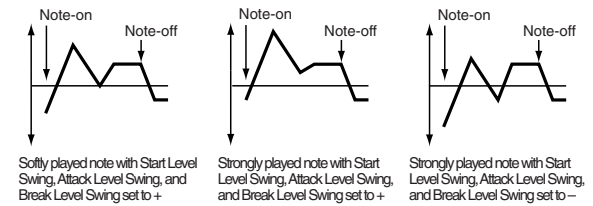
## Release

This parameter specifies the time over which the level will change after note-on occurs until the release level is reached.

0...99 Time value.

## Level Modulation

Filter 1 EG changes (level) (AMS = Velocity, Intensity = a positive (+) value)



## AMS (Alternate Modulation Source)

This parameter selects the source that will control the “Level” parameters of the filter EG (“AMS (Alternate Modulation Source) list” on page 208).

## Intensity (AMS Intensity)

This parameter specifies the depth and direction of the effect applied by “AMS”. With a setting of 0, the levels specified by “Frequency (Cutoff Frequency A)” will be used.

For example, if “AMS” is Velocity, and you set “St (Start Level Swing)”, “At (Attack Level Swing)” and “Br (Break Level Swing)” to + and set “Intensity” to a positive (+) value, the EG levels will rise as you play more strongly. If “Intensity” is set to a negative (–) values, the EG levels will fall as you play more strongly.

-99...+99 Intensity value.

## St (Start Level Swing)

This parameter specifies the direction in which “AMS” will affect “Start”. When “Intensity” has a positive (+) value, a setting of + for this parameter will allow “AMS” to raise the EG level, and a setting of – will allow “AMS” to lower the EG level. With a setting of 0 there will be no change.

## At (Attack Level Swing)

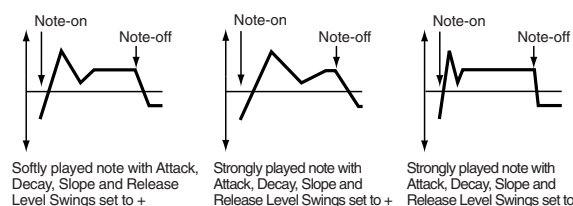
This parameter specifies the direction in which “AMS” will affect “Attack”. When “Intensity” has a positive (+) value, a setting of + for this parameter will allow “AMS” to raise the EG level, and a setting of – will allow “AMS” to lower the EG level. With a setting of 0 there will be no change.

## Br (Break Level Swing)

This parameter specifies the direction in which “AMS” will affect “Break (Break Point)”. When “Intensity” has a positive (+) value, a setting of + for this parameter will allow “AMS” to raise the EG level, and a setting of – will allow “AMS” to lower the EG level. With a setting of 0 there will be no change.

## Time Modulation

Filter 1 EG changes (Time) (AMS = Velocity, Intensity = a positive (+) value)



### AMS1/2

Use this parameter to select the source that will control the “Time” parameters of the filter EG. See “AMS (Alternate Modulation Source) list” on page 208.

### Int (AMS Intensity)

This parameter specifies the depth and direction of the effect that “AMS1/2” will have.

For example, if “AMS1/2” is set to FltKTr +/+, the EG “Time” parameters will be controlled by the Keyboard Tracking settings. With positive (+) values of this parameter, positive (+) values of “Ramp Low/High” will lengthen the EG times, and negative (–) values of “Ramp Low/High” will shorten the EG times. The direction of change is specified by “At (Attack Time Swing)”, “Dc (Decay Time Swing)”, “Sl (Slope Time Swing)”, and “Rl (Release Time Swing)”.

With a setting of 0, the times specified by “Frequency (Cutoff Frequency A)” will be used.

If “AMS1/2” is set to Velocity, positive (+) values of this parameter will cause EG times to lengthen as you play more strongly, and negative (–) values will cause EG times to shorten as you play more strongly.

–99...+99 Intensity value.

### At (Attack Time Swing)

This parameter specifies the direction in which “AMS1/2” will affect the attack time. With positive (+) values of “Intensity”, setting this parameter to + will allow AMS to lengthen the time, and setting this parameter to – will allow AMS to shorten the time. With a setting of 0 there will be no change.

### Dc (Decay Time Swing)

This parameter specifies the direction in which “AMS1/2” will affect the decay time. With positive (+) values of “Intensity”, setting this parameter to + will allow AMS to lengthen the time, and setting this parameter to – will allow AMS to shorten the time. With a setting of 0 there will be no change.

### Sl (Slope Time Swing)

This parameter specifies the direction in which “AMS1/2” will affect the slope time. With positive (+) values of “Intensity”, setting this parameter to + will allow AMS to lengthen the time, and setting this parameter to – will allow AMS to shorten the time. With a setting of 0 there will be no change.

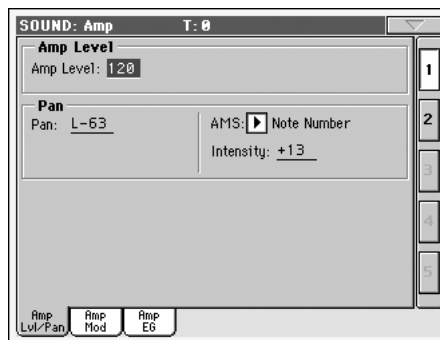
### Rl (Release Time Swing)

This parameter specifies the direction in which “AMS1/2” will affect the release time. With positive (+) values of “Intensity”, setting this parameter to + will allow AMS to lengthen the time,

and setting this parameter to – will allow AMS to shorten the time. With a setting of 0 there will be no change.

## Amp: Amp Level/Pan

These parameters control the volume and pan of the selected oscillator.



### Amp Level

Volume of the selected oscillator.

**Note:** The volume of a Sound can be controlled by CC#7 (volume) and #11 (expression). The resulting level is determined by multiplying the values of CC#7 and #11. The Global MIDI channel is used for control.

0...127 Volume level.

### Pan

Pan (stereo position) of the selected oscillator.

**DRUM** This parameter is not available when editing a Drum Kit. Use the individual Pan control for each key (see “Pan” on page 192).

- |        |  |
|--------|--|
| Random | The sound will be heard from a different location at each note-on. |
| L001   | Places the sound at far left.                                      |
| C064   | Places the sound in the center.                                    |
| R127   | Places the sound to far right.                                     |

**Note:** This can be controlled by CC#10 (panpot). A CC#10 value of 0 or 1 will place the sound at the far left, a value of 64 will place the sound at the location specified by the “Pan” setting for each oscillator, and a value of 127 will place the sound at the far right. This is controlled on the global MIDI channel.

## Pan modulation

### AMS (Alternate Modulation Source)

Selects the source that will modify pan (see “AMS (Alternate Modulation Source) list” on page 208). This change will be relative to the “Pan” setting.

### Intensity

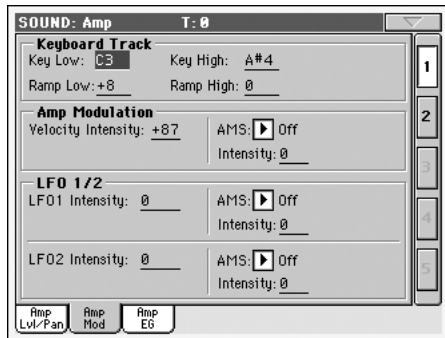
Specifies the depth of the effect produced by “AMS”. For example, if “Pan” is set to C064 and “AMS” is Note Number, positive (+) values of this parameter will cause the sound to move toward the right as the note numbers increase beyond the C4 note (i.e.,

as you play higher), and toward the left as the note numbers decrease (i.e., as you play lower). Negative (–) values of this parameter will have the opposite effect.

–99...+99      Parameter value.

## Amp: Amp Mod

These settings allow you to apply modulation to amp (for each oscillator) to modulate the volume.



## Keyboard Tracking

These parameters let you use keyboard tracking to adjust the volume of the selected oscillator. Use the “Key” and “Ramp” parameters to specify how the volume will be affected by the keyboard location that you play.

### Key Low/High

These settings specify the note number at which keyboard tracking will begin to apply. The volume will not change between “Key Low” and “Key High”.

Keyboard tracking will apply to the range below the specified Low note number, and above the specified High note number.

C–1...G9      Lowest/Highest note in the range.

### Ramp Low/High

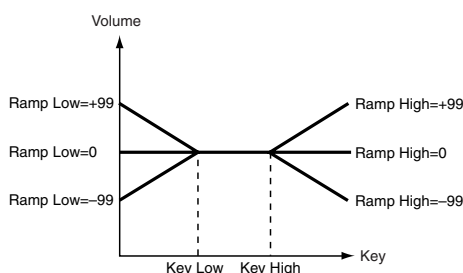
These parameters specify the angle of keyboard tracking.

With positive (+) values of the “Ramp Low” parameter, the volume will increase as you play notes below the “Key Low” note number. With negative (–) values, the volume will decrease.

With positive (+) values of the “Ramp High” parameter, the volume will increase as you play notes above the “Key High” note number. With negative (–) values, the volume will decrease.

–99...+99      Angle value.

Here is an example of volume changes produced by keyboard location and “Ramp” settings:

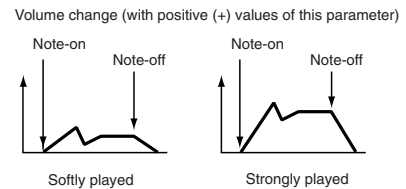


## Amp Modulation

These parameters specify how the volume of the selected oscillator will be affected by velocity.

### Velocity Intensity

With positive (+) values, the volume will increase as you play more strongly. With negative (–) values, the volume will decrease as you play more strongly.



–99...+99      Intensity value.

### AMS (Alternate Modulation Source)

Selects the source that will control the volume of the amp for the selected oscillator (See “AMS (Alternate Modulation Source) list” on page 208). “Velocity” cannot be selected.

### Intensity

This parameter specifies the depth and direction of the effect that “AMS” will have. The actual volume will be determined by multiplying the value of the changes produced by the amp EG with the values of Alternate Modulation etc., and if the levels of the amp EG are low, the modulation applied by Alternate Modulation will also be less.

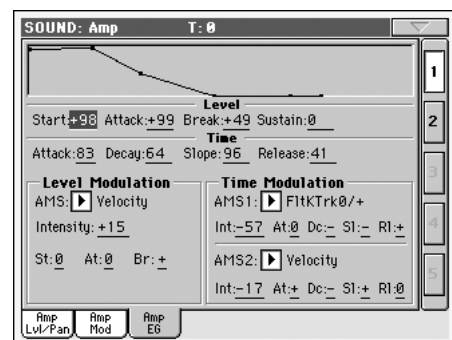
For example, if “AMS” is set to After Touch, positive (+) values of this parameter will cause the volume to increase when pressure is applied to the keyboard. However if the EG settings etc. have already raised the volume to its maximum level, the volume cannot be increased further.

With negative (–) values of this parameter, the volume will decrease when pressure is applied to the keyboard.

–99...+99      Intensity value.

## Amp: Amp EG

These parameters let you create time-varying changes in the volume of the selected oscillator.



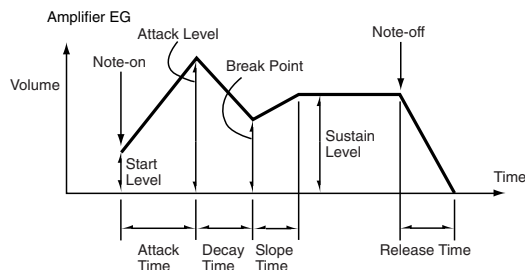


## Diagram

The diagram on top of the page shows the Amplitude envelope line.

## Level

These parameters are the level of the envelope segment.



### Start

This parameter specifies the volume level at note-on. If you want the note to begin at a loud level, set this to a high value.

0...99 Level value.

### Attack

This parameter specifies the volume level that will be reached after the attack time has elapsed.

0...99 Level value.

### Break

This parameter specifies the volume level that will be reached after the decay time has elapsed.

0...99 Level value.

### Sustain

This parameter specifies the volume level that will be maintained from after the slope time has elapsed until note-off occurs.

0...99 Level value.

## Time

These parameters specify the time over which the volume change will occur.

### Attack

This parameter specifies the time over which the volume will change after note-on until it reaches the attack level. If the start level is 0, this will be the rise time of the sound.

0...99 Time value.

### Decay

This parameter specifies the time over which the volume will change from when it reaches the attack level until it reaches the break point level.

0...99 Time value.

## Slope

This parameter specifies the time over which the volume will change from when it reaches the break point level until it reaches the sustain level.

0...99 Time value.

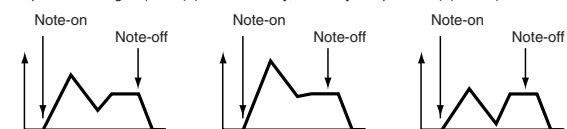
## Release

This parameter specifies the time over which the volume will change after note-off until it reaches 0.

0...99 Time value.

## Level Modulation

Amp 1 EG changes (Level) (AMS=Velocity, Intensity = a positive (+) value)



Softly played note when Start Level Swing=0 and Attack Level Swing and Break Level Swing are set to +

Strongly played note when Start Level Swing=0 and Attack Level Swing and Break Level Swing are set to +

Strongly played note when Start Level Swing=0 and Attack Level Swing and Break Level Swing are set to +

## AMS (Alternate Modulation Source)

This parameter specifies the source that will control the "Level" parameters of the amp EG. See "AMS (Alternate Modulation Source) list" on page 208.

## Intensity

This parameter specifies the depth and direction of the effect that "AMS" will have. For example, if "AMS" is Velocity, setting "St (Start Level Swing)", "At (Attack Level Swing)" and "Br (Break Point Level Swing)" to + and setting "Intensity" to a positive (+) value will cause the amp EG volume levels to increase as you play more strongly. Setting "Intensity" to a negative (-) values will cause the amp EG volume levels to decrease as you play more strongly. With a setting of 0, the levels will be as specified on "Amp: Amp EG".

-99...+99 Intensity value.

## St (Start Level Swing)

This parameter specifies the direction in which "AMS" will change "Start". If "Intensity" is set to a positive (+) value, setting this parameter to + will allow AMS to increase the EG level, and setting this parameter to - will allow AMS to decrease the EG level. With a setting of 0, no change will occur.

## At (Attack Level Swing)

This parameter specifies the direction in which "AMS" will change "Attack". If "Intensity" is set to a positive (+) value, setting this parameter to + will allow AMS to increase the EG level, and setting this parameter to - will allow AMS to decrease the EG level. With a setting of 0, no change will occur.

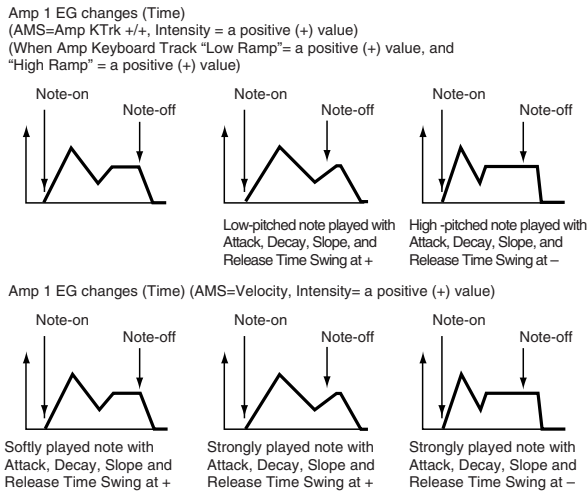
## Br (Break Point Level Swing)

This parameter specifies the direction in which "AMS" will change "Break". If "Intensity" is set to a positive (+) value, setting this parameter to + will allow AMS to increase the EG level, and setting this parameter to - will allow AMS to decrease the EG level. With a setting of 0, no change will occur.



## Time Modulation

These parameters let you use an alternate modulation source to modify the amp EG times that were specified in “Time” on page 202.



### AMS1 (Alternate Modulation Source 1 - Time)

This parameter specifies the source that will control the “Time” parameters of the amp EG (see “AMS (Alternate Modulation Source) list” on page 208). With a setting of Off, there will be no modulation.

### Intensity

This parameter specifies the depth and direction of the effect that “AMS1” will have. For example, if “AMS1(T)” is Amp KTrk +/-, the (Amp) Keyboard Track settings (see “Keyboard Tracking” on page 201) will control the EG “Time” parameters. With positive (+) values of this parameter, positive (+) values of “Ramp (Ramp Setting)” will cause EG times to be lengthened, and negative (–) values of “Ramp (Ramp Setting)” will cause EG times to be shortened. The direction of the change is specified by “At (Attack Time Swing)”, “Dc (Decay Time Swing)”, “Sl (Slope Time Swing)”, and “Rl (Release Time)”.

When “AMS1(T)” is Velocity, positive (+) values will cause EG times to lengthen as you play more strongly, and negative (–) values will cause EG times to shorten as you play more strongly. With a setting of 0, the EG times will be as specified by the “Level” parameters (see page 202).

### At (Attack Time Swing)

This parameter specifies the direction of the effect that “AMS1” will have on “Attack”. With positive (+) values of “Intensity”, setting this parameter to + will allow AMS1 to lengthen the time, and setting it to – will allow AMS1 to shorten the time. With a setting of 0 there will be no effect.

### Dc (Decay Time Swing)

This parameter specifies the direction of the effect that “AMS1” will have on “Decay”. With positive (+) values of “Intensity”, setting this parameter to + will allow AMS1 to lengthen the time, and setting it to – will allow AMS1 to shorten the time. With a setting of 0 there will be no effect.

### Sl (Slope Time Swing)

This parameter specifies the direction of the effect that “AMS1” will have on “Slope”. With positive (+) values of “Intensity”, set-

ting this parameter to + will allow AMS1 to lengthen the time, and setting it to – will allow AMS1 to shorten the time. With a setting of 0 there will be no effect.

### Rl (Release Time)

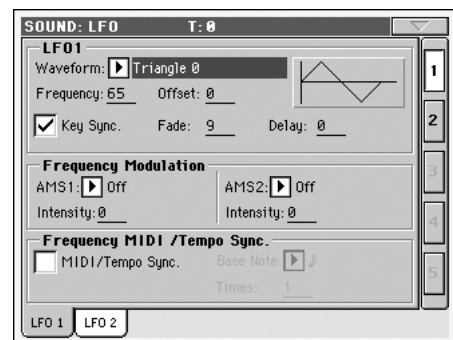
This parameter specifies the direction of the effect that “AMS1” will have on “Release”. With positive (+) values of “Intensity”, setting this parameter to + will allow AMS1 to lengthen the time, and setting it to – will allow AMS1 to shorten the time. With a setting of 0 there will be no effect.

### AMS2 (Alternate Modulation Source 2)

This is another alternate modulation source for the Amp EG. See above “AMS1” parameters.

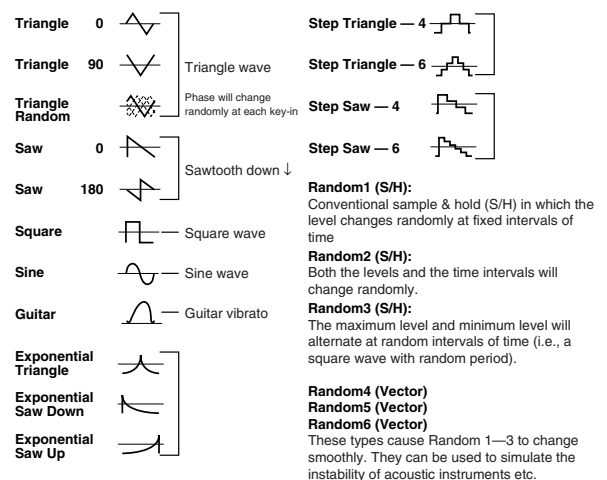
## LFO: LFO1

In this and the next page you can make settings for the LFO that can be used to cyclically modulate the Pitch, Filter, and Amp of each oscillator. There are two LFO units for each oscillator. By setting the LFO1 or LFO2 Intensity to a negative (–) value for Pitch, Filter, or Amp, you can invert the LFO waveform.



### Waveform

This parameter selects the LFO waveform. The numbers that appear at the right of some of the LFO waveforms indicate the phase at which the waveform will begin.



### Frequency

Set the LFO frequency. A setting of 99 is the fastest.

00...99 Frequency rate.

1...16      Beats before restarting the cycle.

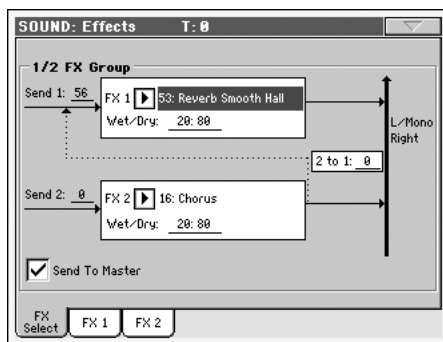
## LFO: LFO2

Here you can make settings for the LFO2, which is the second LFO that can be applied to the selected oscillator. See “LFO: LFO1” for more information on the parameters value.

However in “Frequency Modulation”, the LFO cannot be selected as a modulation source in “AMS1” or “AMS2.”

## Effects: FX Select

Here you can select two effects for the whole Sound, switch them on/off, and specify chaining.



**Note:** For details on the effects, refer to the “Effects” chapter.

## FX 1/2 Group

### Send

Send level for each effect.

**DRUM** Drum samples have their own send level settings (see “Send FX1” and “Send FX2” on page 192). Use this parameter to adjust the general offset of the Drum Kit.

000...127 Effect level.

### FX1/2

Use these parameters to select the effect type for effect 1/2. See the “Effects” chapter for more information.

**Note:** If 000: No Effect is selected, the output from the master effect will be muted.

### Wet/Dry

Mix between the effected (Wet) and direct (uneffected, Dry) signal.

Dry Direct signal only.

Wet Effected signal only.

nn:nn Percentage of Wet/Dry signal.

### 2>1

Use this parameter to send the output of effect 2 to the input of effect 1.

000...127 Level of the signal exiting the effect 2 going back to the effect 1.

### Send to Master

This parameters allows you to decide if the direct + effected signal must go to the Master, or just the effected signal.

On Only the effected signal will be sent to the Audio Outputs. The direct (non-effected) signal will not be sent.

Off Both the effected signal and direct signals will be sent to the Audio Outputs.

## Effects: FX1

In this page you can edit the effected assigned to the FX1 (A or C) effect processor (usually reverb). See the “Effects” chapter for more information.

## Effects: FX2

In this page you can edit the effected assigned to the FX2 (B or D) effect processor (usually modulating effect). See the “Effects” chapter for more information.

## Page menu

Press the page menu icon to open the menu. Press a command to select it. Press anywhere in the display to close the menu without selecting a command.



### Write Sound

Select this command to open the Write Sound dialog box, and save all editing parameters to a Sound.

See “Write Sound dialog box” on page 206 for more information.

### Solo Oscillator

Select this command to solo the selected oscillator, and mute the other oscillators. Select it again to unmute the other oscillators.

When this function is activated, the “Solo OSC [n]” indicator (n = oscillator number) blinks on the page header. While in this situation, you can select a different oscillator to be soloed.

### Swap LFO

Select this command to replace LFO1 with LFO2, and vice-versa.

### Copy Oscillator

Select this command to copy all settings between oscillators.

See “Copy Oscillator dialog box” on page 206 for more information.

### Copy FX

Select this command to copy all FX settings from another Sound.

See “Copy FX dialog box” on page 207 for more information.

### Copy Drum Kit

Select this command to copy the Drum Kit from a different Drum Kit.

See “Copy Drum Kit dialog box” on page 207 for more information.

### Init Sound

Select this command to delete all parameters, and set them to a default value.

### Compare

When this command is checked, original Sound parameter values are temporarily recalled, to compare them with edited

parameters. You cannot edit the Sound while you are in Compare mode.

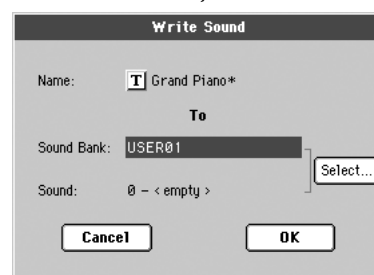
While this function is on, the Compare indicator blinks on the page header.

## Write Sound dialog box

Open this window by selecting the Write Sound item from the page menu. Here, you can save all Sound parameters to a Sound location in memory.

**Warning:** If you write over an existing User Sound, the Sound will be deleted and replaced by the one you are saving (“overwrite”). Please save on disk any User Sound you don’t want to lose.

**Note:** You can’t save over a Factory Sound location.



### Name

Name of the Sound to be saved. Press the **T** (Text Edit) button next to the name to open the Text Edit window.

### Sound Bank

Target bank of Sounds. Each bank corresponds to one of the PERFORMANCE/SOUND buttons. Use TEMPO/VALUE controls to select a different bank.

### Sound

Target Sound location in the selected bank. Use TEMPO/VALUE controls to select a different location.

### Select... button

Press this button to open the Sound Select window, and select a target location.

## Copy Oscillator dialog box

Open this window by selecting the Copy Oscillator item from the page menu. Here, you can copy all settings between oscillators.



### From Sound

Press this button to open the Sound Select window, and select the source Sound.

### From Oscillator

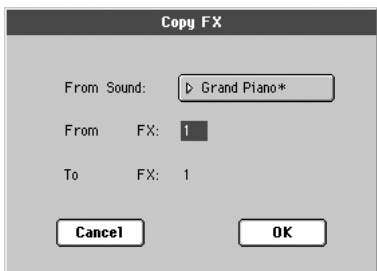
Select the source oscillator to copy from.

### To Oscillator

Target oscillator where to copy the source settings to.

## Copy FX dialog box

Open this window by selecting the Copy FX item from the page menu. Here, you can copy all FX settings between FX processors.



### From Sound

Press this button to open the Sound Select window, and select the source Sound.

### From FX

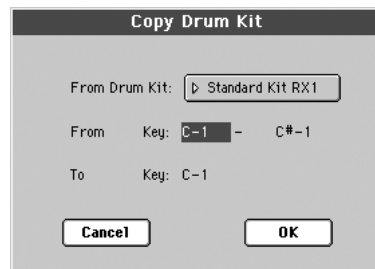
Select the source effect to copy from.

### To FX

Target effect where to copy the source settings to.

## Copy Drum Kit dialog box

Open this window by selecting the Copy Drum Kit item from the page menu. Here, you can copy settings from a range of keys of a Drum Kit.



### From Drum Kit

Press this button to open the Sound Select window, and select the source Drum Kit.

### From Key

Select the source range of keys to copy from.

### To Key

Target key. Settings are copied starting from this key, and upwards.

## AMS (Alternate Modulation Source) list

Off	Do not use Alternate Modulation
Pitch EG	Pitch EG
Filter EG	Filter EG within the same oscillator
Amp EG	Amp EG within the same oscillator
LFO1	LFO1 within the same oscillator
LFO2	LFO2 within the same oscillator
Flt KTrk +/- (Filter Keyboard Track +/-)	Filter keyboard tracking within the same oscillator
Flt KTrk +/- (Filter Keyboard Track +/-)	Filter keyboard tracking within the same oscillator
Flt KTrk 0/+ (Filter Keyboard Track 0/+)	Filter keyboard tracking within the same oscillator
Flt KTrk +/-0 (Filter Keyboard Track +/-0)	Filter keyboard tracking within the same oscillator
Amp KTrk +/- (Amp Keyboard Track +/-)	Amp keyboard tracking within the same oscillator
Amp KTrk +/- (Amp Keyboard Track +/-)	Amp keyboard tracking within the same oscillator
Amp KTrk 0/+ (Amp Keyboard Track 0/+)	Amp keyboard tracking within the same oscillator
Amp KTrk +/-0 (Amp Keyboard Track +/-0)	Amp keyboard tracking within the same oscillator
Note Number	Note number
Velocity	Velocity
Poly AT (Poly After Touch)	Polyphonic After Touch (transmitted from the Pa1X only as sequence data)
Channel AT (Channel After Touch)	After Touch (Channel After Touch)
Joystick X	Joystick X (horizontal) axis
Joystick +Y	Joystick +Y (vertical upward) direction (CC#01)
Joystick Y	Joystick Y (vertical downward) direction (CC#02)
JS+Y & AT/2 (Joy Stick +Y & After Touch/2)	Joystick +Y (vertical upward) direction and After Touch
JS-Y & AT/2 (Joy Stick Y & After Touch/2)	Joystick Y (vertical downward) direction and After Touch
Ass.Pedal	Assignable foot pedal (CC#04)
CC#18	CC#18
CC#17	CC#17
CC#19	CC#19
CC#20	CC#20
CC#21	CC#21
Damper	Damper pedal (CC#64)
CC#65	Portamento switch (CC#65)
Sostenuto	Sostenuto pedal (CC#66)
CC#80	CC#80
CC#81	CC#81
CC#82	CC#82
CC#83	CC#83
Tempo	Tempo (tempo data from Sequencer 1 clock or external MIDI clock)

**Flt KTrk +/- (Filter Keyboard Track +/-)**

+/-

**Flt KTrk +/- (Filter Keyboard Track +/-)**

**Flt KTrk 0/+ (Filter Keyboard Track 0/+)**

0/+

**Flt KTrk +/-0 (Filter Keyboard Track +/-0)**

**Amp KTrk +/- (Amp Keyboard Track +/-)**

**Amp KTrk +/- (Amp Keyboard Track +/-)**

**Amp KTrk 0/+ (Amp Keyboard Track 0/+)**

**Amp KTrk +/-0 (Amp Keyboard Track +/-0)**

+/+

The direction of the effect will be determined by the sign (positive or negative) of the “Ramp Low” or “Ramp High” setting.

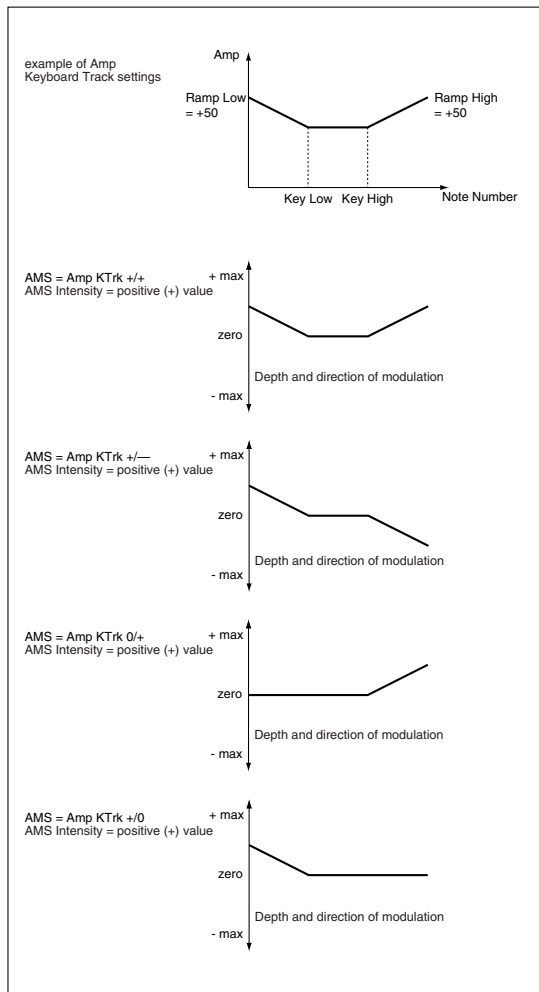
The direction of the effect will be determined by the sign of the “Ramp Low” setting, and by the opposite sign of the “Ramp High” setting (50 for a setting of +50, and +50 for a setting of 50).

“Ramp Low” will have no AMS effect. The sign of the “Ramp High” setting will determine the direction of its effect.



+ / 0

The sign of the “Ramp Low” setting will determine the direction of its effect. “Ramp High” will have no AMS effect.



### JS +Y & AT/2 (Joy Stick +Y & After Touch/2)

The effect will be controlled by the joystick +Y (vertically upward) and by after touch. In this case, the effect of after touch will be only half of the specified intensity.

### JS Y & AT/2 (Joy Stick -Y & After Touch/2)

The effect will be controlled by the joystick Y (vertically downward) and by after touch. In this case, the effect of after touch will be only half of the specified intensity.

## Sampling operating mode

Pa1X includes a full-featured sampler, with powerful tools for creating (a) new sounds and (b) rhythm patterns, based on audio grooves.

**New Sounds.** Sampling allows you to create new sounds, by recording from an external source connected to Pa1X Audio Inputs, or by loading files from disk. Pa1X can read common formats, like WAV and AIFF files, Korg Trinity and Triton Samples, Korg Trinity and Triton Multisamples, Korg Triton Programs, and Akai™ S1000 and S3000 Samples and Programs.

To be used, Samples must then be assigned to a Multisample or a Drum Kit. A Multisample allows you to arrange samples into separate zones of the keyboard. Drum Kits allows you to assign a different sample to each note of the keyboard, with up to six dynamic layers per note.

Multisamples can then be assigned to Sounds. Sounds created with this function can be used as any ordinary Sound, and assigned to any track.

The Load Sample function allows you to read samples (Korg “.KSF”, Akai® “.S1” or “.S3”, “.AIFF” and “.WAV”) from disk. The Import function allows to read multisamples (Korg “.KMP” and Akai® “.P1” or “.P3”) from Korg Trinity and Triton, or Akai S1000 or S3000 disks. Programs (“.PCG” files) can be imported from Korg Triton disks, and converted to Sounds.

**Note:** Akai data can only be imported from CD.

You can also use the Export function to export samples (“.KSF”) and multisamples (“.KMP”) in Korg proprietary format.

**Audio Grooves.** Another powerful feature of the Sampling mode is the Time Slice. This feature lets you add realism to MIDI tracks, by using sampled patterns as the rhythm track of a Style.

Cycling rhythm samples, or audio grooves, can be “sliced” into separate percussive instruments. Combined with MIDI tracks, the “sliced” audio groove can be kept in sync with the Tempo, and can play slower or faster than the original groove.

**Note: Sampling is only available on instruments with the hard disk installed.**

**Warning:** When loading a “.SET” folder containing Sounds associated with PCM data, all existing PCM data in memory are deleted. Save them before loading the folder, by selecting the “PCM” option during a Save All operation (see “Saving the full memory content” on page 259).

To see if a “.SET” folder contains PCM data, open it and look for a “PCM” folder.

**Note:** When entering the Sampling mode, samples are automatically loaded from the (hidden) PCM folder on the hard disk. This may take some time before this mode becomes operative.

**Note:** No sound will be heard when you first enter the Sampling mode.

**Note:** Some demo audio grooves can be found on the Korg Pa1X web site ([www.korgpa.com](http://www.korgpa.com)).

## Entering and exiting the Sampling mode

- While in Sound mode, press the RECORD button to enter in Sampling mode.
- While in Sampling mode, press the RECORD button to exit the Sampling mode, and return to the Sound mode.

## The Record (Sampling) procedure

Here is a short overview of a typical sampling procedure.

1. With the MASTER VOLUME slider set to zero, connect the source to be sampled to one or both the Audio Inputs on the rear of the Pa1X. When the source has been connected, raise the MASTER VOLUME slider to a position other than zero.
2. Adjust the source volume.
  - If recording from the MIC input, adjust the input level of the Pa1X using the GAIN knob next to the Audio Input connectors.
  - If recording from the line inputs, adjust the source output level. If possible, set its output level to the maximum.

Watch at the AUDIO IN LED to check the input level. Ideally, the LED should turn to red only on signal peaks, and should usually stay orange (green means too low an input signal).
3. Press the SOUND button to enter the Sound mode, then press RECORD to enter the Record page.
4. Use the “Record Mode” parameter to select the audio input to be sampled.
5. If you can, first start the source to be recorded, then press the Record button in the display to start recording.
 

As an alternative, press the Record button in the display, and immediately start the source to be recorded.
6. Press the Record button in the display again to stop recording. When the memory is full, the sampling automatically stops. A maximum of 10.9 seconds is allowed for each sample.
7. Play the keyboard to listen to the sampled sound.
8. If you are not satisfied with the recorded sound, press the Record button in the display again, to repeat recording. Press Record again to stop recording. A new sample will be automatically created.
9. When finished sampling your sound, you can either save it, or (if it is an audio groove) continue editing it with the Time Slice function.
  - To save the sample, select the Write command from the page menu. The Write Sample dialog box will appear (see “Write Sample dialog box” on page 221). Assign a name to

the new Sample, and save it to the PCM folder on the hard disk.

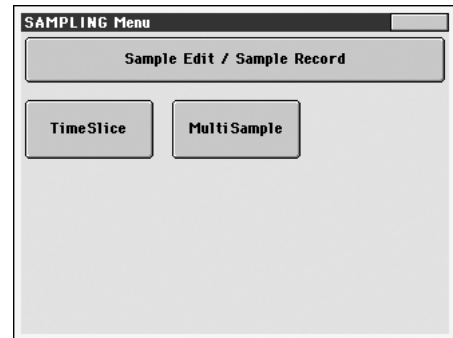
- To create a series of separate percussive samples from an audio groove, and a MIDI Groove, go to the Time Slice page. After creating a series of slices, use the Extend function to refine your groove. Select the Write command from the page menu, to save the sliced samples and the MIDI Groove to disk.
10. After saving, press the MENU button and go to the “Multi-sample” section, to assign the sample(s) to a multisample. Assign each sample to a different keyboard zone of the multisample.
  11. When finished editing the multisample, select the Write command from the page menu. The Write Multisample dialog box will appear (see “Write MultiSample dialog box” on page 221). Assign a name to the new multisample, and save it to the internal memory (SSD).
  12. Press RECORD to exit the Sampling mode and return to the Sound mode.
    - To access the new multisample, first select an ordinary Sound. Press MENU and go to the “Basic: OSC Basic” page (see page 189). Select one of the available layers, then select the RAM bank of multisamples. Finally, select the new multisample.
    - To access the new sample(s), you must assign it to a Drum Kit. First select a Drum Kit. Press MENU and go to the “DrumKit: Sample Setup (Drum Kits)” page (see page 190). Select a key and a layer, then select the RAM bank of samples. Finally, select the new sample.
  13. Select the Write Sound command from the page menu, and save the Sound to an empty User location.
  14. Assign the new Sound to a Style track (preferably, the Drum or Percussion track), then select the “Save Current Style Perf.” command from the page menu, to save the Style Performance.
  15. If the new Sound is based on an audio groove, use the “Import: Import Groove” function in the Style Record mode (see page 118) to import the generated MIDI Groove to the Style track you assigned the new Sound to.

**Warning:** Generated MIDI Grooves will be deleted when turning the instrument off. Import them to a Style track before turning the instrument off.

## Edit menu

From any page of the Sampling mode, press the MENU button to open the Sampling edit menu. This menu gives access to the various Sampling edit sections.

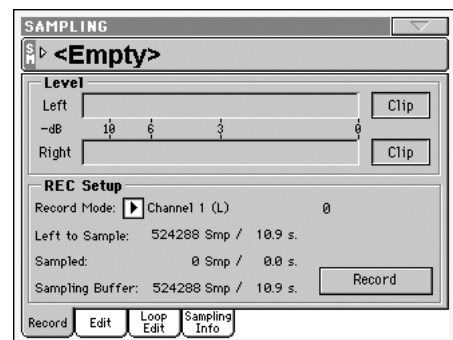
When in the menu, select an edit section, or press EXIT to exit the menu and return to the Sample Edit / Sample Record page. To return to this page, you can also select the Sample Edit / Sample Record menu item.



Each item in this menu corresponds to an edit section. Each edit section groups various edit pages, that may be selected by pressing the corresponding tab on the lower part of the display.

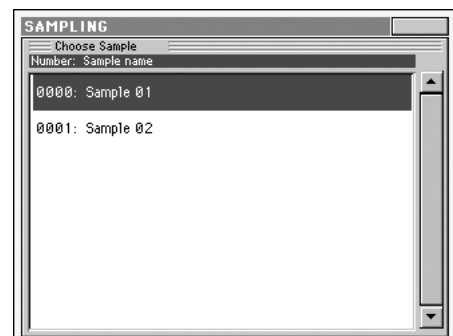
## Sampling: Record

This page allows you to record a 16-bit, 48kHz stereo or mono sample.



## SM (Sample)

Press this area to open the Choose Sample window, and select one of the available samples in the RAM memory for editing.



Select one of the available samples. The window will be automatically closed after selecting.

## Level

Use these meters to see the level of the entering signal. When the CLIP indicator turns red, the signal is too hot. Lower it by reducing the source output level, or by using the GAIN knob on the rear panel of the Pa1X.

In case of mono sampling, only one of the indicators will work.

## REC Setup

### Record Mode

Use this parameter to select the audio input on the back of the instrument.

**Channel 1 (L)** Only the Input 1 is selected. A mono sample will be produced.

**Channel 2 (R)** Only the Input 2 is selected. A mono sample will be produced.

**Channel 1&2 (Stereo)**

Both inputs will be selected. A stereo sample will be produced.

**Note:** Whether you record or load a stereo or mono sample, the sample in memory will be treated as if it was stereo (the editor is always a stereo editor). Mono samples will be saved as mono files. Stereo samples will be saved as two separate mono files, and will be treated as mono files when reloaded.

### Left to Sample

*Non editable.* Remaining memory (in samples/seconds) for sampling. The maximum space available for samples is 524,288 (mono or stereo) samples, or 10.9 seconds.

### Sampled

*Non editable.* Used memory (in samples/seconds) for sampling.

### Sampling Buffer

*Non editable.* Available memory (in samples/seconds) for sample editing.

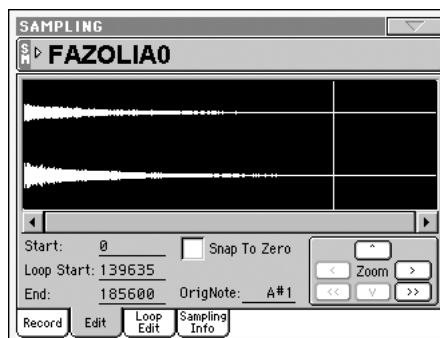
### Record button

Press this button to start recording. Press it again to stop recording. Recording will automatically stop when the maximum available space will end.

**Note:** Pa1X always samples at the maximum quality (16 bit, 48,000Hz). Samples of a different quality may be loaded (8 or 16 bit, 11,025Hz to 48,000Hz).

## Sampling: Edit

This page allows you to cut, trim or normalize a sample, as well as edit the loop points. The sample can be played on the full keyboard.



## SM (Sample)

Selected sample. See “SM (Sample)” above.

## Sample diagram

This is the graphical display of the selected sample waveform. The area included between the Start and End points is highlighted (dark background).

## Parameters

### Start (Sample Start)

This is the sample start point (in samples). You may edit this point, as well as the End point, to shorten the sample. Changing the Sample Start cuts out the attack portion of the sound.

**Note:** When moving the “Start” point forward, the “Loop Start” point is also moved forward.

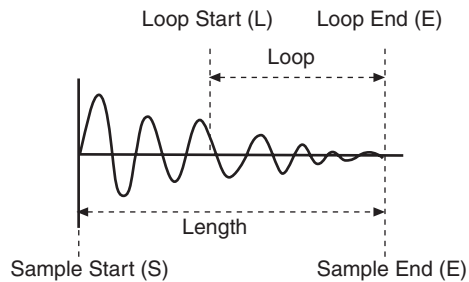
**Warning:** When saving the edited sample (Write Sample operation), the segments exceeding the Start and End points are permanently removed.

### Loop Start

**Note:** Use the “Loop On” parameter on the “Sampling: Loop Edit” page to turn the loop on (see page 214).

Use this parameter to adjust the Loop Start point. When you adjust this parameter, an audible click may appear, due to a pitch and/or level mismatch between the starting and ending points of the loop. Move the Loop Start and Loop/Sample End point, so that the click can no longer be heard.

When editing audio grooves, the Loop Start should match the Sample Start point. This parameter usually differs from the Sample Start in ordinary sounds (i.e., a guitar, a piano, a voice...).



### End (Sample/Loop End)

This is the sample and loop end point (in samples). You may edit this point, to shorten the sample.

**Warning:** When saving the edited sample (Write Sample operation), the segments exceeding the Start and End points are permanently removed.

### Snap to Zero

Turn this parameter on, to make all Sample and Loop Start and End selections fall on zero-crossing points (i.e., points where the waveform crosses the x-axis, and goes from negative to positive, or from positive to negative values). This will make loops more accurate, and will reduce the risk of “clicks”.

### OrigNote (Original Note)

Original pitch of the sampled note. While this parameter means nothing in this page, it will be useful when assigning a sample to the multisample, to identify the original pitch of the sample.

For example, if you sample a C4, set this parameter to “C4”. When the sample will be assigned to a keyboard zone of the multisample, it will be transposed (if needed) according to this parameter, to avoid a change of the original pitch.

### Zoom

Use these buttons to change the size of the waveform shown in the diagram. When a button is greyed-out, it means the maximum or minimum value has been reached.



Increase the vertical size.



Decrease the vertical size.



Increase the horizontal size.



Decrease the horizontal size.



Full zoom in.



Full zoom out.

## Changing the sample length and finding good-sounding loop points

To adjust the sample length and loop points, check the “Loop On” parameter, then use the “Start”, “Loop Start” and “End” parameters to create a fine sounding cycling loop.

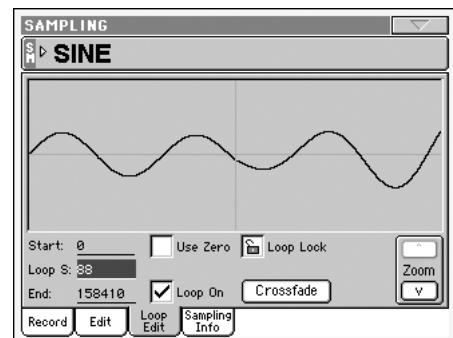
For example, you may have sampled an audio groove of an exceeding length. Use the “End” parameter to cut the exceeding portion at the end of the sample, and adjust the starting point of the loop using the “Start” or “Loop Start” parameters.

Usually, checking the “Snap to Zero” parameter is a big help, to avoid the loop clicks due to level mismatches.

## Sampling: Loop Edit

The loop is a cycling portion of a sampled sound, that may match with the whole sample. After the attack stage, most sounds repeat the same waveform during their sustain stage. You may adjust the Loop Start point with the “Loop Start” parameter, and the Loop End point (always matching the Sample End point) using the “End” parameter.

This page lets you fine tune the loop points, by watching at the Loop End and Loop Start points matching at the center of the diagram. A good-sounding loop is shown as a continuous, non-breaking line.



### SM (Sample)

Selected sample. See “SM (Sample)” on page 211.

### Loop diagram

This diagram shows the “End” (Loop End) point on the left half, and the “Loop Start” point on the right half of the screen. Use the “End” and “Loop Start” parameters to adjust the loop.

### Parameters

#### Start

See “Start (Sample Start)” on page 212.

#### Loop Start

See “Loop Start” on page 212.

#### End

See “End (Sample/Loop End)” on page 213.

#### Use Zero

See “Snap to Zero” on page 213.

#### Loop Lock

This fixes the length of the loop being edited.

- Off** The “Loop S.” and “End” parameters can be edited separately.
- On** When the “Loop S.” or “End” parameter is edited, the other one will be automatically adjusted so that the distance between them (i.e., the loop length) does not change. This is convenient when you are creating a rhythm loop to match a specific tempo.

### Loop On

Use this parameter to turn the loop on or off.

- On** The loop is turned on, and the portion of sound included between the Loop Start and Loop End points will cycle until a key is kept pressed. If the “Loop Start” point matches the “Start” point, the whole sample is cycled.
- Off** The loop is turned off. The sound will play from the Sample Start to the Sample End point only once, even if you keep a key pressed on the keyboard.

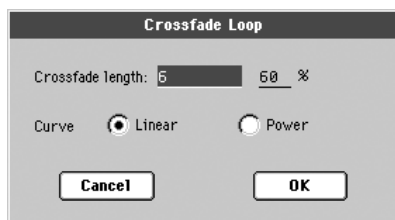
## Crossfade

When looping the pitched sample of a complex sound such as strings or woodwinds to make the sound sustain, it is necessary to create a long loop to preserve the rich character of the sound. Crossfade Loop can be used to minimize the difference in pitch and level between the beginning and ending of the loop region, to create a natural-sounding loop. In order to solve such problems, Crossfade Loop causes the sound to change gradually from the end to the beginning of the loop.

In practice, here is how it works. A specific length (the “Crossfade Length” value) of the waveform immediately before the beginning of the loop is taken and mixed with the end portion. At this time, the waveform level of the portion immediately before the end (the length specified by “Crossfade Length”) will gradually decrease, and the waveform level immediately before the beginning of the loop will gradually increase as the two are mixed.

When the “Loop On” parameter is checked, and the “Start” and “Loop S.” parameters have different values, the “Crossfade” button becomes available.

When you press the Crossfade button, the Crossfade Loop dialog box appears:



### Crossfade Length

In “Crossfade Length,” specify the length of the sample that you wish to crossfade. You can enter it either as the number of samples, or a percentage (%). If you set this as a percentage, the number of samples will be calculated automatically.

If you set this to 50%, crossfade will be performed on the second half of the region between loop start and loop end.

The “Crossfade Length” cannot be greater than the smaller length between the Sample Start – Loop Start points, or the Loop Start – Sample End points.

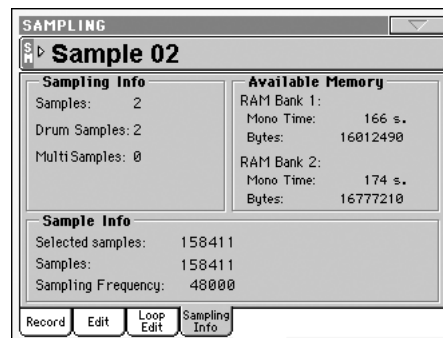
### Curve

Set “Curve” to specify how the volume will change in the crossfaded region.

- Linear** The volume will change linearly.
- Power** The volume will change non-linearly. Sometimes a setting of Linear will produce the impression that the volume has dropped in the middle of the crossfade curve. In such cases, use Power.

## Sampling: Sampling Info

Use this page to see detailed info on the sample in edit. General information for the RAM memory is also available.



## SM (Sample)

Selected sample. See “SM (Sample)” on page 211.

## Sampling Info

### Samples

Number of samples in memory.

### Drum Samples

Number of drum samples in memory.

### Multisamples

Number of multisamples in memory.

## Available Memory

### RAM Bank 1/2

The Sample RAM memory is divided in two banks of 16 Mega-bytes (MB) each. Pa1X comes with 16MB of RAM already installed, corresponding to Bank 1. You can install an additional (optional) module of 16MB, corresponding to Bank 2, for a total of 32MB.

**Note:** A sample cannot be split between the two banks. It must reside on just one bank.



## Mono Time

Remaining sample memory (in seconds). This value is given for mono samples. With stereo samples, this time has to be halved.

## Bytes

Remaining memory for sampling (in Bytes). This value is given for mono samples. With stereo samples, this time has to be halved.

## Sample Info

### Selected Samples

Size of the selected sample (in samples).

### Samples

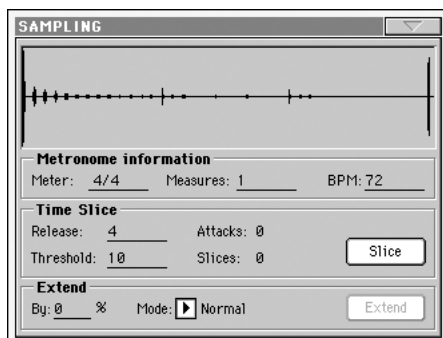
Total size of the samples in memory (in samples).

### Sampling Frequency

Sampling frequency of the selected sample (in Hertz).

## Time Slice

The Time Slice function lets you transform a rhythm audio groove in a series of single percussive samples, to be assigned to a Style or Song Drum or Percussion track.



## Some theory...

**Analyzing and processing.** This function detects the attacks (e.g., kick and snare) inside a rhythm audio groove (a sample that loops a drum pattern), and automatically divides the audio groove into individual percussive samples.

The divided percussive samples will be automatically assigned to a multisample, and the multisample to a Sound.

Within the generated multisample, a separate sample is assigned to a different note on the keyboard, starting from C#3. By playing an ascending chromatic scale with this multisample, you could recreate the original audio groove.

A MIDI Groove will also be created, containing a sequence of notes triggering the sliced percussive samples in the same order as in the original audio groove (i.e., it plays an ascending chromatic scale starting from C#3).

When you will import this MIDI Groove to the percussive track of a Style (see "Import: Import Groove" on page 118), this sequence will let you adjust the groove's tempo without affecting the pitch of the percussive samples.

In addition to changing the groove's tempo without affecting its pitch, this lets you do the following:

- change the order in which notes are played
- change the timing
- edit the pattern notes to freely recreate a new rhythm loop.

**Saving.** After the slicing, you can select the Write command from the page menu, to save the Sound based on sliced samples, and the MIDI Groove containing the corresponding MIDI sequence.

• The Sound will be saved to the selected location in the User area of the internal memory. You will be able to select it as an ordinary Sound, and assign it to the Drum or Percussion track of a Style.

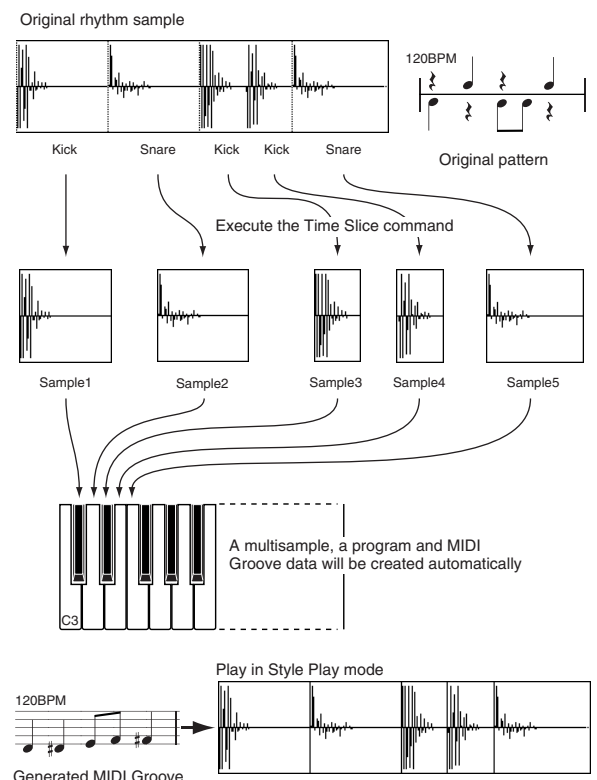
• The Multisample will be automatically saved to the next free available location.

• Samples will be permanently saved to the PCM folder on the hard disk. They can be automatically loaded when turning the instrument on, by checking the "PCM Autoload" option in Disk mode (see page 265).

• The MIDI Groove will be temporarily saved to the SSD memory, and will be available only when using the Import function of the Style Record mode (see "Import: Import Groove" on page 118).

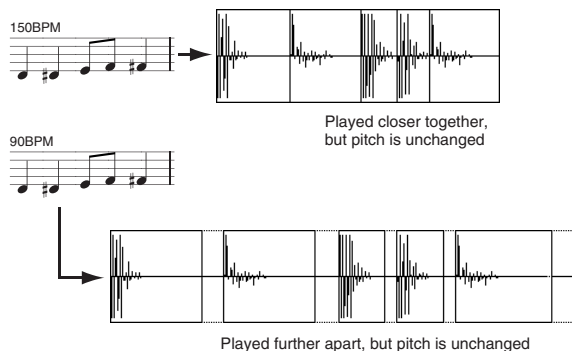
**Warning:** All MIDI Grooves will be delete each time the Pa1X is turned off.

### Ex.1 - Generating samples and MIDI Groove data:



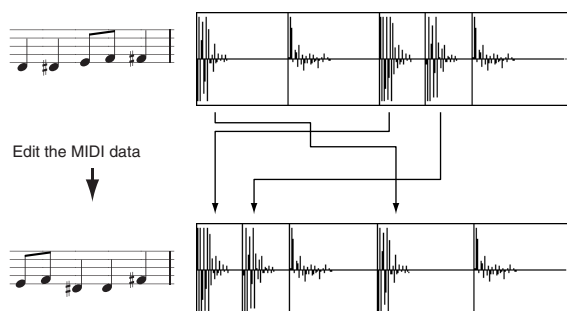
**Note:** Sliced samples and MIDI data are saved with a Write operation.

### Ex.2 - Varying the groove's tempo



**Note:** To vary the groove's tempo, you must first import the generated MIDI data into the Percussion track (Import function of the Style Record mode), and assign the new generated Sound to the Percussion track. Gaps between sliced samples, when slowing down the tempo, can be automatically filled by the Extend function, smoothing each sample's tail.

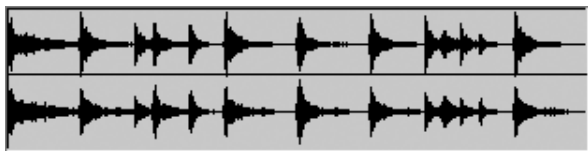
### Ex.3 - Recombining MIDI notes and samples



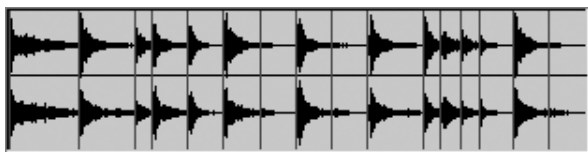
**Note:** To recombine notes inside the generated MIDI sequence, you must first import the MIDI data in Style Record mode, by using the "Import" function. Then, use the Event Edit to change the note order.

## Sample diagram

This diagram shows the sample waveform and the slices. Here is how the sample diagram appears before the Slice:



... and the same diagram after the Slice:



## Metronome Information

### Meter

Use this parameter to specify the Meter of the original sample.

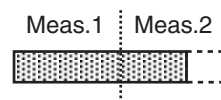
### Measures

Use this parameter to specify the number of measures of the original sample. Usually, you will load a groove 1 or 2-measures long.

### BPM

This parameter specifies the tempo (in Beats Per Minute) of the original sample. Pa1X automatically calculates this value based on the Start, End (see page 212), Meter and Measures parameters.

The BPM can be only adjusted to values lower than the one automatically calculated. This can be useful, for example, when the actual sample is shorter than the entered Meter and Measures values.



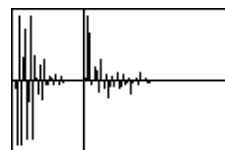
In the above example, the actual groove lasts only up to the first half of Measure 2. The recognized tempo is 130, while the real tempo is 100. Set the BPM value to 100, and a rest will be added to the end of the groove, to allow it to loop seamlessly.

## Time Slice

See "The Time Slice procedure" on page 217 for more information.

### Release

Adjust the value of this parameter to change the number of recognized attacks, by varying the speed needed to the Slice engine to start working again. For example, in the following example, if the Release value is too high (i.e., too long), the second attack may be lost:



**Note:** After changing the Release value, you must select the Slice command again.

### Threshold

This parameter varies the threshold over which the attacks are recognized (i.e., the Time Slice sensitivity). If it is too low, weaker attacks may be ignored.

**Note:** After changing the Threshold value, you are not obliged to select the Slice command again. The Slices value is immediately changed.

### Attacks

This (non-editable) parameter shows the number of attacks recognized. More than one attack may be recognized in a single slice. Adjust the Release and Threshold parameters to change the number of recognized attacks.

## Slices

This (non-editable) parameter shows the number of generated slices, i.e. generated samples and notes in the midfile. To change this value, edit the Release and Threshold parameters.

**Note:** You can have a maximum of 78 slices.

## Slice button

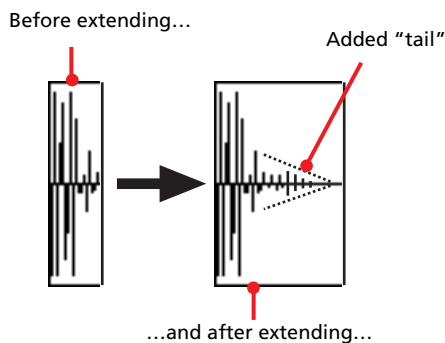
Select this command to execute the Slice after entering the Time Slice page, or changing the Release value. This command is “ghosted” (i.e., non-selectable) if no sample has been recorded or loaded yet.

The Time Slice operation is executed on the sample, from the “Start” to the “End” point set in the Sample Edit / Sample Record section.

## Extend

See “The Extend procedure” on page 218 for more information.

When using a sliced groove with a slow tempo, an annoying gap may be heard between a sample and the following one. The Extend function allows you to fix this problem by adding a “tail” to all samples, making their decay smoother and more musical.



**Note:** You can use the Extend function only after a Time Slice operation.

**Note:** The Extend function increases the original sample size.

**Note:** If there is not enough buffer memory, the Extend function may not work. If this happens, please decrease the “By” value.

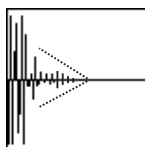
## By

Use this parameter to set the length of the “tail” added to the samples (in percentage). The higher this value, the greater the size of the samples. A setting of 20-30% is usually suitable to most grooves.

## Mode

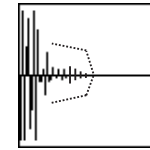
This parameter specifies if the added “tail” must decay in a linear way, or sustain for a longer time and then fall suddenly.

**Normal** This option is most suitable for percussive sound with a short (but not immediate) decay. The “tail” envelope is linear, and the level decays fast.



## Long

This option is most suitable for cymbals, whose sound should be sustained up until the next note. The “tail” envelope is sustained and falls slowly, then falls suddenly next to the end.



## Extend button

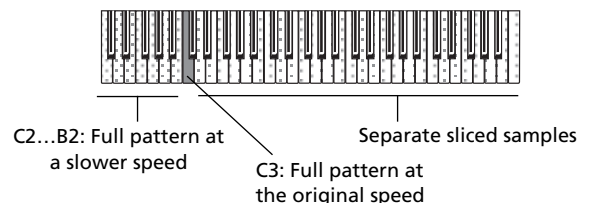
Press this button to execute the Extend command. After you select it, it will return “ghosted”, meaning that you can’t select it again. If you change any of the parameters in this page, it will be available again.

## The Time Slice procedure

Before executing a Slice operation, you must record or load a sample. Then, you may edit the sample on “Sampling: Record”, then execute the Slice operation on this sample.

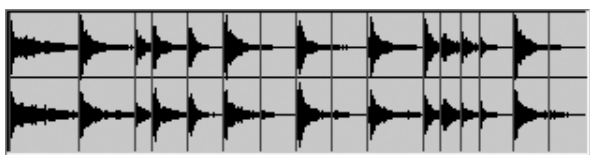
1. After recording or loading a sample, go to the Time Slice page.
2. Pa1X automatically calculates the BPM parameter, based on the given Meter and Measures values. If you know these data, set the Meter, Measures and BPM (Beats Per Minute) parameters. This would make the slicing more accurate.
3. Select the “Slice” command.

The original sample will be sliced, and each generated sample assigned to a different key:



Key	Assigned sample/pattern	Speed %
C2	Full pattern cycling at half the speed	50%
C#2	Full pattern cycling at various speeds	53%
D2		56%
D#2		60%
E2		63%
F2		67%
F#2		71%
G2		75%
G#2		80%
A2		84%
A#2		89%
B2		94%
C3	Full pattern cycling at the original speed	100%
C#3 and above	Separate sliced samples	—

A MIDI Groove with the original pattern will also be generated. The screen will change, to show slices separated by vertical lines:



4. Test the generated sliced drum kit on the keyboard.

- To test the full pattern at different speed, play a note from C2 (half speed) to C3 (original speed). See table above.
- To test the single sliced samples, play notes from C#3 and above. If you play a full chromatic scale, the original pattern will be sounded.

**Hint:** If too many samples have been generated, and the keyboard can't fit them all, use the OCTAVE buttons to transpose the keyboard, and listen to samples exceeding the upper limit.

5. If the Slice didn't produce satisfactory results, adjust the Release parameter. If this does not produce good results, try adjusting the Threshold parameter, too. After adjusting the Release parameter, you must execute the Time Slice again.
6. Since a tempo value rounding happens when making a Time Slice operation, and the loop may not be accurate, you may need to adjust both the "Start" and "End" parameters of the "Sampling: Edit" page, to make the groove loop flawlessly. After editing these parameters, you must execute the Time Slice again.

*Go on experimenting different settings! Editing an audio groove is a pure matter of experimentation.*

7. When the Slice is completed, you can save the sliced samples and the MIDI Groove to disk, or use the Extend function to improve the quality of the slices.

Select the Write command from the page menu. The Write Slice dialog box will appear (see "Write Slice dialog box" on page 222). Assign a name to the new Sound, and save it to an User Sound location.

A MIDI Groove with the same name will also be saved to a reserved area of the internal memory. Be warned, that this area will be deleted when turning the instrument off. Convert it to an internal Style pattern, by using the Import function of the Style Record mode, before turning the instrument off.

- To improve the quality of the slices, use the Extend function (see "Extend" below).

8. After saving, you may press RECORD to exit the Sampling mode.
9. After exiting the Sampling mode, you may load the generated MIDI Groove by using the Import function of the Style Record mode (see "Import: Import Groove" on page 118 for more information).

## The Extend procedure

1. Set the By parameter, according to the tempo of the groove you will use. If you will slow down the groove very much, assign higher values to this parameter, otherwise you may assign lower values.
2. Select the Extend Mode. "Long" is more suitable for cymbals.
3. Select the Extend command.
4. After the Extend operation is complete, test the full pattern at different speed, by playing notes from C2 (half speed) to C3 (original speed). See table on page 217.
5. If the Extend didn't produce satisfactory results, change the settings. Any previously made change will be deleted.
6. When the Extend is completed, you can save the sliced and extended samples and the resulting MIDI Groove to the internal memory.

Select the Write command from the page menu. The Write Slice dialog box will appear (see "Write Slice dialog box" on page 222). Assign a name to the new Sound, and save it to an User Sound location.

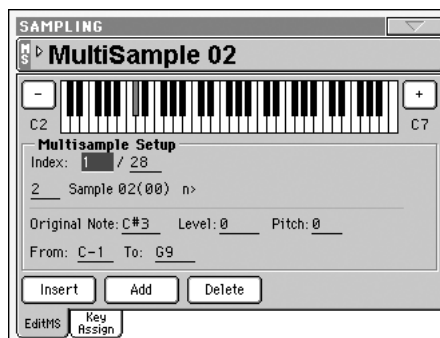
A MIDI Groove with the same name will also be saved to a reserved area of the internal memory. Be warned, that this area will be deleted when turning the instrument off. Convert it to an internal Style pattern, by using the Import function of the Style Record mode, before turning the instrument off.

7. After saving, you may press RECORD to exit the Sampling mode.
8. After exiting the Sampling mode, you may load the generated MIDI Groove by using the Import function of the Style Record mode (see "Import: Import Groove" on page 118 for more information).

## Multisample: Edit MS

The Multisample is a way of organizing several samples on the keyboard. Each sample is assigned to a Keyboard Zone (or Index), with a higher and a lower limit.

A Multisample is then assigned to a Sound (see "Basic: OSC Basic" on page 189), where it is enriched with several performance parameters, like Amplitude Envelope, LFO, Filters, etc...



## MS (MultiSample)

Press this area to open the Choose Multisample window, and select one of the available multisamples in memory.

## Keyboard diagram

This diagram shows the selected Index/Zone (highlighted), and its Original Note (in red). Use the big “-” and “+” button on its side to scroll the diagram one octave lower or upper.

## Multisample Setup

### Index

Index number of the selected Zone of the multisample / total number of Zones in the multisample. A Zone always corresponds to a single sample.

### Sample Number / Name

Number / name of the sample assigned to the selected zone of the multisample.

### Original Note

Use this parameter to automatically transpose the assigned sample, to make it sound at the right pitch. It should match to the “OrigNote (Original Note)” value assigned when editing the sample (see page 213).

### Level

Relative level of the selected zone.

### Pitch

Fine tuning of the selected sample in cents (1 cent = 1/100 of a semitone).

### From ... To

Range of the selected Zone (or Index).

## Buttons

### Insert

Press this button to create a new zone (Index) after the selected one.

### Add

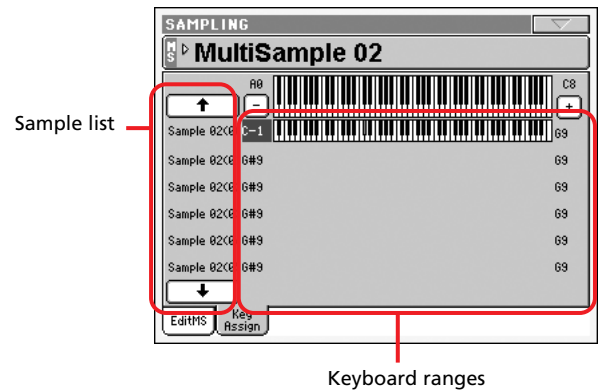
Press this button to add a new zone (Index) after the last one.

### Delete

Press this button to delete the selected Zone/Index.

## Multisample: Key Assign

Use this page to see and edit the samples assigned to each Keyboard Range/Index in the multisample. This page gives a better display of the assigned samples and their range on the keyboard.



## MS (MultiSample)

See “MS (MultiSample)” on page 219.

## Sample list

List of samples assigned to the selected multisample. Use the big button with an arrow on top and to the bottom of the list to scroll the list up or down.

## Keyboard ranges

Next to each sample name the low and high Zone limits appear. Edit these values to change the Zone range. The Original Note is shown in red.



## Page menu

Press the page menu icon to open the menu. Press a command to select it. Press anywhere in the display to close the menu without selecting a command.



### Write

Select this command to open the Write Sample, Write Multisample or Write Slice dialog box (depending on the page you are in), and save the sample(s) to the hard disk (PCM folder), and the multisample(s) or the Sound generated by the Time Slice function to the internal memory (SSD).

See “Write Sample dialog box” on page 221, “Write MultiSample dialog box” on page 221, or “Write Slice dialog box” on page 222 for more information.

### Delete

Select this command to delete one or all samples and multisamples from memory.

See “Delete Sample dialog box” on page 222, or “Delete Multisample dialog box” on page 222 for more information.

### Normalize

Select this command to automatically rescale the level of the selected sample. Peaks will be raised to -0dB (i.e., maximum volume before clipping), while the remaining parts of the sample will be proportionally raised.

Normalization optimizes the sample’s level relative to other samples, making all samples sound more uniformly. It also helps optimizing signal/noise ratio, by preventing further stages of amplification from increasing any residual noise.

### Cut

Select this command to cut the selected part of the sample (inside the “Start” and “End” points).

### Trim/Crop

Select this command to cut all parts of the sample out of the selected range (i.e., out of the “Start” and “End” points).

### Select All

Use this command to select the whole sample.

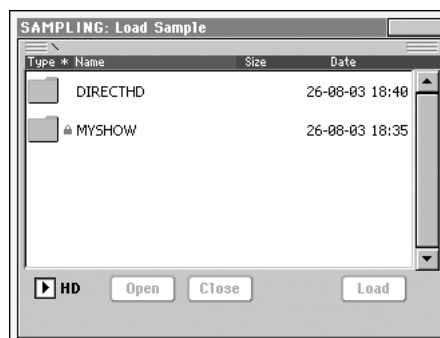
### Init Multisample

Only available in the Multisample page. Select this command to create a new, blank multisample. Only one Zone will be available, with no sample assigned.

## Load Sample

Use this command to load single samples (mono or stereo), in KSF, AIFF or WAVE format.

**Warning:** By loading new samples, all samples in RAM are deleted. Before loading, use the Write command to save older samples to disk.



The samples are loaded to the RAM memory. Before leaving the Sampling mode, use the Write command to save samples to the hard disk (PCM folder) as New Samples.

- “KSF” is Korg’s native sample format, used by the Trinity and Triton series of workstations, as well as the Pa-series arrangers. The file name must have the “.KSF” extension.
- “S1” is Akai S1000, and “S3” is S3000 native sample format.
- “AIFF” is the Apple® Macintosh® preferred format for audio. The file name must have the “.AIF” extension.
- “WAVE” is the Microsoft® Windows® preferred format for audio. The file name must have the “.WAV” extension.

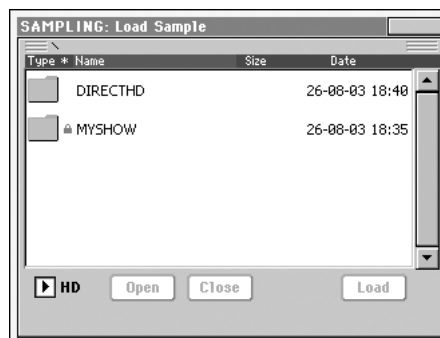
**Note:** Akai data can only be imported from CD.

**Note:** You can only load samples in a 8 or 16-bit resolution, and a sampling frequency rate from 11,025 to 48,000Hz. Loaded samples always preserve their original resolution.

**Note:** If the sample exceeds the maximum size allowed by the Pa1X (524,288 samples, either mono or stereo), it will be truncated.

## Import

Use the Import command to import sounds, multisamples and samples from non-native (i.e., non-Korg) formats.



With this command, you can import the following formats:

- “PCG” is Korg’s native Program format, used by the Trinity and Triton series of workstations. The file name must have the “.PCG” extension
- “KMP” is Korg’s native multisample format, used by the Trinity and Triton series of workstations. The file name must have the “.KMP” extension.



- “P” is Akai S1000 and S3000 native Program format (including the sample key assignment, or multisample).

**Note:** Akai data can only be imported from CD.

Imported Sounds and Multisamples are stored in the internal SSD memory, that cannot be deleted when turning the instrument off.

Imported Samples are stored in RAM, and are deleted when turning the instrument off. Before turning the instrument off, save them to disk by selecting the Write command from the page menu while in any page of the Sample Edit / Sample Record section.

To automatically load samples when turning the instrument on, check the “PCM Autoload” function in Disk mode (see page 265). To load samples after turning the instrument on, press the “Load PCM” button in the same page (see page 266).

**Note:** While Pa1X and Triton share most of their internal multisamples, some of them may differ. While reading a PCG file, Pa1X tries to use exactly the same multisamples as in Triton. If this is not possible, it looks for a similar multisample. If this too is not possible, an <empty> multisample will be selected. Enter the Sound Edit mode, and select a multisample suitable for the imported Program.

**Note:** Not all Triton’s PCG data are imported. Insert FX, EQ, Arpeggio, Combi, Global and Drum Kit data are not loaded.

**Note:** You cannot import Drum Kits.

**Note:** Pa1X cannot read multisamples saved on more than a single floppy disk.

**Note:** Multisample may contain many different samples. They are assigned to the same keys as in the original file.

**Hint:** When importing a KMP file, take note of the selected multisample name; you will need it in Sound Edit mode, when assigning the multisample to a new Sound.

## Export

Depending on whether you are in the “Sample Edit / Sample Record” or “Multiample” section, this command allows you to export a sample in one of two popular computer audio file formats, or a multisample in a Korg “KMP” file.

See “Export Sample dialog box” on page 223, or “Export Multisample dialog box” on page 223 for more information.

## Exit from Record

Choose this command to exit from the Sampling mode.

## Write Sample dialog box

Open this dialog box by selecting the Write command from the page menu, while in the Sample Edit / Sample Record section. In this dialog box you can save the sample to disk, inside the (hidden) PCM folder. Please always remember to save PCM samples into a “.SET” folder, before turning the instrument off, or before loading or recording new samples.



To assign a different name to the sample, press the **T** (Text Edit) button to open the Text Edit window.

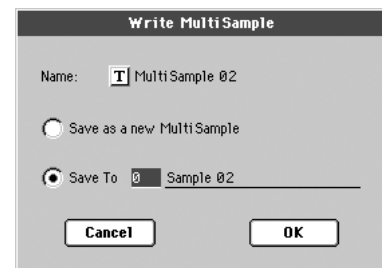
Select an option to select a memory location where to save the sample:

- Select “Save as a new Sample” to save to a new location.
- Select “Save to” to overwrite an existing location. **Warning:** The older sample at the same location will be deleted!

## Write MultiSample dialog box

Open this dialog box by selecting the Write command from the page menu, while in the Multisample section. In this dialog box you can save the multisample to the internal memory (SSD). Multisamples are a way to organize samples on the keyboard, and are used by Sounds as their basis.

**Note:** Multisamples are maintained in memory even when turning the instrument off, but the associated samples are not. To automatically reload them to the RAM memory when turning the instrument on, check the “PCM Autoload” parameter in the Disk mode (see page 265).



To assign a different name to the multisample, press the **T** (Text Edit) button to open the Text Edit window.

Select an option to select a memory location where to save the sample:

- Select “Save as a new MultiSample” to save to a new location.
- Select “Save to” to overwrite an existing location. **Warning:** The older multisample at the same location will be deleted!

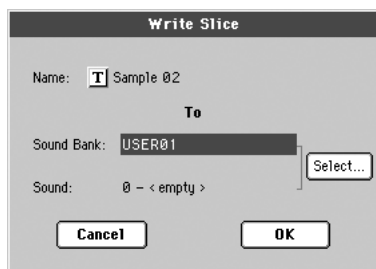
## Write Slice dialog box

Open this dialog box by selecting the Write command from the page menu, while in the Time Slice page. In this dialog box you can save the Sound, sliced Samples and Multisample generated by the Time Slice function, together with the generated MIDI Groove.

The Sound will be saved to the selected User bank location in the internal, non-volatile memory (SSD). The Multisample will be saved to a free location in the internal memory (SSD). Samples will be saved in the PCM folder on the hard disk.

**Note:** The MIDI Groove is automatically saved in a reserved, temporary location on disk, and is automatically deleted when turning the instrument off. So, import it (by using the “Import: Import Groove” function in Style Record mode, see page 118), before turning the instrument off.

**Warning:** The older Sound at the target location will be deleted!



### Name

To assign a different name to the Sound, press the **T** (Text Edit) button to open the Text Edit window.

### Sound Bank

Target bank of Sounds. Each bank corresponds to one of the PERFORMANCE/SOUND buttons. Use TEMPO/VALUE controls to select a different bank.

### Sound

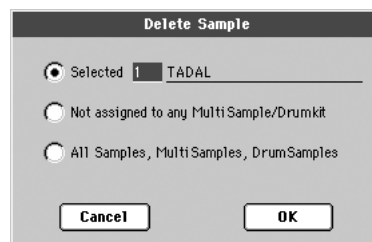
Target Sound location in the selected bank. Use TEMPO/VALUE controls to select a different location.

### Select... button

Press this button to open the Sound Select window, and select a target location.

## Delete Sample dialog box

Open this dialog box by selecting the Delete command from the page menu, while you are in any page of the Sample Edit/Sample Record section.



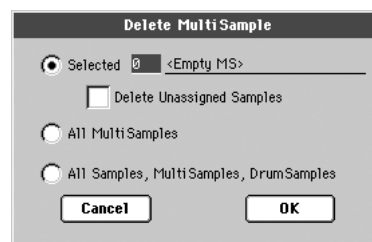
- Select “Selected”, and select a sample number, to delete just one of the samples from memory.
- Select “Not assigned to any Multisample/Drumkit” to delete only samples not yet assigned to a multisample or drumkit (see paragraphs on the “Multisample” section, starting from page 198).

**Note:** Use this option with care, since you may delete samples you would like to preserve, that have not yet been assigned to a multisample or drumkit. Use it only when you are sure all desired samples have been assigned to a multisample or drumkit.

- Select “All Samples, Multisamples, Drum Samples” to delete all samples, multisamples and drum samples from memory. This operation completely resets the RAM, and may be used to “clean-up” any trouble.

## Delete Multisample dialog box

Open this dialog box by selecting the Delete command from the page menu, while you are in any page of the Multisample section.



- Select “Selected”, and select a multisample number, to delete just one of the multisamples from memory.

Check the “Delete Unassigned Samples” option, to also delete all samples not assigned to a multisample.

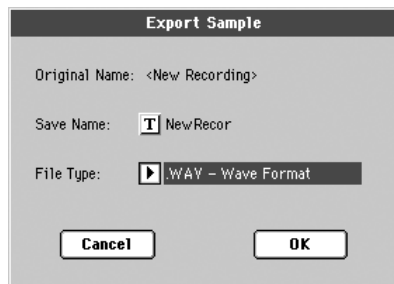
**Note:** Use this option with care, since you may delete samples you would like to preserve, that have not yet been assigned to a multisample or drumkit. Use it only when you are sure all desired samples have been assigned to a multisample or drumkit.

- Select “MultiSamples” to delete all multisamples. No samples will be deleted, including those associated with the deleted multisamples.

- Select “All Samples, Multisamples, Drum Samples” to delete all samples, multisamples and drum samples from memory. This operation completely resets the RAM, and may be used to “clean-up” any trouble.

## Export Sample dialog box

Open this dialog box by selecting the Export command from the page menu, while you are in any page of the Sample Edit/Sample Record section.



### Original Name

Name of the sample being exported.

### File Name

Name of the generated file on disk.

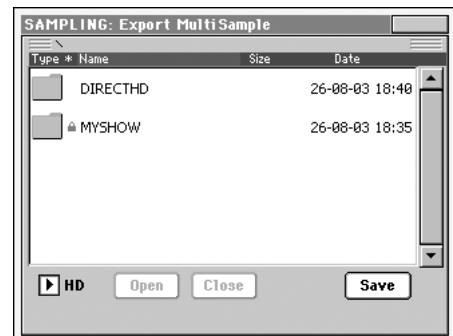
### File Type

Either of the file types you can choose as the file format.

- |      |   |
|------|---|
| WAV  | Microsoft Wave format, very common on Windows PCs.                |
| AIFF | Apple's Audio Interchange File Format, standard on the Macintosh. |

## Export Multisample dialog box

Open this dialog box by selecting the Export command from the page menu, while you are in any page of the Multisample section.



By using this function, you can export from the internal memory the multisample in edit in the Multisample section, and all linked samples. The Export operation generates a “.KMP” file (Korg’s proprietary file format for multisamples), and a folder containing a series of “.KSF” files (Korg’s proprietary file format for samples) inside the same directory.

**Note:** You cannot export a multisamples on more than a single floppy disk. You can, however, export files of any size on the hard disk.

**Note:** When exporting a stereo multisample, be careful to assign a different name to the Left and Right channel files, to avoid overwriting. A “-L” and “-R” suffix is usually added after the name of this kind of files.

## Global edit mode

The Global edit environment is the place where you can set global functions, i.e. functions overriding the single Performance, STS or Style. This edit environment overlaps the current operating mode (Style Play, Song Play, Sequencer, Sound Edit).

### What is it, and how the Global is structured

The Global is a file that can be written to memory (and may subsequently be saved to disk), containing global parameters for the whole instrument or each single operating mode.

Global parameters can be written to memory by selecting the various “Write Global...” commands from the page menus – each dedicated to one of the areas of the Global file. They can be saved to disk by using the ordinary Disk operations.

**Note:** Saving or loading a “.SET” folder also saves or loads the Global file. Parameter changing may be avoided by turning the Lock for any single parameter (or groups of parameters in the Lock page of the Global mode, see “General Controls: Lock” on page 227).

There are separate areas in the Global file, that may be separately written to memory, to avoid writing all global parameters at once when not needed:

- Global Setup, containing global parameters not linked to any single operating mode.
- Style Play Setup, containing global parameters for the Style Play mode, not linked to the single Performance, STS or Style.
- Song Play Setup, containing global parameters for the Song Play mode, not linked to the single Song.
- Sequencer Setup, containing global parameters for the Sequencer mode, not linked to the single Song.
- Disk Preferences, containing preferences for the Disk mode.
- MIDI Setup, containing the available MIDI Setups, i.e., settings for MIDI communication.
- Voice Processor Setup, containing lead voice setups for the Voice Processor.
- Voice Processor Presets, containing single presets for the Voice Processor.

### Main page

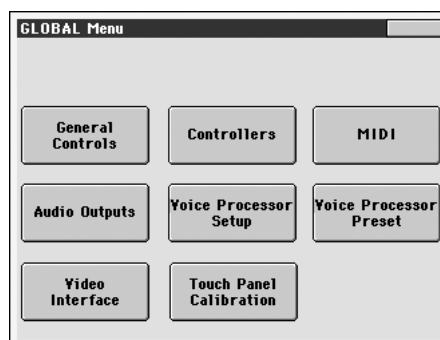
There is no main page in the Global edit mode. When pressing EXIT, you exit the Global mode, and the underlying operating mode in the background is recalled.

### Edit menu

From any page of the Global mode, press the MENU button to open the Global edit menu. This menu gives access to the various Global edit sections.

When in the menu, select an edit section, or press EXIT to exit the Global mode.

When in a page, press EXIT to go back to current operating mode in the background (Style Play, Song Play, Sequencer, Sound).

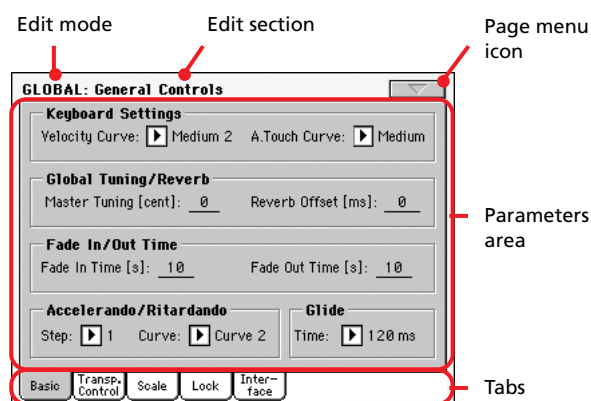


Each item in this menu corresponds to an edit section. Each edit section groups various edit pages, that may be selected by pressing the corresponding tab on the lower part of the display.

**Note:** The Global mode is not available while in Record mode (Style Record, Song Record, Sampling).

### Edit page structure

All edit pages share some basic elements.



#### Edit mode

This indicates that the instrument is in Global mode.

#### Edit section

This identifies the current edit section, corresponding to one of the items of the edit menu (see “Edit menu” on page 224).

### Page menu icon

Press this icon to open the page menu (see “Page menu” on page 251).

### Parameters area

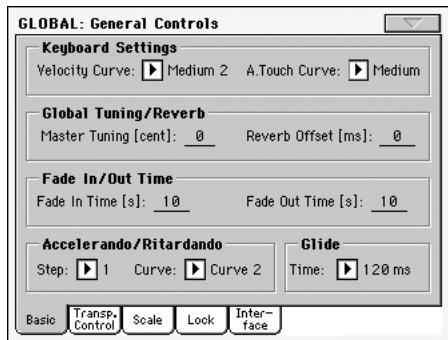
Each page contains various parameters. Use the tabs to select one of the available pages. For detailed information on the various types of parameters, see sections starting from page 225.

### Tabs

Use tabs to select one of the edit pages of the current edit section.

## General Controls: Basic

This page contains various general parameters, setting the status of the keyboard, the fade in/out, and the accelerando/ritardando.



### Keyboard Settings

#### Velocity Curve

►GBL<sup>Gbl</sup>

This parameter sets the sensitivity of the keyboard to your touch.

Fix No dynamic control available. Dynamic values are fixed, as in a classic organ.

Soft1 ... Hard3

Curves, from the lightest one to the hardest one.

#### A.Touch Curve

►GBL<sup>Gbl</sup>

This parameter sets the sensitivity of the keyboard to the pressure you apply after first pressing a key.

Soft1 ... Hard2

Curves, from the lightest to the hardest.

### Global Tuning/Reverb

#### Master Tuning

►GBL<sup>Gbl</sup>

This is the master tuning of the instrument (in cents of a semi-tone). Use it to adapt your keyboard tuning to an acoustic instrument, for example an acoustic piano.

-50 Lowest pitch.

0 Standard pitch (A4=440Hz).

+50 Highest pitch.

### Reverb Offset

►GBL<sup>Gbl</sup>

This is the master offset for all reverbs. Use it to adjust reverb tails to the room where you are playing. Use negative values when you are in a very reverberant room, positive values if the room is too dry.

By using this global control, you are not obliged to change the reverb time in each single Performance, STS, Style Performance, or Song.

-50 Less reverb.

0 Standard reverb.

+50 More reverb.

### Fade In/Out Time

These parameters allows you to set the speed for the Fade In/Out function.

#### Fade In Time

►GBL<sup>Gbl</sup>

Time for a full fade in (from zero to maximum volume), after you press the FADE IN/OUT button.

5...20 Fade time (in seconds).

#### Fade Out Time

►GBL<sup>Gbl</sup>

Time for a full fade out (from maximum volume to zero), after you press the FADE IN/OUT button.

5...20 Fade time (in seconds).

### Accelerando/Ritardando

These parameters lets you adjust the speed of the Accelerando and Ritardando functions.

#### Step

Speed of the Tempo change (from 1 to 6). With higher values, the step change is greater, and the speed will change faster. With lower values, the step change is smaller, and the speed will change more slowly.

#### Curve

Accelerando/ritardando curves (from 1 to 3). Experiment the various options, to see the one that best fit your taste.

#### Glide

Glide is a function you can assign to a footswitch. When the pedal is pressed, affected notes on Upper tracks are bent down, according to settings for the Pitch Bend on the same tracks. When the pedal is released, notes return to the normal pitch, at the speed defined by the “Time” parameter.

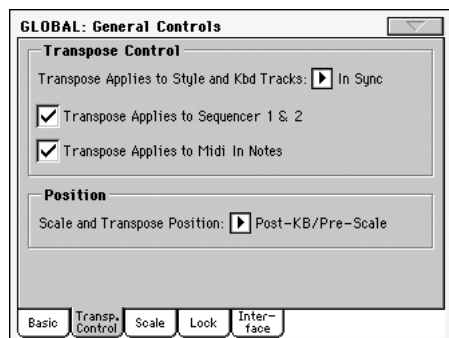
To change Pitch Bend values for each Upper track, see the “PB Sensitivity” parameter in the Style Play mode (see page 84)

#### Time

Time needed to notes affected by the Glide to return to the normal pitch.

## General Controls: Transpose Control

This page is where you can select to which tracks the Master Transpose is applied to, and adjust some related parameter.



### Transpose Control

#### Transpose applies to Style and Kbd tracks... ▶GBL Gbl

Use this parameter to turn the Master Transpose on or off, and define the way it is applied, to Style and Keyboard tracks.

- Off** No Master Transpose is applied to Style and Keyboard tracks.
- In Sync** When you press either the TRANSPOSE [b] or [#] buttons, the new transpose setting will not take effect until the first beat of the next measure is reached. Keyboard tracks sounding at the time of the transpose will be stopped.

- In Realtime** When you press either the TRANSPOSE [b] or [#] buttons, the new transpose setting will occur when the next note is played for both the Style and Keyboard tracks individually. (Note that any note playing from the Keyboard tracks will be stopped when you press the TRANSPOSE button).

The next key or chord you press will sound with the new transpose setting applied. (Note that if you play a Keyboard track prior to a new chord, the Keyboard track will play in the new key as the Style will continue to play in the old key until a new chord is entered).

#### Transpose applies to Sequencer 1/2 ▶GBL Gbl

This flag lets you turn the Master Transpose on or off for the two onboard Sequencers.

#### Transpose applies to Midi In notes ▶GBL Gbl

This flag lets you turn the Master Transpose on or off for Note messages received from MIDI IN.

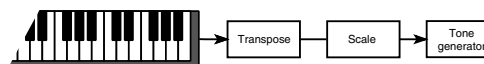
### Position

#### Scale and Transpose position

The Scale and Transpose Position allows you to define the relation between the Scale and the Master Transpose.

#### Post-KB/Pre-Scale

When this option is selected, notes will be transposed immediately after they leave the keyboard. The Scale will be applied to the transposed notes. For example, if you altered an E, and then set the Master Transpose to +1, the E key will play F, and the altered key will be E<sub>b</sub> (that will play an altered E).



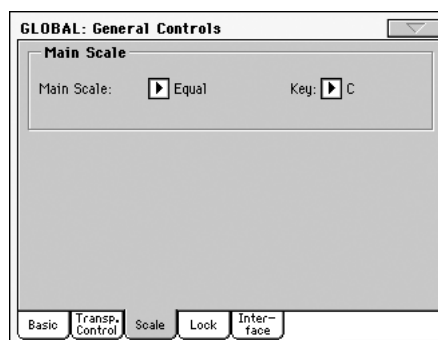
#### Post-KB & Scale

When this option is selected, all notes are transposed immediately before they enter the internal tone generator, or are sent to the MIDI OUT, but after the Scale. For example, if you altered an E, and set the Master Transpose to +1, the altered key will still be E (that will play an altered F).



## General Controls: Scale

This page lets you select the main (or basic) scale of the instrument.



#### Main Scale ▶GBL Gbl

This parameter sets the main scale (or temperament) for the whole instrument, apart for tracks where a different sub-scale has been selected by a Performance or STS (see "Scale Mode" on page 93, Style Play mode).

See "Scales" on page 375 for a list of available scales.

**Note:** You cannot select a User scale in Global mode.

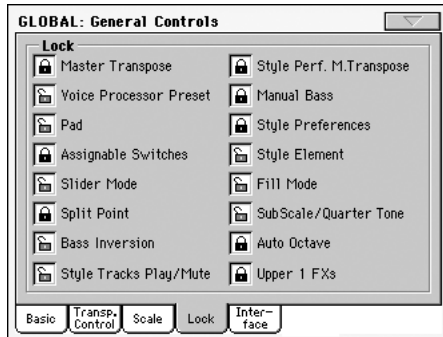
#### Key ▶GBL Gbl

This parameter is needed by some scales to set the preferred key (see "Scales" on page 375).



## General Controls: Lock

This page contains all the available locks, sometimes grouped under just a single lock. Locks prevent parameter values to be changed by loading data from disk, or selecting a different Performance, Style or STS.



### Locks

►GBL Gbl

All the available locks. Lock them to prevent changes due to loading or selecting different elements. These locks are also found in various other pages, next to the locked parameter.

**Hint:** To save the status of the various parameters as a fixed status for the Pa1X, save all the parameters to Performance 1 of bank 1 (automatically selected when turning on the instrument), and save these locks to the Global.

#### Master Transpose

When locked, master transpose is not automatically changed when selecting a different Performance or style.

(See “Master transpose” on page 76).

#### Voice Processor Preset

When locked, selecting a Performance or STS will not change the Voice Processor Preset.

(See “VP Preset” on page 80).

#### Pad

When locked, selecting a Performance or STS will not change the Pad assignment.

(See “Pad/Switch: Pad” on page 92).

#### Assignable Switches

When locked, selecting a Performance or STS will not change the Assignable Switch assignment.

(See “Pad/Switch: Assignable Switch” on page 92).

#### Slider Mode

When locked, selecting a Performance or STS will not change the selected status of the SLIDER MODE button.

(See “Assignable Sliders A 1-8, B 1-8” on page 229).

#### Split Point

When locked, selecting a Performance or STS will not change the split point.

(See “Split Point” on page 81).

### Style Tracks Play/Mute Lock

When closed, this lock prevents a Style or Performance change to modify the Play/Mute status of the Style tracks. This way, you can, for example, turn the bass track off during a whole show, to allow your bassist to play it live. Also, you could mute all Acc tracks, to only play with the Drum and Bass tracks.

(See “Track status icons” on page 80).

### Style Performance Master Transpose Lock

When closed, this lock prevents a Style change to modify the Master Transpose. When open, changing a Style may also change the Master Transpose.

(See “Master transpose” on page 76).

**Hint:** In order to avoid having the Master Transpose setting change when selecting a new Performance or STS, use the general Master Transpose Lock (the first parameter in this page).

**Note:** When the Master Transpose Lock is closed, this parameter has no effect. However, the Master Transpose Lock also locks the Style Performance Transpose.

### Bass Inversion

When locked, selecting a Performance or STS will not change the Bass Inversion status.

(See “BASS INVERSION” on page 9).

### Manual Bass

When locked, selecting a Performance or STS will not change the Manual Bass status.

(See “MANUAL BASS” on page 9).

### Style Preferences

When locked, selecting a Performance or STS will not change the value of parameters contained in the Style Preferences pages.

(See “Preferences: Style Preferences” on page 93, and “Preferences: Global Setup” on page 94).

### Style Element

When locked, selecting a different Style does not cause selecting a different Style Element.

### Fill Mode

When locked, the selected Fill Mode will not change when selecting a different Performance or Style.

(See “Fill Mode (1...3)” on page 91).

### Sub Scale/Quarter Tone

When locked, selecting a Performance or STS will not change the Sub-Scale or Quarter Tone value.

(See “Sub-Scale panel” on page 81).

### Auto Octave

This lock lets you decide if the instrument will automatically transpose the Upper tracks when switching between the FULL UPPER and the SPLIT Keyboard modes.

• If On, when switching to the FULL UPPER or SPLIT Keyboard Mode, the Upper tracks transposition is left unchanged.

- If Off, when switching to the FULL UPPER Keyboard Mode, the Upper tracks Octave Transpose is automatically set to "0". When switching to the SPLIT Keyboard Mode, the Upper tracks Octave Transpose is automatically set to "-1".

**Upper 1 FXs** In Sound mode, you can assign a Sound two effects (FX1 and FX2). When you assign a new Sound to the Upper 1 track, the FX1 and FX2 settings saved with that Sound can be automatically selected, overriding Performance/STS settings for this track. Whether Sound or Performance/STS effect parameters will be considered, depends on the status of this lock.

- If the Upper 1 FX Lock is turned on, when assigning a new Sound to the Upper 1 track, Performance/STS parameters are left untouched; selected effects, and FX Send values, are not changed.

- If the Upper 1 FX Lock is turned off, when assigning a new Sound to the Upper 1 track, Sound parameters are considered; selected effects, and FX Send values, are changed according to the Sound's stored data.

**Note:** If effects associated to the selected Sound are not compatible with effects already assigned to the CD FX block, C and/or D Send values on the other Keyboard tracks will be automatically set to zero.

For example, assume a chorus effect is assigned to the D effect processor. If the new Sound assigns a distortion effect to the D effect processor, the D Send value on the Upper 2, Upper 3, and Lower tracks will be set to zero, to avoid these tracks sound in the wrong way. This way, the Upper 1 track (usually the most important one for solo playing) will sound with the needed effect, while the other Keyboard tracks will just sound dry.

## General Controls: Interface

This page contains parameters related to the way messages are shown in the display.



## Help/Message Language

### Language

►GBL Gbl

Use this pop-up menu to select one of the available languages for the online help system. Operating System version 2.0 supports the English, French, German, Italian and Spanish languages.

### Change button

Press this button to apply the selected language to the user's interface.

### How to select the Help language

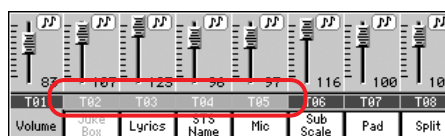
1. Since Pa1X must be reset at the end of this procedure, be sure to first save all unsaved data.
2. While in this page, select a language from the pop-up menu.
3. The Change button will start flashing in red. Press it.
4. You will be asked if you want to save the Global, and select the new language. Press Yes to confirm. The Global will be automatically saved, and the language selected.
5. A message will advice you to reboot the Pa1X. Press OK to close the message window.
6. Turn the Pa1X off, then on again.

## Track Activity

### Show Track Activity

►GBL Gbl

Use this parameter to turn on/off the Track Activity display. When it is turned on, you can monitor events coming from the tracks or the MIDI inputs. Incoming events are shown by the changing color of each track's label.



Here is the list of colors and their meaning:

- |            |  |
|------------|--|
| Red        | Data coming from the MIDI IN ports.  |
| Light Blue | Internal data, generated by the keyboard, pads, the Arranger or one of the Sequencers. |
| Grey       | Either internally or externally generated data (or both at the same time).             |
| Dark Blue  | No data received.  |

## Program Change

### Show Program Change number

►GBL Gbl

Program Change display next to Sound names can be turned on or off, to make the interface less cluttered with data.

Check this parameter to show Program Change numbers next to Sound names in the main page of the Style Play and Song Play operating modes, and in the various Single Track Info areas.

**Note:** Program Change numbers are always shown in Sound Edit mode.

## Auto Select

### Auto Style Select

►GBL<sup>Gbl</sup>

### Auto Performance/Sound Select

►GBL<sup>Gbl</sup>

When one of these parameters is checked, the last selected Style, Performance or Sound selected in a bank is immediately selected when pressing the bank button.

This way, you can assign your preferred Style, Performance or Sound to each control panel's button, and select it just with a single press.

However, the Style/Perf/Sound Select window still appears when you press one of the bank buttons, so you can select a different item if desired.

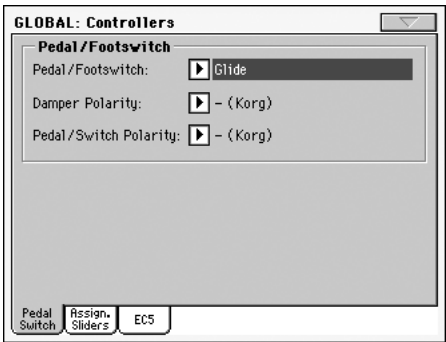
**Note:** The memorized Style, Performance or Sound is reset to the first one in each bank, when turning the instrument off and then on again.

**Hint:** Save your preferred Performances into the first location of each bank. This way, by turning on this parameter, you will select your preferred Performance at the touch of a single button.

Also note that, by turning the "Factory Style and Pad Protect" parameter off, you can do the same with the Styles.

## Controllers: Pedal/Switch

This page lets you select a function to the Assignable Pedal/Footswitch, and select the polarity for the Damper and Assignable Pedal/Footswitch.



See page 371 for a list of the assignable functions. The first functions are switch-type functions, while the remaining (starting from Master Volume) are continuous-like functions.

### Pedal/Footswitch

►GBL<sup>Gbl</sup>

Continuous pedal, or footswitch, connected to the ASSIGNABLE PDL/SW connector.

### Damper Polarity

►GBL<sup>Gbl</sup>

Polarity of the Damper pedal.

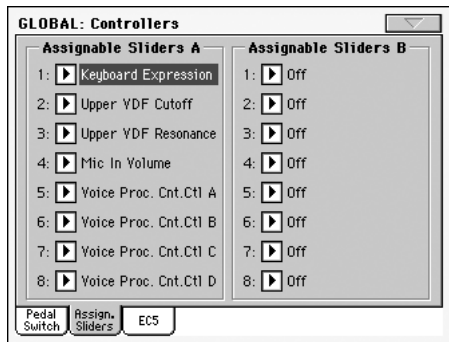
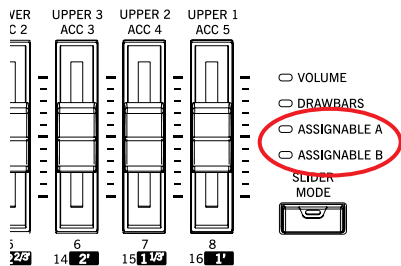
### Pedal/Switch Polarity

►GBL<sup>Gbl</sup>

Polarity of the Assignable pedal or footswitch.

## Controllers: Assignable Sliders

This page lets you program the Assignable Sliders. Two sets are available (Assignable Sliders A and Assignable Sliders B). You can assign the preferred set by using the SLIDER MODE button on the control panel, respectively selecting the ASSIGNABLE A or ASSIGNABLE B mode. The status of the SLIDER MODE button can be saved with the Performance or STS.



See "List of Assignable Pedal and Assignable Sliders functions" on page 372 for a list of the assignable functions. The first functions are switch-type functions, while the remaining (starting from Master Volume) are continuous-like functions. Only continuous functions can be assigned to the sliders.

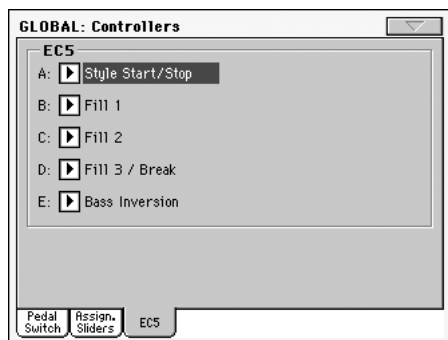
### Assignable Sliders A 1-8, B 1-8

►GBL<sup>Gbl</sup>

Function assigned to the corresponding slider on the control panel.

## Controllers: EC5

This page lets you program each of the five switches of the KORG EC5 multiswitch controller.



See “List of Footswitch and EC5 functions” on page 371 for a list of the assignable functions. The first functions are switch-type functions, while the remaining (starting from Master Volume) are continuous-like functions. Only switch functions can be assigned to the EC5 switches.

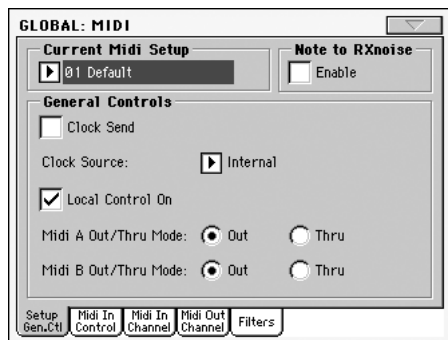
### EC5-A...E

►GBL<sup>Gbl</sup>

Each of the switches of a KORG EC5 multiswitch.

## MIDI: MIDI Setup / General Controls

This page allows you to select a MIDI Setup, convert ordinary notes to RX Noises, and set global parameters for the MIDI communication.



### Current MIDI Setup

#### MIDI Setup

►GBL<sup>Sty</sup> ►GBL<sup>Sng</sup> ►GBL<sup>Seq</sup>

MIDI channels can be automatically configured by selecting a MIDI Setup. Each of them lets you assign the best values to various MIDI parameters, to allow an easier connection with a particular MIDI controller. See “MIDI” on page 273 for more information on using MIDI Setups.

A different MIDI Setup may be automatically selected when entering the Style Play, Song Play or Sequencer modes. To select a MIDI Setup for these modes, see “Midi Setup” on page 94 for the Style Play mode, “Midi Setup” on page 149 for the Song Play mode, and “Midi Setup” on page 181 for the Sequencer mode.

For detailed information on MIDI Setup settings, see “MIDI Setup” on page 321.

**Note:** After selecting a MIDI Setup, you can apply any changes to each channel's settings. To store the changes in memory, select the Write Global-Midi Setup command in the page menu to save it to memory (see “Write Global - Midi Setup dialog box” on page 251).

**Hint:** To restore the original MIDI Setups, load the original Factory data again (downloadable from [www.korgpa.com](http://www.korgpa.com)).

### Note to RX Noise

RX Noises are special sounds that make Sounds be more realistic. They are usually located above C7, depending on the Sound.

#### Enable

When this parameter is turned on, notes received from MIDI in the RX Noises range are recognized. When off, notes are not received.

**Note:** This parameter is automatically turned off when turning the instrument on again.

### General Controls

Use these parameters to set MIDI Clock, Local Off, and MIDI OUT ports.

#### Clock Send

►GBL<sup>Midi</sup>

Use this parameter to turn the clock information on the MIDI OUT on or off. This parameter is common to all MIDI Setups.

**Note:** In Song Play mode, only the Sequencer 1 Tempo value will be sent to the MIDI OUT.

**Off** The Pa1X cannot send the MIDI Clock signal. You cannot slave another instrument to the Pa1X, even when connected to the MIDI OUT.

**On** The Pa1X can send the MIDI Clock signal. You can slave another instrument to the Pa1X Tempo, Start/Stop and Play/Stop commands. Connect the other instrument to the Pa1X MIDI OUT port.

#### Clock Source

This parameter selects the MIDI Clock source for the Style Play and Sequencer modes.

**Note:** In Song Play mode, the Internal clock is always used.

**Note:** The Clock parameter is always set to “Internal” each time you turn the instrument on.

**Internal** Internal, i.e. the clock generated by the Pa1X Sequencer 1 internal metronome.

**MIDI A** External from MIDI IN A. In Style Play or Sequencer mode, the Pa1X is slaved to an external device, connected to its MIDI IN port. The Start/Stop and Play/Stop commands, as well as the metronome tempo, cannot be selected from the control panel of the Pa1X. Use the external device to set the tempo and start or stop the sequencer or arranger.

**MIDI B** As above, but referred to MIDI IN B.

### Local Control On

The Local parameter turns the keyboard on or off.

**Note:** The Local parameter is automatically reactivated each time you turn the instrument on.

- On

When you play the keyboard, MIDI data is sent to the internal sound generator. If tracks are assigned to a MIDI OUT channel, data is also sent to the MIDI OUT port.
- Off

The keyboard is connected to the MIDI OUT, but cannot play the internal sound generator.

This is very useful when working with an external sequencer, to send notes and various MIDI messages from the integrated keyboard and controllers to the external sequencer, and then let the sequencer send them back to the sound generator, without overlapping. See the MIDI chapter.

MIDI A Out/Thru Mode

►GBLMid

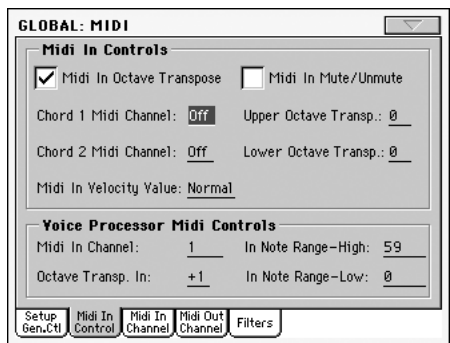
MIDI B Out/Thru Mode

►GBLMid

Use these radio buttons to define if the MIDI OUT connector must work as OUT or THRU connectors. (OUT ports send data generated by the Pa1X, while THRU connectors send the same data received on the MIDI IN port).

## MIDI: MIDI In Control

This page lets you program general parameters for the MIDI IN, like the Chord Recognition channel and MIDI parameters for the Voice Processor.



### Midi In Controls

Midi In Octave Transpose

►GBLMid

Use this parameter to determine if the Octave Transpose is applied also to notes received on the MIDI IN.

- On

Notes received on the MIDI IN are transposed according to the Octave Transpose setting for each track.
- Off

Data received on the MIDI IN are not transposed.

Midi In Mute/Unmute

►GBLMid

Use this parameter to determine if a muted track can still play data received via MIDI.

- On

No data received via MIDI on a muted track can be played by Pa1X.
- Off

Data received via MIDI on a muted track can still play on the Pa1X.

Chord 1 Midi Channel

►GBLMid

Chord 2 Midi Channel

►GBLMid

Notes entering these channels are sent to the Chord Recognition engine.

There are two separate Chord channels. This is very useful when you must send chords to Pa1X on two different channels (like with some MIDI accordions).

Upper Octave Transp (Transpose)

►GBLMid

Octave transposition of data received on the MIDI IN for the Upper tracks. For example, if you select the +1 value, a received C4 will play a C5 on the Pa1X.

This parameter may be useful to many MIDI accordion players, whose MIDI interface may transmit on an unexpected octave.

Lower Octave Transp (Transpose)

►GBLMid

Octave transposition of data received on the MIDI IN for the Lower track. For example, if you select the +1 value, a received C4 will play a C5 on the Pa1X.

This parameter may be useful to many MIDI accordion players, whose MIDI interface may transmit on an unexpected octave.

Midi In Velocity Value

►GBLMid

Use this parameter to set a fixed velocity (dynamics) value for all received MIDI notes. This is useful when playing the Pa1X with an organ or a MIDI Accordion.

- Normal

Normal velocity values are received.
- 40...127

All received velocity values are converted to the selected value.

### Voice Processor Midi controls

Midi In Channel

►GBLMid

Notes received on this channel are sent to the Harmony section of the Voice Processor.

Octave Transpose In

►GBLMid

Octave transpose for all notes received via MIDI by the Harmony section of the Voice Processor.

In Note Range-High

►GBLMid

In Note Range-Low

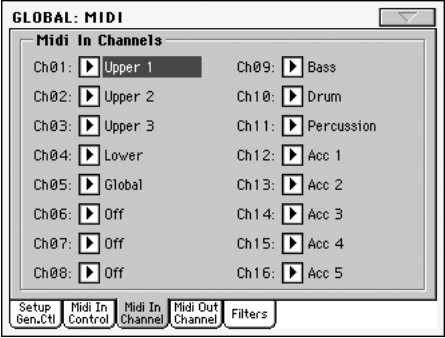
►GBLMid

These parameters are the lowest and highest notes received by the Harmony section of the Voice Processor. Notes received out of this range are not recognized.



## MIDI: MIDI In Channels

In this page, you can assign Pa1X tracks to any of the MIDI IN channels.



### Channels

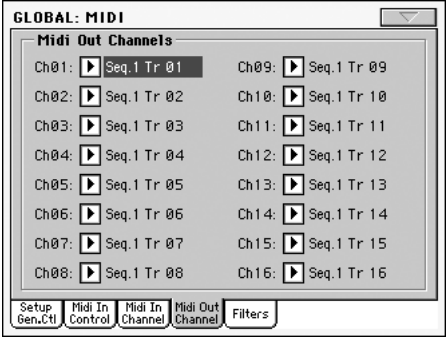
►GBL<sup>Mid</sup>

You can assign to each channel one of the following tracks:

Off	No track assigned.
Lower	Lower track.
Upper 1...3	One of the Upper tracks.
Drum	Drum track.
Percussion	Percussion track.
Bass	Bass track.
Acc 1...5	One of the Auto-accompaniment tracks.
Seq.1 Tr 01...16	One of Sequencer 1 tracks.
Seq.2 Tr 01...16	One of Sequencer 2 tracks.
Global	Special channel to simulate the Pa1X's integrated controls (keyboard, pedals, joystick) with an external keyboard or controller. MIDI messages coming on this channel are seen as if they were generated by Pa1X's integrated controllers.
Control	On this special channel, the Pa1X receives MIDI messages to remotely select Styles, Performances, STS and Style Elements. See tables on page 280 and following for more information on the received data

## MIDI: MIDI Out Channels

In this page, you can assign Pa1X tracks to any of the MIDI OUT channels.



### Channels

►GBL<sup>Mid</sup>

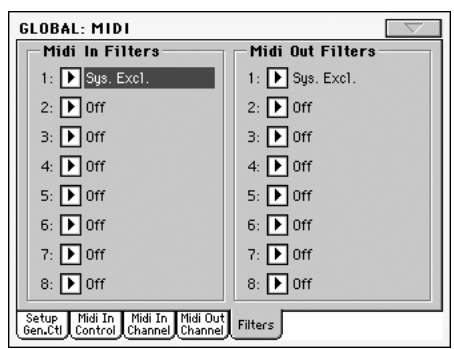
You can assign to each channel one of the following tracks:

Off	No track assigned.
Lower	Lower track.
Upper 1...3	One of the Upper tracks.
Drum	Drum track.
Percussion	Percussion track.
Bass	Bass track.
Acc1...5	One of the Auto-accompaniment tracks.
Seq.1 Tr 01...16	One of Sequencer 1 tracks.
Seq.2 Tr 01...16	One of Sequencer 2 tracks.
Seq.1/2 Tr 01...16	Use these channels to send data generated by a track with the same name on either or both onboard sequencers at the same time.
Chord	Use this channel to send notes recognized by the Chord Recognition engine to the MIDI OUT. This is useful, for example, to control an external Harmonizer from the Pa1X, using the Lower track to play chords, even if the track is muted.



## MIDI: Filters

Use this page to set up to 8 filters for the MIDI data received or sent by the Pa1X.



### Midi In Filters

Selected MIDI IN filters.

Off	No filter.
Pitch Bend	Pitch Bend.
MonoTouch	Mono (or Channel) After Touch.
PolyTouch	Poly After Touch.
PrgChange	Program Change.
SysExcl	System Exclusive.
All CC	All Control Change messages.
0...127	Control Change message #0...127. See "MIDI Controller" on page 376 for a list of available Control Change messages.

►GBLMid

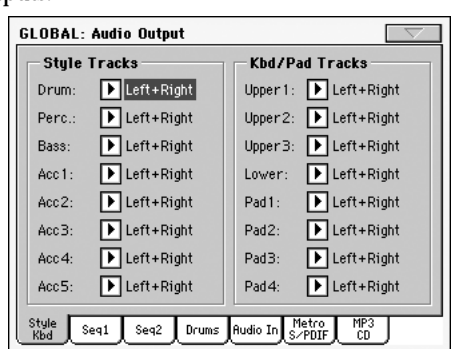
### Midi Out Filters

Selected MIDI OUT filters. See above for information on each filter type.

►GBLMid

## Audio Output: Sty/Kbd

This page lets you connect Style, Keyboard and Pad tracks to the audio outputs.

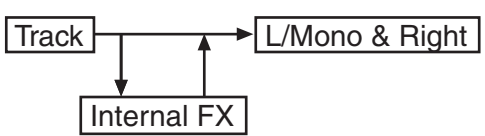


### Tracks

Use these parameters to assign an audio output (OUTPUT section, on the back of the instrument) to each track.

►GBLMid

**Left + Right** The selected track is connected to the Left & Right outs, in stereo. The track is also sent to the Internal FX processors (A and B for the Style tracks, C and D for the Keyboard and Pad tracks). You can set the volume using the MASTER VOLUME slider.



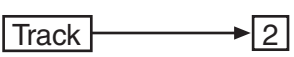
**Out 1 + 2** The track is connected to the 1 & 2 sub-outs, in stereo. It is not sent to the Internal FX processors. The MASTER VOLUME slider has no effect on it.



**Out 1** The selected track is connected to the sub-out 1. It is mixed to mono. It is not sent to the Internal FX processors. The MASTER VOLUME slider has no effect on it.

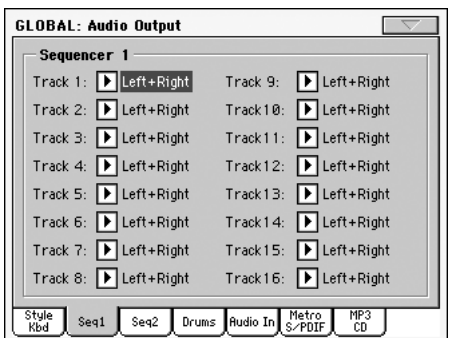


**Out 2** The selected track is connected to the sub-out 2. It is mixed to mono. It is not sent to the Internal FX processors. The MASTER VOLUME slider has no effect on it.



## Audio Output: Seq1

This page lets you connect Sequencer 1 tracks to the audio outputs. These setting are also applied to the Sequencer mode.



### Tracks

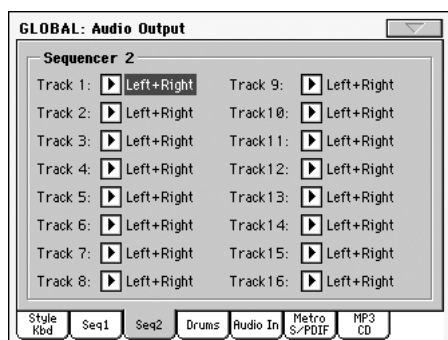
Use these parameters to assign an audio output (OUTPUT section, on the back of the instrument) to each track.

See "Audio Output: Sty/Kbd" on page 233 for more information.

►GBLMid

## Audio Output: Seq2

This page lets you connect Sequencer 2 tracks to the audio outputs.



### Tracks

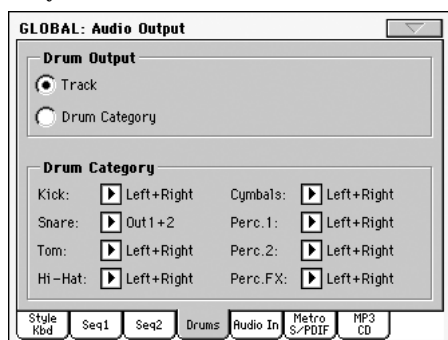


Use these parameters to assign an audio output (OUTPUT section, on the back of the instrument) to each track.

See “Audio Output: Sty/Kbd” on page 233 for more information.

## Audio Output: Drums

This page lets you route Drum Kit Sounds to the audio outputs.



See “Audio Output: Sty/Kbd” on page 233 for more information about the available audio outputs.

### Drum Output



This parameter lets you decide if Drum Kit Sounds will be sent to the single output (or output pair) defined for the track they are assigned to, or each drum category will be sent to a different output.

**Track** When this option is selected, Drum Kits will be sent to the output selected in one of the previous pages for the tracks they are assigned to.

### Drum Category

When this option is selected, you can select a different output for each category of Drum Kit sounds. Use the “Drum Category” box below, to select an output for each category of percussive sounds.

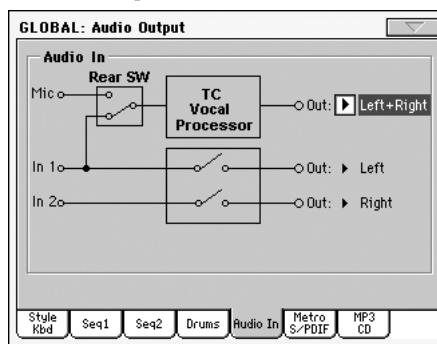
### Drum Category



Kick	Bass Drum category.
Snare	Snare Drum category.
Tom	Tom category.
Hi-Hat	Hi-Hat category.
Cymbals	Cymbals category.
Perc.1	Low-pitched percussion category.
Perc.2	High-pitched percussion category.
Perc. FX	Sound FX category.

## Audio Output: Audio In

This page lets you connect the Audio Inputs and the Voice Processor to the audio outputs.



See “Audio Output: Sty/Kbd” on page 233 for more information on the available audio outputs.

### Rear SW (SELECT switch)

The status of this switch, located on the rear panel, is shown by the Rear SW diagram. From its status depends the routing of the Audio In signal.

- When set to “MIC”, the MIC input goes to the Voice Processor, while line inputs 1 and 2 are directly connected to the Left and Right outputs.
- When set to “1”, line input 1 goes to the Voice Processor, while line input 2 and the MIC input are deactivated.

### Mic

The microphone input is alternative to the line input In 1, depending on the status of the SELECT switch on the rear panel. When selected, the signal coming from a connected microphone goes to the Voice Processor, then is output in stereo together with any processing made inside the Voice Processor.

### In 1

The line input In 1 may be routed to the Left output, or to the Voice Processor, depending on the status of the SELECT switch on the rear panel.

- If the SELECT switch it is set to “MIC”, this input is sent to the Left output.
- If the SELECT switch is set to “1”, it is sent to the Voice Processor.

## In 2

The line input In 2 may be routed to the Right output, or deactivated, depending on the status of the SELECT switch on the rear panel.

- If the SELECT switch it is set to “MIC”, this input is sent to the Right output.
- If the SELECT switch is set to “1”, it is deactivated.

## Voice Processor Out

►GBL Gbl

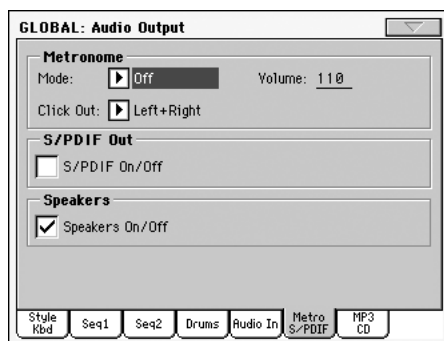
Use this parameter to assign an audio output (OUTPUT section, on the back of the instrument) to the Voice Processor.

## In 1/2 Out

*Non editable.* These output are fixed, and cannot be changed.

# Audio Output: Metro / S/PDIF

This page lets you define various parameters for the Metronome, the S/PDIF output, and the Speakers (for the Pa1X with integrated speakers).



## Metronome

### Mode

►GBL Gbl

Use this parameter to activate the metronome for the Style Play and/or Song play operating modes.

Off	No metronome is heard.
Style	The metronome is always activated when playing a Style.
Song	The metronome is always activated when playing a Song.
Style+Song	The metronome is always activated when playing a Style or Song.

### Volume

►GBL Gbl

Use this parameter to set the volume of the metronome.

### Click Out

►GBL Gbl

The metronome's click can be routed to any audio output.

**Hint:** When sending the click to your drum player, we suggest to select one of the sub-outs Out 1 and 2, to avoid it is sent to the audience through the Left+Right outputs.

**Note:** The selected Metronome Mode must not be Off, in order for the click to be sent to an audio output during playback.

See “Tracks” on page 233 for detailed information on the available outputs.

## S/PDIF Out

### S/PDIF On/Off

Use this parameter to turn the S/PDIF digital audio output on or off.

**Note:** This parameter is automatically set to Off each time you turn the instrument on.

**On** All tracks set to be sent to the Left+Right audio outputs (see from page 233) are sent to the S/PDIF output. Together with the audio signal, the Word Clock sync signal is also output, with a frequency of 48kHz.

When in this mode, the Pa1X becomes the Word Clock master. No other master device can be connected to the same digital audio system. Please, refer to the connected audio device (mixer, audio card...) for information on how to set it as a Word Clock slave.

**Off** No signal is sent to the S/PDIF output.

## Speakers

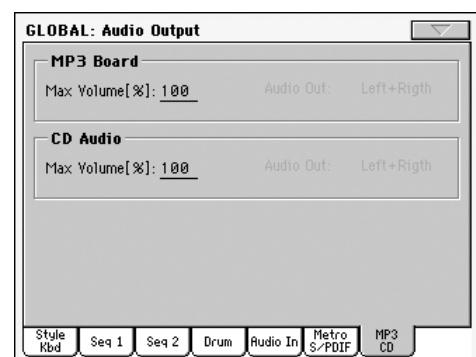
### Speakers On/Off

►GBL Gbl

*Not available on the Pa1X Pro.* On a Pa1X with integrated speakers, use this checkbox to turn speakers on or off. This option is useful when the instrument is connected to an external amplification system, and you don't need the speakers.

# Audio Output: MP3/CD

In this page you can program the MP3 (EXBP-MP3) and Audio CD (CDRW-1) options.



## MP3 Board

*This section only appears when the optional EXBP-MP3 board has been installed.*

## Max Volume

►GBL<sup>Gbl</sup>

Use this parameter to set the maximum volume of the MP3 Player.

## Audio Out

►GBL<sup>Gbl</sup>

This (non-editable) parameter shows the fixed output for the MP3 Player (Left+Right).

## CD Audio

*This section only appears when the optional CDRW-1 CD drive has been installed.*

## Max Volume

►GBL<sup>Gbl</sup>

Use this parameter to set the maximum volume of the Audio CD Player.

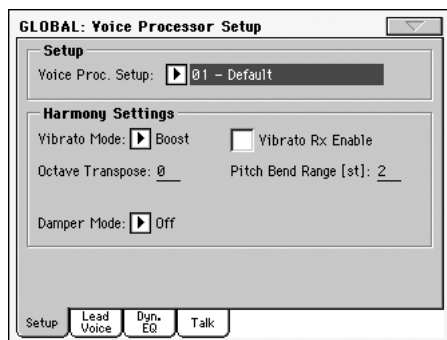
## Audio Out

►GBL<sup>Gbl</sup>

This (non-editable) parameter shows the fixed output for the Audio CD (Left+Right).

# Voice Processor Setup: Setup

In this page you can select a Voice Processor Setup, and set some general parameters for the current Setup.



## Setup

### Voice Processor Setup

Use this parameter to select a Voice Processor Setup.

Setup parameters are global and do not change when a different preset is recalled. Setup parameters are all the parameters found in the Voice Processor Setup edit section, including Lead input level and pan, Compression/Gate, and EQ parameters among many others.

They are parameters that would typically be set for a given situation based on the singer, microphone or studio configuration and then left that way as a basis for the presets within the Voice Processor. If you change your microphone (or singer!) the EQ/Compression settings need to only be adjusted once in the setup section.

If you wish to save your setup settings, just select the “Write Global-Voice Processor Setup” command from the page menu (see page 251).

## Harmony Settings

These parameters are general settings for the Harmony section voices, that are saved on the Voice Processor Setup.

### Vibrato Mode

►GBL<sup>Vps</sup>

This parameter sets whether the vibrato follows the onset and attack of the model (Boost) or is instantaneous (Manual). The joystick controls the vibrato in both modes.

**Boost** The preset value for each voice (see “Vibrato Amount” on page 244) is boosted when moving the joystick.

**Manual** Vibrato starts from a value of 0, and is fully controlled by the joystick.

### Vibrato Rx Enable

►GBL<sup>Vps</sup>

This parameter lets you turn vibrato reception on or off.

### Octave Transpose

►GBL<sup>Vps</sup>

This transposes the harmony voices in Notes mode (see “Harmony Mode” on page 242). The value corresponds to octaves. This is useful when used in conjunction with “In Note Range-High” and “In Note Range-Low” parameters (see page 231).

When receiving notes from MIDI, this value is summed to the value of the “Octave Transpose In” parameter, found in the “MIDI: MIDI In Control” page (see page 231).

### Pitch Bend Range

►GBL<sup>Vps</sup>

*Only available in Notes mode.* Sets in semitones the range that MIDI pitch bend information will alter the pitch of the harmonies in Notes mode.

### Damper Mode

►GBL<sup>Vps</sup>

Use this parameter to define the effect of the Damper pedal on the Voice Processor. The Damper message can be received from the Damper pedal connected to the DAMPER jack, or from the MIDI IN (CC#64).

**Off** Damper disabled.

**Sustain** Notes sent to the Voice Processor are sustained as long as the pedal is kept pressed. Therefore, chords sent to the Harmony section do not change until the pedal is released or a different chord is recognized.

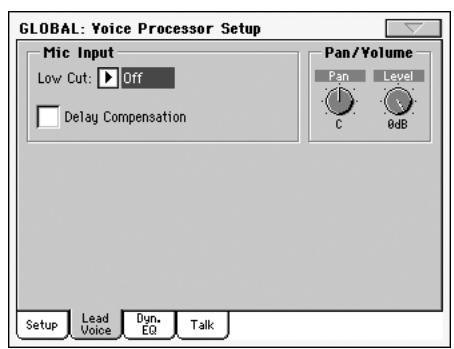
### Harmony Hold

Harmony voices are sustained while you continue to sing through them. On activation (press and hold the Damper pedal), you can freeze whatever the harmony voices are doing, and they will hold their notes (in a very natural way) until you let go.

**Note:** The Harmony Hold function can also be assigned to an Assignable Footswitch or Switch.

## Voice Processor Setup: Lead Voice

This page lets you adjust parameters for the Lead voice (i.e., the singer's voice).



### Mic Input

**Low Cut** ▶GBLVps  
Low cut filter. 12dB per octave. Cutoff frequency options include 60, 80 and 120 Hz.

**Delay Compensation** ▶GBLVps  
Turning this on delays the lead vocal so that the humanized harmony voices will be randomly ahead and behind the lead voice. Turning this off results in minimum lead voice processing delay.

### Pan/Volume

**Pan knob** ▶GBLVps  
Adjusts panning for the lead voice. L64 (panned fully left) to R63 (panned fully right).

**Level knob** ▶GBLVps  
This parameter sets the Lead Voice level.

**DryOff** This setting mutes the dry input vocal, but allows the thickening voices to pass through the unit as if the lead level was set to 0dB.

**Off** Lead Voice is turned off.

-30dB ... 0dB Lead Voice level.

## Voice Processor Setup: Dynamics / EQ

In this page you can adjust parameters for the Compressor/Gate and Equalizer, applied to the Lead and Harmony voices.



### Assign

**Dyn** ▶GBLVps  
Compressor/Gate assignment. The options are Off, Lead + Harmony, Harmony or Lead. The compressor has auto-makeup gain, so there are no output levels problems when selecting a different option.

**EQ** ▶GBLVps  
EQ assignment. The options are: Off, Lead + Harmony, Harmony or Lead.

### Dynamics

The Voice Processor has dynamics processing optimized for vocals.

**Thresh knob** ▶GBLVps  
Compressor Threshold. Range: 0 to -60 dB.

**Ratio knob** ▶GBLVps  
Compression ratio. Range: 1.1:1 to 64:1.

**Gate knob** ▶GBLVps  
Gate Threshold. Range: Off, -70dB to 0dB

### EQ

The Voice Processor has an extremely flexible 3-band EQ with frequency and gain-adjustable high and low shelving bands, as well as a fully parametric band with Q control.

**Low Gain knob** ▶GBLVps  
Low Shelving Frequency cut/boost. Range: ±12 dB.

**Low Frequency knob** ▶GBLVps  
Low Shelving Frequency center frequency. Range: 80Hz...16kHz.

**Mid Gain knob**►GBL<sup>VPs</sup>

Mid Band Frequency cut/boost. Range:  $\pm 12$  dB.

**Mid Frequency knob**►GBL<sup>VPs</sup>

Mid Band Frequency center frequency. Range: 80Hz...16kHz.

**Mid Q knob**►GBL<sup>VPs</sup>

Resonance of the midband. Range is .1 (wide band) to 10 (very narrow band).

**High Gain knob**►GBL<sup>VPs</sup>

High Shelving Frequency cut/boost. Range:  $\pm 12$  dB.

**High Frequency knob**►GBL<sup>VPs</sup>

High Shelving Frequency center frequency. Range: 80Hz...16kHz.

## Voice Processor Setup: Talk

This page is where you can set the Talk function, to be used to address the audience, speaking over the background music. Parameter contained in this page are relative to programming parameters, and are used to attenuate the music when speaking.



### Talk

**Talk**►GBL<sup>Tik</sup>

On/off switch for the Talk function. This is the same you can find in the Mic panel of the Style Play and Song Play modes.

### Mode

**Auto (AutoTalk)**►GBL<sup>Tik</sup>

When this parameter is checked, the Talk function automatically engages when the Sequencer or Arranger is stopped. This way, you can talk to the audience between two songs, without the need to press the Talk On/Off button.

### Mixer

**Ld to Rv (Lead to Reverb) knob**►GBL<sup>Tik</sup>

Use this knob to attenuate the reverb applied to the lead voice. 0dB corresponds to no attenuation.

**FX Lev (FX Level) knob**►GBL<sup>Tik</sup>

Use this knob to attenuate the effects level. 0dB corresponds to no attenuation.

**Master Volume Attenuation knob**►GBL<sup>Tik</sup>

Use this knob to reduce the master volume. 0dB corresponds to no level reduction.

### Reverb

**Type**►GBL<sup>Tik</sup>

Use this parameter to choose a reverb to be automatically selected when turning the Talk function on.

**PreDly (Pre Delay)**►GBL<sup>Tik</sup>

Use this parameter to delay the reverb, and separate it from the lead voice. With higher values, reverb may be perceived as an echo.

**Decay**►GBL<sup>Tik</sup>

Use this parameter to set the reverb's decay time (in seconds). The higher this value, the more difficult is to understand separate words.

**Low Color**►GBL<sup>Tik</sup>

Reverb Low Color. Specifies the characteristics of the reverbs low frequencies.

**High Color**►GBL<sup>Tik</sup>

Reverb High Color. Specifies the characteristics of the reverbs high frequencies.

### Thicken

**On/Off**►GBL<sup>Tik</sup>

This checkbox allows enabling/disabling of lead voice thickening parameters.

**Det. (Detune)**►GBL<sup>Tik</sup>

Sets the amount of lead voice detuning.

**Spread**►GBL<sup>Tik</sup>

Sets the amount that the detuned voices are panned. A value of 100% results in the detuned voices being hard panned R and L. A value of 0% results in the detuned voices panned to center.

### Level

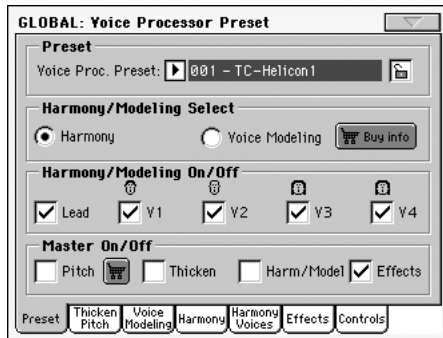
**Level knob**►GBL<sup>Tik</sup>

Use this knob to set the level of the voice thickening effect.



## Voice Processor Preset: Preset

This page allows you to select a Voice Processor Preset, as well as turning on or off the various Voice processor modules.



### The 'Buy Info' buttons

Two optional software modules are available for the Voice Processor: Pitch Correction and Voice Modeling. These modules can be purchased separately. Please see "Voice Processor: The optional Pitch Correction and Voice Modeling modules" on page 246 for more information on how to purchase them.



### Using Pitch Correction and Voice Modeling in demo mode

Even if you have not yet bought the optional software modules, you can turn them on, and try them (with some limitations) before you buy. While in demo mode, the audio signal will be interrupted every 30 seconds, and the "VP Demo" indicator will flash on top of the screen.

VP Demo

- To turn Voice Modeling on, select the corresponding radio-button.
- To turn Pitch Correction on, check the Pitch parameter.

### Preset

#### Voice Processor Preset

▶PERF ▶STS ▶STS<sup>SB</sup>

Use this parameter to select a Voice Processor Preset. This Preset is saved when writing a Performance or STS to memory.

Preset parameters can be recalled by selecting a Performance or STS. They can be found in the Voice Processor Preset edit section, including Harmony Voice settings, Pitch Correction parameters, and Effect settings among many others.

If you wish to save your Preset settings, just select the "Write Global-Voice Processor Preset" command from the page menu (see page 251).

## Harmony/Modeling Select

### Harmony/Voice Modeling

▶GBLV<sup>VP</sup>

Use this radio-button to select either the Harmony or the Voice Modeling modules. They cannot be used at the same time in the same Preset.

**Note:** The Voice Modeling module is optional, and may not be available in your instrument. Please contact your Korg distributor, or check on our site ([www.korgpa.com](http://www.korgpa.com)), for information on this module.

### Harmony On/Off

These are "switches" for the Lead voice and voices generated by the Harmony section.

**Note:** These parameter are the same found in the Mic panel of the main page of the Style Play and Song Play modes.

### Lead

▶GBLV<sup>VP</sup>

This checkbox allows turning the lead voice On or Off, independent of the Lead Level knob in the Voice Processor Setup section (see "Level knob" on page 237). This is useful in creating presets where you want to hear harmony voices only.

**Note:** This parameter is only available when the Harmony section is turned on. If it is turned off, the Lead parameter is automatically set to On.

### V1...V4

▶GBLV<sup>VP</sup>

These checkboxes allow turning each of the four Harmony Voices On or Off, independent of the Level knob in the Harmony Voice page (see "Level knob" on page 244).

This is the same as the "Voice On/Off" checkbox (see page 243).

### Master On/Off

These are "switches" for the various Voice Processor sections.

**Note:** These parameter are the same found in the Mic panel of the main page of the Style Play and Song Play modes.

### Pitch

▶GBLV<sup>VP</sup>

This checkbox allows the enabling/disabling of the Pitch Correction module (available as an option).

### Thicken

▶GBLV<sup>VP</sup>

This checkbox allows the enabling/disabling of the Thicken module.

### Harmony/Modeling

▶GBLV<sup>VP</sup>

This checkbox allows the enabling/disabling of the Harmony or Voice Modeling module (available as an option).

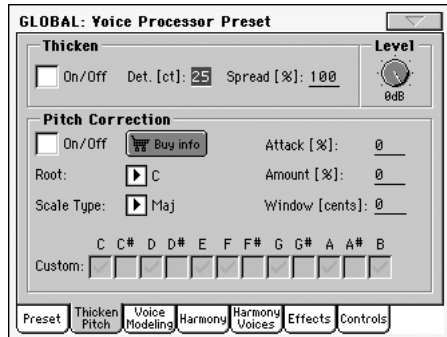
### Effects

▶GBLV<sup>VP</sup>

This checkbox allows the enabling/disabling of the Voice Processor Effects module.

## Voice Processor Preset: Thicken / Pitch

This page contains parameters for the Thicken and the Pitch Correction module (*Pitch Correction available as an option – see “Voice Processor: The optional Pitch Correction and Voice Modeling modules” on page 246*).



### Thicken

Thickening makes the Lead voice thicker, by adding two “ghost” voices to the singer’s voice.

#### On/Off

►GBL<sup>VPp</sup>

This checkbox allows enabling/disabling of lead voice thickening parameters. It is the same control found on the “Preset” page.

#### Det. (Detune)

►GBL<sup>VPp</sup>

Sets the amount of lead voice detuning.

#### Spread

►GBL<sup>VPp</sup>

Sets the amount that the detuned voices are panned. A value of 100% results in the detuned voices being hard panned R and L. A value of 0% results in the detuned voices panned to center.

### Level

#### Level knob

►GBL<sup>VPp</sup>

Sets the volume level of the lead voice thickening effect.

### Pitch Correction

*Available as an option – see “Voice Processor: The optional Pitch Correction and Voice Modeling modules” on page 246.*

The Voice Processor will listen to the pitch of your voice, compare it to the selected correction scale, and then apply pitch correction in realtime. The amount of correction applied is governed by the various amount and timing settings available.

Pitch correcting your lead voice not only makes for great sounding lead vocals, it can also benefit your harmonies in that the pitch correction is applied prior to harmony voice generation.

#### Pitch Correction On/Off

►GBL<sup>VPp</sup>

Check this parameter to turn Pitch Correction on. This is the same as the “Pitch” parameter in the Preset page (Voice Processor Preset section), and in the Mic panel of the Style Play and Song Play modes (main page).

### Root

►GBL<sup>VPp</sup>

Pitch Correction scale root.

### Scale Type

►GBL<sup>VPp</sup>

Pitch Correction scale type: Major, Minor-Natural (natural minor), Minor-Harmonic (harmonic minor), Minor-Ascending (ascending melodic minor), Chromatic and Custom. This setting, in combination with Root, determines which notes your input vocal will be corrected to.

### Attack

►GBL<sup>VPp</sup>

Pitch Correction attack rate. Sets the responsiveness of the correction. 0% is slow, and 100% is fast. Settings of between 16% and 40% give the most transparent pitch correction. High settings can give you a robotic sounding effect.

### Amount

►GBL<sup>VPp</sup>

Pitch Correction Amount. Scales the amount of automatic correction applied to the input voice. The range is 0% to 100%. However, 0% does not mean that the correction is turned off. The amount of applied correction depends on how far out of tune the input note is. This allows for a very musical way of correcting pitch. It corrects the large pitch errors while preserving the natural micro variations around the target pitch. For example:

- With the amount set to 100%, a 10 cent flat input will be corrected by 10 cents and a 50 cent flat input will be corrected by 50 cents.
- With the amount set to 80%, a 10 cent flat input will be corrected by approximately 5 cents and a 50 cent flat input will be corrected by approximately 40 cents.
- With the amount set to 0%, a 10 cent flat input will not be corrected and a 50 cent flat input will be corrected by approximately 10 cents.

### Window

►GBL<sup>VPp</sup>

Correction Window. Specifies the maximum distance (above or below) in cents an out-of-tune note can be from the closest correction note and still be corrected. A very small window setting will cause correction to occur only when the singer is singing very close to the correct pitch. The maximum window size is 200 cents or a whole tone above and below the target pitch.

### Custom Scale

►GBL<sup>VPp</sup>

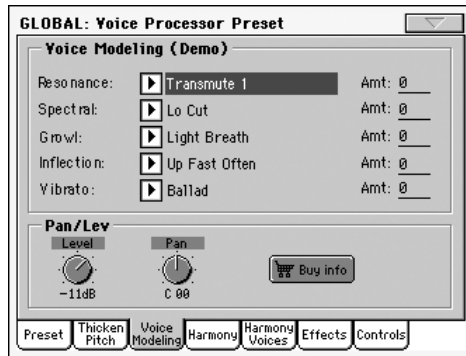
This diagram, available when the Custom Scale Type is selected, provides a chromatic list of notes beginning with the scale root. Checkmarks indicate which notes are in the pitch correct scale and which are ignored. No checkmark means that the note is ignored. Modified (custom) scales are stored with presets.

## Voice Processor Preset: Voice Modeling

Available as an option – see “Voice Processor: The optional Pitch Correction and Voice Modeling modules” on page 246.

**Note:** The Voice Modeling module is alternative to the Harmony module. They cannot be both active at the same time. Go to the Preset page (Voice Processor Preset section) to select the Voice Modeling option and make parameters in this page editable.

This page allows you to enable/disable, and edit, the Voice Modeling parameters.



Voice Modeling is essentially realtime resynthesis and reshaping of the human voice. It offers a variety of ways in which to process the vocal input, including the ability to add breath, growl, rasp, head and chest resonance, inflection or vibrato.

The Voice Modeling can enhance or transform a voice. For example, a “thin” vocal into a “throaty” one, a “male” into a “female”. Complete control is possible through various modeling parameters of the voice: Resonance, Spectral, Growl and Vibrato.

**Note:** You can use the Voice Modeled (VM) Lead voice together with the unprocessed Lead voice, by turning on the “Lead” parameter in the Preset page (Voice Processor Preset section).

### Resonance

►GBLVpp

Resonance is how we model different vocal tract dimensions, and apply them to incoming vocals. Your favorite vocalists all have unique pitch and glottal characteristics. Resonance changes the tonal makeup of the sound by moving vocal formants, so that the Voice Modeled (VM) Lead voice sounds quite different than the original. Formants are the harmonic combinations that help make our voices unique.

The styles have been given names that are easily identified when assembling presets. The names may be associated with a particular genre of music or sound. This way, you can associate a certain modification with a name, similar to how we describe colors in a picture with names.

Some of the Resonance styles contain a built-in octave shift, either up or down. This is to accommodate a male singing in the female register, with a feminine timbre, or for a female to simulate a male singing voice. These Resonance styles enable you to sing in a natural range and still hit the notes of your opposite gender comfortably; they are Style settings Transmute.

The Amt (Amount) parameter allows you to dial in the relative strength of this effect on your VM voice; 0% for no effect, 100% for pure Resonance.

### Spectral

►GBLVpp

The Spectral control is a set of equalizer response curves intended to complement the Resonance selections. This equalization is different than those controlled via EQ in the Voice Processor Setup section. The Spectral styles reflect the natural equalization equivalent to the native control a singer has over his or her own voice. These modeled EQ curves are applied to the Voice Modeling (VM) voice. These styles may be used in conjunction with the resonances, or purely as additional tonal control over the VM voice.

The Amt (Amount) parameter allows you to dial in the relative strength of this effect on your VM voice; 0% for no effect, 100% for maximum effect.

### Growl

►GBLVpp

Growl refers to the combination of complex sounds the human voice can make to change non-pitched aspects of the vocal sound. Consider these examples: the cool breathy sound of a Jazz or Folk singer, the legendary warm grumble of Blues from the Mississippi Delta, the brazen sizzle of Rock and Alternative Rock or the growl of 60's Soul.

The Growl settings contain three types of effects: Breathiness, Rasp, and Growl, arranged in various combinations in the style library. All of these are set to create percussive and expressive textures in addition to the sung note. Experimentation is the key to finding styles that work in your scenario, or are difficult to create in your scenario. The last few entries contain extreme and unreal Growl styles – no longer need you burn out your throat night after night. Growl styles are created using the following parameters:

**Breathiness** factors in ‘virtual air’ that gives the effect of being close to a sensitive condenser microphone. This intimate sound may be used in some Jazz styles or for pop ballads, although its application is not limited to these. Breathiness may also be used to give a ‘tired’ or ‘strained’ sound, where the singer may be pushing a lot of air. You can also dial in ‘whisper’ or like textures to simulate a specific singer's style.

**Rasp** is an effect where the breath pushed through the throat cavity goes beyond mere breathiness, into a harsh sizzle or grind. These sounds are a combination of hard breath and friction in the larynx, which are difficult for many singers to reproduce and are very damaging on the vocal cords. You can use Rasp on your normal voice and achieve a grittier, rough delivery, sending a clean voice into an overdriven frenzy. In many forms of heavy rock music, this is an expressive and elusive performance component.

**Growl** describes another way that we can achieve Blues, Rock, or Rhythm & Blues sounds with our normal voice. Growl refers to a type of grind or friction of the larynx and epiglottis, usually heard in Soul, R&B, and Blues music. Some of the styles are sensitive to the dynamics of the lead voice, meaning that when you raise the volume of a syllable, the Voice Processor ‘growls’ on that syllable.

As with the other Voice Modeling effects, the Amt (Amount) parameter controls the level of effect incorporated into the signal.

## Inflection

►GBL<sup>VPP</sup>

The Inflection styles allow the singer to adjust the characteristics of ‘scooping’ to the sung note. This is a stylistic effect in singing where a singer sweeps up a variable range of pitch to rest on the intended note. The Inflection settings use the following nomenclature: Up/Down, Fast, Often.

**Up/Down** is the direction of Inflection – Up to a note, or Down to a note.

**Fast** is the speed at which the inflection ‘scoops’, either Slow, Medium or Fast.

**Often** is how regularly the Inflection occurs. The Voice Processor listens for an Onset period before applying Inflection to the beginning of the next phrase.

## Vibrato

►GBL<sup>VPP</sup>

Vibrato is a pitch effect that singers often use in their delivery of a piece of music. This effect is achieved by repeatedly altering the size of the mouth and vocal tract in a pattern that varies above and below a central pitch in an oscillating fashion.

The Vibrato styles are based on real vocalist’s vibratos. We have analyzed a large set of parameters from a voice database and created various vibrato models. The Vibrato setting names reflect the style of the vocals from which they were extracted. However, a vibrato modeled from a style or gender different from yours can sound very good when applied to your voice. Experimentation is the key to finding a style setting that best suits your application. You might begin incorporating Vibrato into your sound by setting the Amt (Amount) control to 50%. This setting matches the depth level that we analyzed in our modeling subjects. You can then vary the effect from this middle range up or down to suit your taste.

## Level

►GBL<sup>VPP</sup>

Use this knob to set the level of the modelled voices.

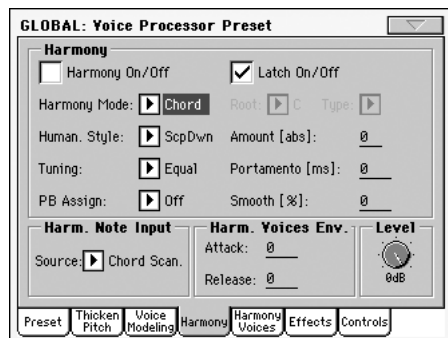
## Pan

►GBL<sup>VPP</sup>

Use this knob to set the position in the stereo field of the modelled voices.

# Voice Processor Preset: Harmony

In this page you can define general parameters for the Harmony module.



## Harmony

### Harmony On/Off

►GBL<sup>VPP</sup>

This checkbox allows enabling/disabling of the Harmony module. It is the same control found on the “Preset” page.

### Latch On/Off

►GBL<sup>VPP</sup>

When enabled in Chord mode, the last chord played remains active after the notes have been released from the keyboard. When enabled in Notes mode, the harmony voices will only respond to note input when the number of notes being played equals the harmony voices enabled. This ensures logical voice assignment when voices change. When Latch is On, the envelope parameters Attack and Release are not applicable.

### Harmony Mode

►GBL<sup>VPP</sup>

Change the current harmony mode. Available parameters: Scalic (Scalic presets), Chord (Chordal presets), Shift, and Notes (Shift and Notes presets).

See “Harmony and Tuning with the Voice Processor” on page 247 for a full description of each harmony mode.

### Root

►GBL<sup>VPP</sup>

In Scalic presets this sets the scale root.

### Type

►GBL<sup>VPP</sup>

In Scalic presets this sets the scale type.

### Human. (Humanization) Style

►GBL<sup>VPP</sup>

This is a list of humanization style types, each made up of a combination of Flextime™ based time randomization, pitch randomization and pitch inflection (scoop).

### Amount

►GBL<sup>VPP</sup>

The amount that the humanization style is applied to the harmony voices.

### Tuning

►GBL<sup>VPP</sup>

This gives the option of either Equal temperament, Just intonation, or Barbershop tuning modes. See “Harmony and Tuning with the Voice Processor” on page 247 for a full description of each tuning mode.

### Portamento

►GBL<sup>VPP</sup>

This is defined in milliseconds as the time to reach a target note when a harmony voice needs to change pitch.

### PB Assign

►GBL<sup>VPP</sup>

Pitch Bend control assignment. Allows assignment of the pitch bend to Pitch (applicable in Notes and Chord harmony modes) or Gender.

**Note:** For this to work, a value different than zero must be assigned to the “Pitch Bend Range” in the “Voice Processor Setup: Setup” page (see page 236).



## Smooth

►GBLVpp

Sets how much of the input pitch nuance is applied to the output voice. Not applicable to Shift presets.

## Harmony Note Input

In Style Play and Song Play mode, when the Harmony track is set to Global, the Voice Processor's Harmony module can receive notes and chords from a source different than the Arranger's Chord Scanning area. This way, you can continue sending chords to the Arranger with your left hand, while, for example, sending chords or notes to the Harmony module with your right hand.

## Source

►GBLVpp

This parameters allows you to select a source of notes or chords for the Harmony module of the Voice Processor.

### Chord Scanning

With this option selected, notes or chords come from the same chord scanning area dedicated to the Arranger. (*This works exactly as in the previous versions of the operating system*).

- |            |   |
|------------|---|
| Lower      | Notes or chords come from the Lower area of the keyboard. |
| Upper      | Notes or chords come from the Upper area of the keyboard. |
| Full Keyb. | Notes or chords come from the full range of the keyboard. |

## Harmony Voices Envelope

The envelope lets you set a different Attack and Release time for the harmony voices.

**Note:** The envelope can only work when the "Latch On/Off" parameter is turned off (see page 242).

## Attack

►GBLVpp

Sets the envelope attack time for harmony voices. Available only in Notes and Chord mode.

## Release

►GBLVpp

Sets the envelope release time for harmony voices. Available only in Notes and Chord mode.

## Level

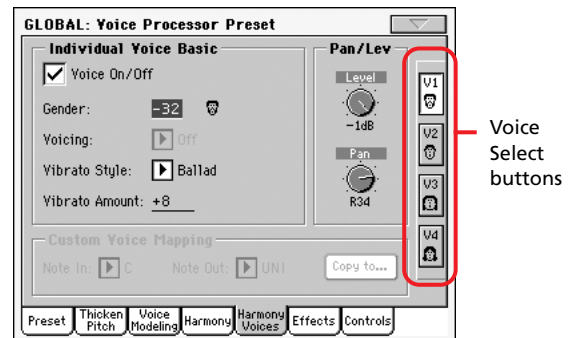
### Level knob

►GBLVpp

Sets the overall harmony voices level.

## Voice Processor Preset: Harmony Voices

The Voice Processor can add up to four Harmony Voices to the Lead voice. Here you can adjust parameters for each individual voice.



## Voice Select buttons

### V1...V4

►GBLVpp

Use these buttons to select one of the four available voices for editing.

## Individual Voice Basic

### Voice On/Off

►GBLVpp

This checkbox allows enabling/disabling of the selected Harmony Voice. It is the same control found on the "Preset" page.

### Gender

►GBLVpp

This parameter sets the formant of the Harmony Voice. Use it to alter the character of the voice ranging from -50 (a big person with a deep voice) to 0 (no change) to +50 (mice/alien sound).

### Voicing

►GBLVpp

This parameter is used to set the voicing of the selected voice. This parameter means different things depending on the harmony mode of the preset.

### Scale Mode Presets

In this mode the Voicing parameter specifies the interval of the harmony note with respect to the input note in the scale. The range of values goes from --8, which is 2 octaves below the input note, to ++8 which is two octaves above the input note, or Custom Map, which means custom voicing (See "Custom Voice Mapping" below). For example, a setting of +3 will result in a harmony voice a third above the input voice, related to the current scale.

### Chord Mode Presets

In this mode the Voicing parameter specifies the relation of the harmony note to the input note with respect to the current chord. In Chord mode presets, the harmony voices are always notes in the chord. A setting of Up1 will result in the harmony voice being the next note above the input voice in the chord. For instance, if the chord was C Major and the input note was an E, an Up1 setting would produce a G harmony voice, just above the input E.

The range of values goes from Down 5 to Unison to Up6. Additional values are Root1 and Root2 which give the root of the recognized chord as the harmony voice, and Bass1 and Bass2 (bass voicing) which give the lowest note received. Root2 and Bass2 are the higher pitch Root and Bass settings.

#### Shift Mode Presets

In this mode the voices are shifted relative to the input note. The values range from -24 semitones to +24 semitones.

#### Notes Mode Presets

In this mode there is no selectable voicing, since harmony voices exactly play received notes.

### Vibrato Style

►GBL<sup>VPp</sup>

A list of Vibrato styles based on the analysis of real singers.

### Vibrato Amount

►GBL<sup>VPp</sup>

The depth of vibrato applied to the voice.

## Pan/Level

### Level knob

►GBL<sup>VPp</sup>

Sets the output level of the selected voice. Please note that there is also a master harmony voice level found in the “Harmony” page.

### Pan knob

►GBL<sup>VPp</sup>

Adjusts the pan for the selected voice. L64 (panned fully left) to R63 (panned fully right).

## Custom Voice Mapping

*This area is only available in Scalio Mode.*

Scale mode harmonies are basically pitch maps. For each input note in a scale you can define a resulting harmony note. The Voice Processor has pre-defined pitch maps for all the offered scale roots, types, and intervals.

The Custom voicing feature allows you to create your own pitch maps. For example, you could define a pitch map so that a C input produces an E output and a D input produces an A output. The best way to work with custom voicing is as follows:

- For a given harmony voice, select the scale root, type, and interval that most closely matches the desired voicing.
- Go to the “Note In” parameter and select the input note that requires a different harmony note.
- Go to the “Note Out” parameter and change the harmony note as desired.
- Select various other input notes and remap as desired. Repeat the above steps for each harmony voice. You can also copy a map from a voice to other voices.
- The custom map can be transposed under the Harmony page by changing the “Root” parameter.

### Note In

►GBL<sup>VPp</sup>

Incoming note.

### Note Out

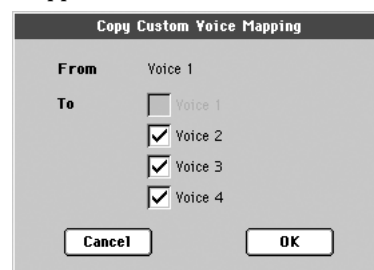
►GBL<sup>VPp</sup>

Resulting note when applying the custom map.

±24	Number of semitones above or under the received note.
UNI	Unison. The same note received on the input is sent to the output.
NC	No Change. The harmony voice will keep its previous pitch until the lead voice pitch changes to a non “NC” note.

### Copy to... button

Use this button to copy the current custom map to another voice. When you press the button, the Copy Custom Voice Mapping dialog box appears:

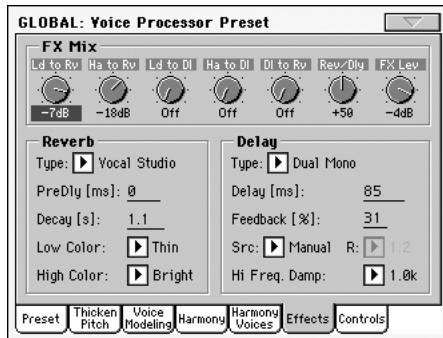


Check all desired target voices, then press OK to confirm the copy.



## Voice Processor Preset: Effects

This page allows to adjust the various effect parameters for the Voice Processor.



### FX Mix

#### Ld to Rv (Lead to Reverb) knob

►GBLVpp

Lead to Reverb effects send.

#### Ha to Rv (Harmony to Reverb) knob

►GBLVpp

Harmony to Reverb effects send.

#### Ld to DI (Lead to Delay) knob

►GBLVpp

Lead to Delay effects send.

#### Ha to DI (Harmony to Delay) knob

►GBLVpp

Harmony to Delay effects send.

#### DI to Rv (Delay to Reverb) knob

►GBLVpp

Delay output to Reverb effects send.

#### Rev/DI (Reverb/Delay Balance) knob

►GBLVpp

Reverb/Delay mix.

#### FX Lev (FX Level) knob

►GBLVpp

Sets the overall volume of the combined Reverb and Delay effects.

### Reverb

#### Type

►GBLVpp

The list of reverb types includes the following acoustic simulations: Living Room, Chamber, Club, Classic Hall, Concert Hall, Large Cathedral, Vocal Studio, Vocal Room, Vocal Hall, Ambience, Live Reverb, Plate1, Plate2, and Spring.

#### Pre Delay

►GBLVpp

Reverb Pre-delay time. Sets the delay time prior to the reverb output. Large rooms typically have reverbs that start much later than the initial signal.

#### Decay

►GBLVpp

Reverb Decay Time.

#### Low Color

►GBLVpp

Reverb Low Color. Specifies the characteristics of the reverbs low frequencies.

#### High Color

►GBLVpp

Reverb High Color. Specifies the characteristics of the reverbs high frequencies.

### Delay

#### Type

►GBLVpp

Use this parameter to select a Delay type.

DualMono Maintains the panning of the sends.

PingPong1 Sends the lead voice to the left effect end only.

PingPong2 Sends the lead voice to the sends depending on the lead pan setting.

#### Delay

►GBLVpp

Only available when Src = Manual (see below). Use this parameter to fine adjust (in milliseconds) the current delay time.

#### Feedback

►GBLVpp

Delay feedback amount.

#### Src (Source)

►GBLVpp

Use this parameter to set the source of the tempo for the delay.

MIDI Tempo is received from MIDI.

Manual The delay time is set using the "Delay" parameter.

#### R (Ratio)

►GBLVpp

Sets the ratio between the tempo and the resulting delay.

#### Hi Freq Damp (High Frequency Damping)

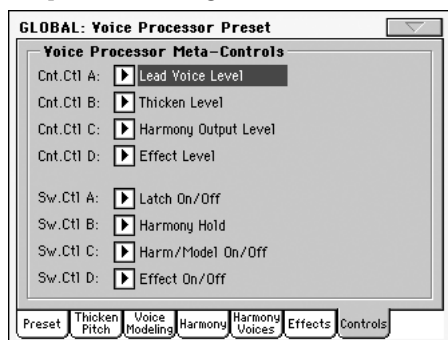
►GBLVpp

High Frequency Damping.

## Voice Processor Preset: Controls

This page allows you to define four continuous and four switch dedicated controllers for the Voice Processor, to be assigned to any physical controller (pedal, footswitch, sliders...).

For example, you can first assign the Lead Voice Level to the “Cnt. Ctl. A” Voice Processor meta-controller, then assign the “Cnt. Ctl. A” option to an Assignable Pedal or Slider.



### Cnt. Ctl A...D

►GBL<sup>VPp</sup>

Continuous controllers. See “List of functions assignable to Voice Processor’s Continuous Controls” on page 374 for a list of assignable parameters.

### Sw. Ctl A...D

►GBL<sup>VPp</sup>

Switch controllers. See “List of functions assignable to Voice Processor’s Switch Controls” on page 374 for a list of assignable parameters.

## Voice Processor: The optional Pitch Correction and Voice Modeling modules

Two optional software modules are available for the Voice Processor: Pitch Correction and Voice Modeling. These algorithms, developed by TC•Helicon, are the most sophisticated tools available today for voice shaping and correction.

You can purchase them as a single optional plug-in (SUG-TC1) from our web site [www.korgpa.com](http://www.korgpa.com), or by contacting your Korg Distributor.

To buy a licence for this software option, press the red Buy button next to each of the parameter names (pages “Preset”, “Thicken/Pitch Correction” or “Voice Modeling”). The following dialog box will appear, showing you your Pa1X Purchase Code:



Copy this code, and press Cancel to close the dialog box. Type the code in the dedicated field of the purchase module (online or on paper, depending on your purchase option).

After receiving the authorization code, open the above dialog box again, then press the **T** (Text Edit) button in the display, and type it in the Activation Key field.

Press OK to confirm. Your Pitch Correction and Voice Modeling modules will become completely functional!

## Harmony and Tuning with the Voice Processor

### Harmony

Here's where we can go into a little more depth about harmonies. We've tried to keep it practical, focusing on what Voice Processor can do for you.

#### Harmony Hold

Truly an innovation, the Harmony Hold feature lets you (on a whim) sustain the backing harmony voices while you continue to sing through them. On activation (press and hold the assigned Damper, Assignable Footswitch, Assignable Switch or EC5 switch), you can freeze whatever the harmony voices are doing, and they will hold their notes (in a very natural way) until you let the pedal go.

See "Pedal/Footswitch" on page 229, "EC5-A...E" on page 230, and "Damper Mode" on page 236 for more information.

#### Harmony Modes

The Voice Processor has five different harmony modes, which give five unique methods of creating harmony. Once we get into describing the more complex harmony modes, we'll be showing you examples based on the C major scale. If you are unfamiliar with this scale we've shown C major here.



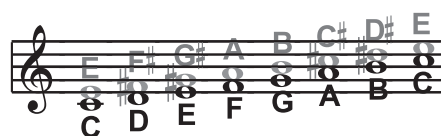
#### Notes Mode

In this mode, you provide the Voice Processor with specific note information to determine the pitch of the harmony voices. This is the most direct and flexible way of creating harmonies, allowing you to weave complex melodies and counter harmonies irrespective of your lead vocal.

#### Shift Mode

Also known as "Fixed Interval", this takes the pitch of your lead voice and creates harmonies a set number of semitones away, based on that pitch. The method of creating harmonies, using a fixed number of semitones relative to an input note or pitch, is called chromatic harmony, the theory of which we'll go into later. We consider this type of harmonizing to be non-intelligent because Voice Processor is not set to any particular key or scale. These are pure, parallel harmonies. The most common shift harmony voices are the 5th (7 semitones) and octave (12 semitones), ranging from two octaves below the input to two octaves above the input pitch.

Below is the C Major scale, showing third above chromatic scale harmony, as used in Voice Processor Shift Mode.



Black = Lead, Grey = Harmony

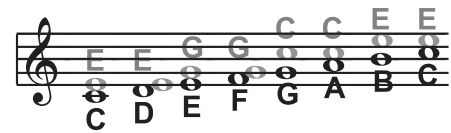
### Chord (Chordal) Mode

Chordal harmonies take your chord information to create intelligent, diatonic harmonies based on your voice. To make "Chordal" harmonies, you need to input in real time the chords of the song. This may be done either by playing on the keyboard, via MIDI or through a programmed sequence of chords included in the Harmony Track of a Song.

In Chordal mode the Voice Processor will only create harmony voices that fall on the notes of the chord. Chordal harmonies are "intelligent" because they decipher the chord you're playing and the note you're singing to produce musically pleasing harmonies. When one note above is defined as a harmony voice (Up1), the next note from the chord above the input note is output for that harmony voice.

The subsequent illustration shows the harmony notes for the C major scale with a voicing selection of a C major chord and a single "one above".

Root: C, Chord Type: Maj, Voicing: Up1



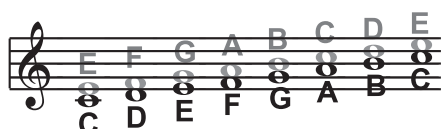
Black = Lead & Grey = Harmony

You might have noticed that each harmony note can cover more than one input note, or that each input note doesn't necessarily have a unique harmony note. For instance, C and D both have E as the 3rd above, E and F share G, and so on. This gives a more stepped sound to the harmony as the changes are both greater in magnitude and less frequent than when using other harmony methods (shift mode for example). The benefit of this method is that it is very easy to integrate vocal harmonies into your songs if you already know their chord progressions! The following lists the chords available with respect to the root of "C":

Major	C	E	G
6	C	E	G A
Maj7	C	E	G B
M7sus4	C	F	G B
min	C	E <sup>b</sup>	G
min6	C	E <sup>b</sup>	G A
min7	C	E <sup>b</sup>	G B <sup>b</sup>
min7b5	C	E <sup>b</sup>	G <sup>b</sup> B <sup>b</sup>
dim	C	E <sup>b</sup>	G <sup>b</sup> [B <sup>b</sup> (= A)]
7	C	E	G B <sup>b</sup>
7b5	C	E	G <sup>b</sup> B <sup>b</sup>
aug	C	E	G <sup>#</sup>
aug7	C	E	G <sup>#</sup> B <sup>b</sup>
sus4	C	F	G
sus2	C	D	G
7sus4	C	F	G B <sup>b</sup>

## Scale (Scalic) mode

Harmonies use key and scale information to create musically correct, diatonic harmonies. Most popular music uses a single scale, so you usually only have to input the information at the beginning of your song. “Scalic” harmonies are more dynamic than the chordal harmonies because there are unique harmony notes for each input note. The subsequent illustration shows the harmony notes for the C major scale with a voicing selection of a C major scale and a single “third above” harmony voice. You can see from the next diagram that the “Scalic” harmonies are intelligent and closely follow your lead voice for a tighter sound.



Black = Lead, Grey = Harmony

Under the Harmony page, is a parameter called “Smooth”. When set to 100% the harmony voices follow your input pitch, errors and all, but when set to 0% the harmonies will jump directly to the scalic harmony notes, kind of like a hard pitch correction on the harmony voice. Setting the Smooth parameter between 0 and 100% is like having variable amounts of pitch correction on the harmonies. Voice Processor has five preprogrammed harmony scales: three major, three minor and one custom per preset. To create a custom scale or pitch map see the

parameter description under “Custom Voice Mapping” on page 244.

It is also tricky to pick out the key in some songs. An example is “Sweet Home Alabama”. Listening, you might think this song is in the key of “D”, as that’s the first chord, but the harmonies actually work best in the key of “G” – try running the song through Voice Processor to hear for yourself.

Setting the scale can also take a bit of practice: for songs centered around the third or root of the scale it might not sound like there’s any noticeable differences between the three major or three minor scales. This is because your song doesn’t hit any of the scale’s altered notes. A melody centered around the fifth of the scale, (such as B in the key of E), highlights the differences between the scales. Try the “Sha Lala Lala ... La Tee Daa” chorus of Van Morrison’s “Brown Eyed Girl” (key: E, scale: major, 3rd above voicing) with each major scale to hear the audible difference between them. For the minor scales, Santana’s “Evil Ways” (key: G, scale: minor, 3rd above voicing) highlights the differences between the three minor scales.

The following table illustrates the third and fifth above for a given input note to illustrate the differences between the six different scales. “nc” means no change, in that the harmony voice will simply keep its previous pitch until the lead voice pitch changes to a non “nc” note.

	Lead Voice	C	C#	D	Eb	E	F	F#	G	G#	A	Bb	B
MAJ1	3rd above	E	nc	F	nc	G	A	nc	B	nc	C	D	D
	5th above	G	nc	A	nc	B	C	nc	D	nc	E	F	F
MAJ2	3rd above	E	nc	F	nc	G	A	nc	C	nc	C	D	D
	5th above	G	nc	A	nc	C	C	nc	E	nc	E	F	F
MAJ3	3rd above	E	nc	F	nc	G	A	nc	Bb	nc	C	D	D
	5th above	G	nc	A	nc	Bb	C	nc	D	nc	E	F	F
MIN1	3rd above	Eb	nc	F	G	nc	Ab	nc	Bb	C	nc	D	nc
	5th above	G	nc	Bb	Bb	nc	C	nc	D	Eb	nc	F	nc
MIN2	3rd above	Eb	nc	F	G	nc	A	nc	Bb	C	nc	D	nc
	5th above	G	nc	A	Bb	nc	C	nc	D	Eb	nc	F	nc
MIN3	3rd above	Eb	nc	F	G	nc	Ab	nc	B	C	nc	D	nc
	5th above	G	nc	A	Bb	nc	C	nc	D	Eb	nc	F	nc

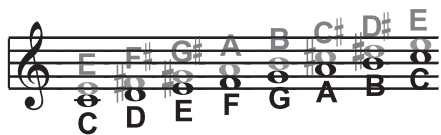
## Diatonic and Chromatic

We've described scalic and chordal harmonies as diatonic, and shift harmonies as chromatic; but what do those words mean? Look at a piano keyboard. Between middle "C" and the next "C" there are twelve keys – 7 white keys and 5 black keys. Each of those keys are pitched one semitone apart for a total of, you guessed it, 12 semitones. The chromatic scale uses all twelve semitone notes opposed to the diatonic scales. Thus there is only one chromatic scale, but 12 each of the major, minor, etc. diatonic scales (C major, C# major, D major, etc). Most of us have grown up hearing the traditional "doh ray me fah so la tee doh" diatonic scale, so that harmonies based on the diatonic scale sound correct.

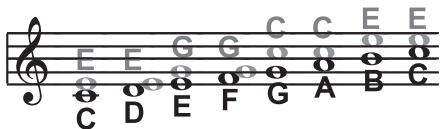
What does this mean, harmony-wise? Diatonic scale harmonies can only use notes within specified scale or chord, so a "third above" harmony voice actually varies between three and four semitones above the lead note where the chromatic harmony would stay exactly four semitones (a major 3rd) above each note.

To recap: we have three different harmony modes that use chromatic or diatonic scales.

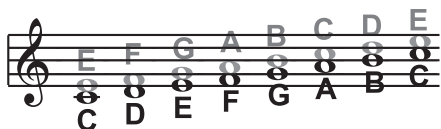
**Shifting**, which uses the chromatic, 12 semitone scale, changes the input pitch by a fixed number of semitones:



**Chordal**, which uses the root, third, fifth and sometimes seventh of the many diatonic scales, pitches the harmony voice to the closest note contained within the chord:



**Scalic**, which uses one of many diatonic scales, pitches the harmony voice to the nearest note contained within the scale:



Theory aside, the best way to get great sound is to experiment with all of Voice Processor' possible harmony modes. Not only will you develop an intuitive sonic sense of what works best where, but by investigating different permutations and combinations you could discover some delightful sounds you might otherwise have missed.

## Just Tuning

Why just tuning? Although probably no one has ever told you this, your expensive grand piano and the last great keyboard synthesizer you bought are both out of tune! Well, to be fair we can say instead that they are all tuned using Equal temperament. Harmony is the result of the interaction between differing audible frequencies in ratios that sound musical to the human ear. A more exact ratio leads to a nicer sounding harmony.

Most instruments (like the piano) are absolute by nature. Each note on the keyboard has a specific pitch. Equal temperament tuning uses approximations for the tuning of each note, allowing us to easily alter the key of our music without re-tuning our instruments. Unfortunately, with this method of tuning we lose the ability to create perfect ratios when playing multiple notes. As a result, much of the harmony you've heard in music has not been perfectly in tune!

The bottom line is that the approximations of equal temperament tuning are practical, but imperfect. Using the Voice Processor with Just tuning will definitely expand your musical horizons!

Just tuning is practice of maintaining the relative (and perfect) ratios between pitches, creating perfect harmonies.

Singers, especially when performing multi-part a cappella music, base their tuning on how it harmonically sounds with other singers. The natural tendency, and what sounds best, is to sing with "just tuning" so that beating is minimized. One of the goals in barbershop quartet singing is to strive for "just relative intonation" so that a sub-frequency is audible. Achieving this goal results in what barbershop fans often describe as the coveted "ring and lock" sound. In barbershop music it is the lead singer's responsibility to try to sing the melody as close to the tuning of a piano (equal temperament) as possible. The other singers must then tune their harmonies to the melody using "just relative intonation". The Voice Processor is able to do this in both the Just and Barbershop tuning modes.

When the Just or Barbershop Modes are selected in the Voice Processor, the harmony tunings are based on the following relationships:

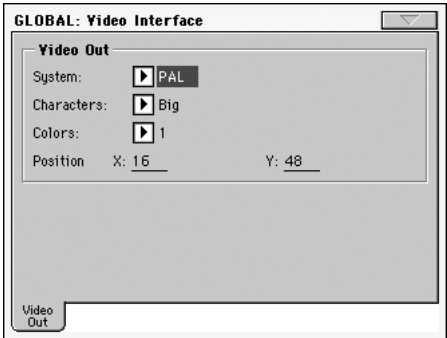
Minor 3rd	3 cycles for every 4 cycles of the input
Major 3rd	5 cycles for every 4 cycles of the input
5th	3 cycles for every 2 cycles of the input.

Barbershop differs from Just tuning in Chordal mode. Just tuning will use the root of the chord for the tuning reference, while Barbershop tuning uses the input notes as the tuning reference. For this reason it is better to use Barbershop in an a-cappella situation and Just when playing with other instruments, because Just tuning sounds more in-tune with the other instruments that most likely have equal temperament tuning.

Our best advice is to experiment and use your ears!

## Video Interface: Video Out

If your Pa1X is fitted with a Video Interface Board (VIF3), use this page to adjust its parameters.



### System

Selects the video standard (PAL or NTSC).

►GBL<sup>Gbl</sup>

### Character

Select the character size (Big or Small).

►GBL<sup>Gbl</sup>

### Colors

Selects a color set for the lyrics and background.

►GBL<sup>Gbl</sup>

1...6      Color set.

### Position X/Y

These parameters lets you adjust the image position on the external video monitor.

►GBL<sup>Gbl</sup>

## Touch Panel Calibration

From time to time (for example, after loading a new operating system), calibrating your Color TouchView™ display may be necessary to make pointing more precise. If so, use this page.



1. When in this page, first touch exactly inside the upper left set of arrows.
2. Then, touch exactly inside the lower right set of arrows.
3. Press done to confirm the new calibration.

## Touch Panel Calibration reset

In case the touch screen has become so misaligned, that it is very difficult to use the Touch Panel Calibration function, you can completely reset it, then fine-tune the adjustment with the above function.

To reset the touch panel, press GLOBAL to enter the Global mode, then press it again, and keep it pressed, until the following dialog box appears.



Press GLOBAL to execute the reset, or EXIT to close this dialog box without any reset.



## Page menu

Press the page menu icon to open the menu. Press a command to select it. Press anywhere in the display to close the menu without selecting a command.



### Write Global-Global Setup

Select this command to open the Write Global-Global Setup dialog box, and save global settings that are not tied to a single operative mode. These settings are programmed in the Global edit mode.

See “Write Global - Global Setup dialog box” on page 251 for information on the dialog box.

### Write Global-Midi Setup

Select this command to open the Write Global-Midi Setup dialog box, and save the current MIDI settings to a MIDI Setup.

See “Write Global - Midi Setup dialog box” on page 251 for more information.

### Write Global-Talk Configuration

Select this command to open the Write Global-Talk Configuration dialog box, and save the current Talk settings (see “Voice Processor Setup: Talk” on page 238).

See “Write Global - Talk Configuration dialog box” on page 252 for more information.

### Write Global-Voice Processor Setup

Select this command to open the Write Global-Voice Processor Setup dialog box, and save the current Voice Processor Setup settings (see from page 236).

See “Write Global - Voice Processor Setup dialog box” on page 252 for more information.

### Write Global-Voice Processor Preset

Select this command to open the Write Global-Voice Processor Preset dialog box, and save the current Voice Processor Preset settings (see from page 239).

See “Write Global - Voice Processor Preset dialog box” on page 252 for more information.

## Write Global - Global Setup dialog box

Open this window by selecting the Write Global-Global Setup item from the page menu. Here, you can save most settings, programmed in the Global edit mode, to the Global file in memory.



Parameters saved in the Global Setup area of the Global are marked with the ►GBL<sup>Gbl</sup> symbol through the user’s manual.

## Write Global - Midi Setup dialog box

Open this window by selecting the Write Global-Midi Setup item from the page menu. Here, you can save all MIDI settings to a MIDI Setup, that is included in the Global file in memory.



Parameters saved in the MIDI Setup area of the Global are marked with the ►GBL<sup>Mid</sup> symbol through the user’s manual.

### Name

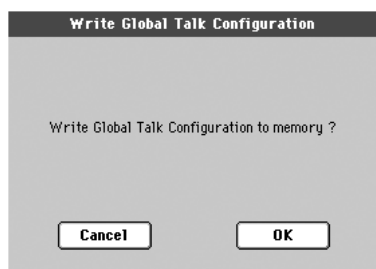
Name of the MIDI Setup to be saved. Press the **T** (Text Edit) button next to the name to open the Text Edit window and modify the name.

### Midi Setup

One of the 8 available MIDI Setup locations, where to save current MIDI settings.

## Write Global - Talk Configuration dialog box

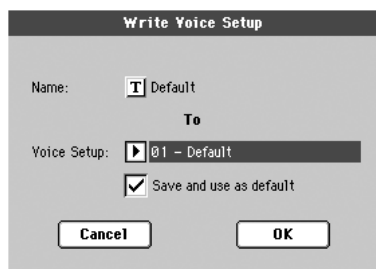
Open this window by selecting the Write Global-Talk Configuration item from the page menu. Here, you can save Voice processor's Talk settings (see "Voice Processor Setup: Talk" on page 238).



Parameters saved in the Talk Configuration area of the Global are marked with the **GBL<sup>Tik</sup>** symbol through the user's manual.

## Write Global - Voice Processor Setup dialog box

Open this window by selecting the Write Global-Voice Processor Setup item from the page menu. Here, you can save current settings for the Voice Processor Setup edit section (see starting from page 236).



Parameters saved in the Voice Processor Setup area of the Global are marked with the **GBL<sup>VPs</sup>** symbol through the user's manual.

### Name

Name of the VP Setup to be saved. Press the **T** (Text Edit) button next to the name to open the Text Edit window and modify the name.

### Voice Setup

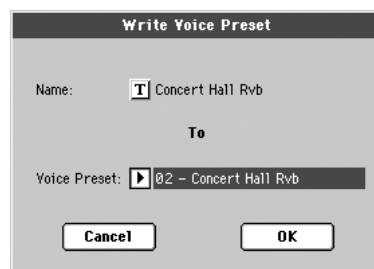
One of the 16 available Voice Setup locations, where to save current VP Setup settings.

### Save and use as default

Check this option when saving a VP Setup, you would like to be automatically selected when turning the instrument on.

## Write Global - Voice Processor Preset dialog box

Open this window by selecting the Write Global-Voice Processor Preset item from the page menu. Here, you can save current settings for the Voice Processor Preset edit section (see starting from page 239).



Parameters saved in the Voice Processor Preset area of the Global are marked with the **GBL<sup>VPp</sup>** symbol through the user's manual.

### Name

Name of the VP Preset to be saved. Press the **T** (Text Edit) button next to the name to open the Text Edit window and modify the name.

### Voice Preset

One of the 128 available Voice Preset locations, where to save current VP Preset settings.

## Disk edit mode

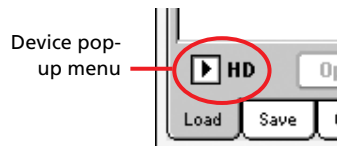
The Disk edit mode is the place where you can manage files. This edit environment overlaps the current operating mode (Style Play, Song Play, Sequencer, Sound Edit).

### Storage devices and internal memory

During a Disk operation, files are usually exchanged between a storage device and the internal memory. The Pa1X can use three different mass storage device types:

- Floppy Disk
- Hard Disk (optional on the Pa1X with speakers)
- CD (optional; only available for reading on version 1.0)

A device can be selected by using the Device pop-up menu, available on the lower left corner of most Disk pages:



Two internal memory areas are available: the SSD and RAM.

- The SSD (Solid State Disk) is the non-volatile memory, where Styles, Sounds, Performance, STSs and User Multi-samples are contained. This area is not deleted when turning the instrument off.
- The RAM (Random Access Memory) is the volatile memory, where Songs and User PCM Sample are contained. This area is deleted when the instrument is turned off.

### Selecting and deselecting files

While a file list is shown in the display, you can select any item by touching it. The selected item is highlighted.

You can deselect all items in any of the following ways:

- Touch an empty area in the file list (if available).
- Press the Device pop-up icon, and select the current device again.

### File types

The following tables describe all the file and folder types the Pa1X can manage. Here are the files you can read or write on the Pa1X.

Extension	File/folder type
SET	All the User data. (This is a folder containing other folders).
BKP	Backup folder, created with the "Full Resource Backup" function of the Disk > Utility page. (This is a folder containing other folders).
GBL	Global
VOC	Voice Processor Presets
PRF	Performance
PCG	Sound
PCM	Sample
STY	Style
PAD	Pad
SBD	SongBook
JBX	Jukebox
MID	Midi file (Standard MIDI File, SMF)
MP3 <sup>(a)</sup>	MP3 file

(a). To read and write MP3 files, the optional EXBP-MP3 board is required.

The Pa1X can also read (but not write) the following types of data.

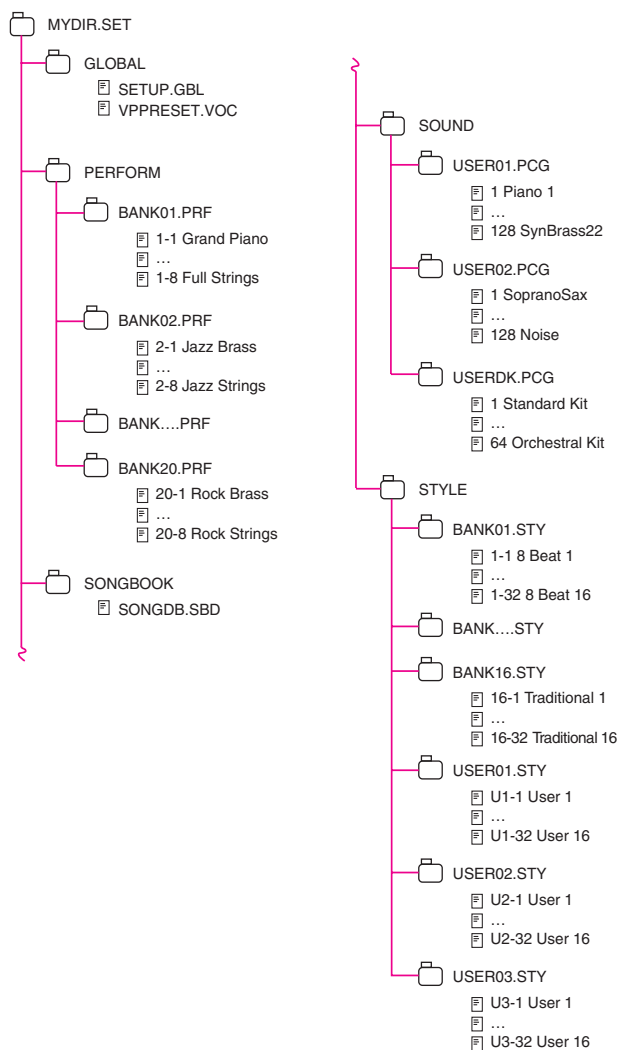
Extension	File type
KAR	Karaoke file
CDA <sup>(a)</sup>	Audio CD Track
PCG	Korg Triton Programs
KSF	Korg Trinity/Triton Sample
KMP	Korg Trinity/Triton Multisample
S	Akai Sample
P	Akai Program
AIF	AIFF audio files
WAV	WAVE audio files

(a). To read Audio CD Tracks, the optional CDRW-1 CD player/writer is required.

## Disk structure

Each disk (and the internal memory) can contain files and folders. The data in Pa1X is slightly more rigorously structured than in a computer, due to the pre-configured kind of data inside the instrument's memory. The diagram below shows the global structure of a Pa1X disk.

**Note:** Style banks from 1 to 16 (Factory Styles) can be seen in Disk mode only when the “Factory Style and Pad Protect” parameter is set to Off (see page 265), and only when loading or saving a single Style bank.

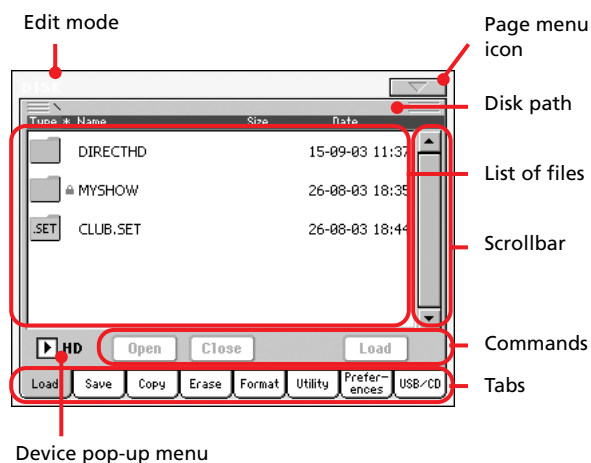


## Main page

There is no main page in the disk edit mode. When pressing EXIT, you exit the Disk mode, and the underlying operating mode in the background is recalled.

## Page structure

All edit pages share some basic elements.



### Edit mode

This indicates that the instrument is in Disk mode.

### Page menu icon

Press this icon to open the page menu (see “Page menu” on page 269).

### Disk path

Full path of the directory currently shown in the display.

### List of files

This area shows the files and folder contained in the selected device.

### Scrollbar

Use the scrollbar to scroll the list. Touching the arrows will scroll one step at a time, while touching the bar will scroll one page at a time.

Pressing the arrows while SHIFT is kept pressed jumps to the previous or next alphabetical section, or file/folder type (depending on the selected display order).

### Device pop-up menu

Use this menu to select one of the available storage devices.

### Commands

Commands may be different depending on the shown page. They are detailed in each relevant section.

### Tabs

Use tabs to select one of the edit pages of the current edit section.

## Navigation tools

When in a Disk page, you can use any of the following commands to browse through the files and folders.

### Scrollbar

See “Scrollbar” above.

### TEMPO/VALUE controls

Use these controls scroll the list up or down.


### Device pop-up menu

See “Device pop-up menu” above.

### Load/Save/Copy/Erase button

Executes the disk operation.

### Open button

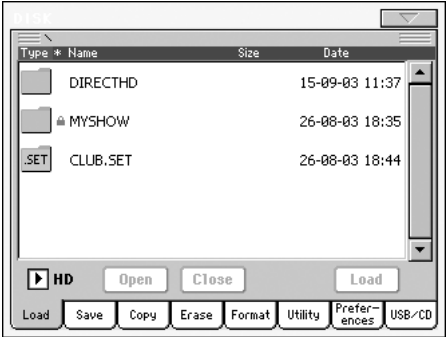
Opens the selected folder or directory (whose name begins with the “” icon).

### Close button

Closes the current folder or directory, returning to the parent (“upper”) level.

## Load

In this page you can load User data files (Performances, User Sounds, User Styles, the SongBook, User PCM, the Global) from a disk to the internal memory (SSD and RAM).



**Note:** While in this page, only data allowed for loading are shown. All other files are hidden.

**Warning:** When loading a “.SET” folder containing Sounds associated with PCM data, all existing PCM data in memory are deleted. Save them before loading the folder.

## Loading all the User data

You can load all the User data with a single operation.

1. If loading from floppy disk, insert the disk into the disk drive.
2. Select the source device, by using the Device pop-up menu. When the device is selected, its content will appear in the display.
3. If the folder you are looking for is inside another folder, select this latter and press the Open button to open it. Press the Close button to go back to the parent folder.
4. Select the “.SET” folder containing the data you wish to load, and press Load to confirm the selection.

**Note:** Most data loaded from disk is merged with data already existing in memory. For example, if there is data in all three USER Style banks in memory (USER01, USER02, USER03), and there is only the USER01 Style bank on disk, the USER01 bank is overwritten, while USER02 and USER03 banks are left unchanged.

As a result, you will have a STYLE folder in memory containing the USER01 bank you just loaded, and the old USER02 and USER03 banks.

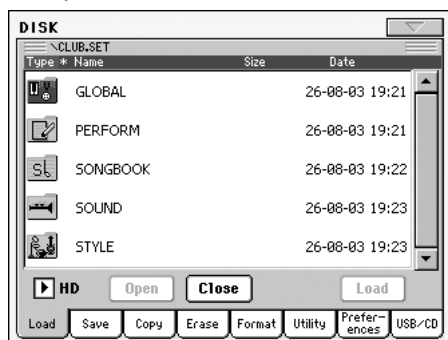
**Warning:** When loading a “.SET” folder containing PCM data, all existing PCM data in memory are deleted. Save them before loading the folder, by selecting the “PCM” option during a Save All operation (see “Saving the full memory content” on page 259).

To see if a “.SET” folder contains PCM data, open it and look for a “PCM” folder.

## Loading all data of a specified type

You can load all User data of a specified type with a single operation.

1. If loading from floppy disk, insert the disk into the disk drive.
2. Select the source device, by using the Device pop-up menu. When device is selected, its content will appear in the display.
3. If the folder you are looking for is inside another folder, select the latter and press the Open button to open it. Press the Close button to go back to the parent folder.
4. Select the ".SET" folder containing the data you wish to load, and press Open to open the ".SET" folder. A list of User data appears (Global, Performance, SongBook, Sounds, Style...).



5. Select the folder containing the type of data you are looking for, and press Load to confirm your selection.

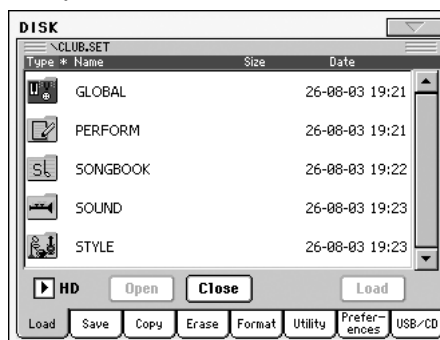
**Note:** Data loaded from disk, and data already in memory are merged. For example, if there is data in all three USER Style banks in memory (USER01, USER02, USER03), and there is only the USER01 Style bank on disk, the USER01 bank is overwritten, while USER02 and USER03 banks are left unchanged.

As a result, you will have a STYLE folder in memory containing the USER01 bank you just loaded, and the old USER02 and USER03 banks.

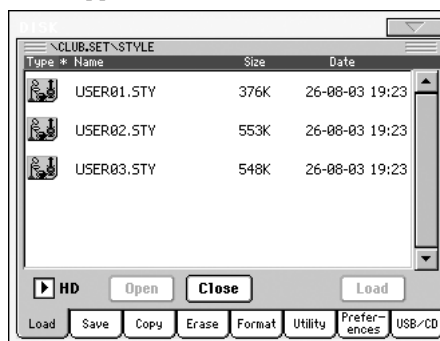
## Loading a single bank

You can load a single bank of User data (User Sounds, User Styles, Performances) with a single operation. A bank corresponds to a STYLE SELECT or PERFORMANCE/SOUND SELECT button.

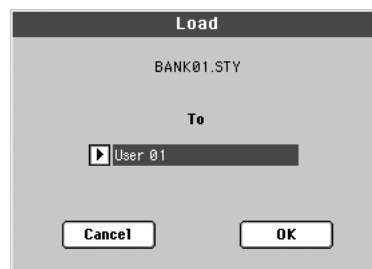
1. If loading from floppy disk, insert the disk into the disk drive.
2. Select the source device, by using the Device pop-up menu. When device is selected, its content will appear in the display.
3. If the folder you are looking for is inside another folder, select this latter and press the Open button to open it. Press the Close button to go back to the parent folder.
4. Select the ".SET" folder containing the data you wish to load, and press Open to open the ".SET" folder. A list of User data appears (Global, Performance, SongBook, Sounds, Style...).



5. Select the folder containing the type of data you are looking for, and press Open to open the selected folder. A list of User banks appears.



6. Select the bank you are looking for, and press Load to confirm the selection. A dialog box appears, asking you to select one of the available User banks in memory.



In the page above, the previously selected Style bank will be loaded into the bank 1 (USER1 button) in memory. The existing Styles in memory will be deleted and overwritten.



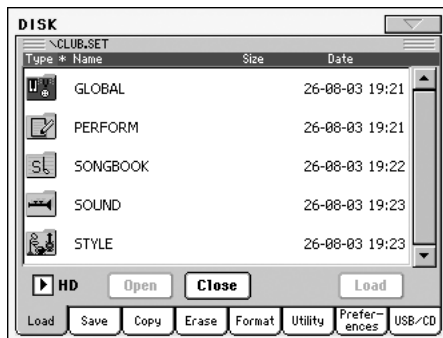
7. Select the target bank, and press OK to load the source bank.

**Warning:** After confirming, all User data contained in the bank in memory is deleted.

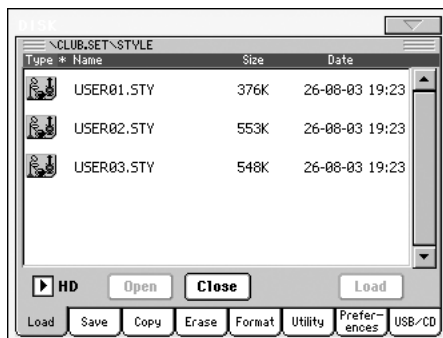
## Loading a single item

You can load a single User item with a single operation.

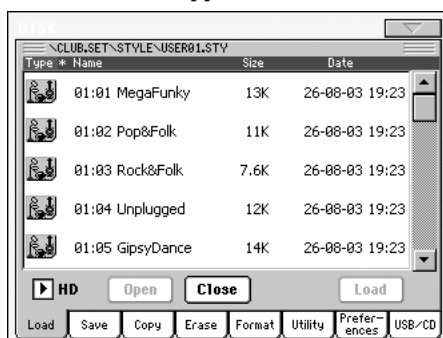
1. If loading from floppy disk, insert the disk into the disk drive.
2. Select the source device, by using the Device pop-up menu. When device is selected, its content will appear in the display.
3. If the folder you are looking for is inside another folder, select this latter and press the Open button to open it. Press the Close button to go back to the parent folder.
4. Select the ".SET" folder containing the data you wish to load, and press Open to open the ".SET" folder. A list of User data appears (Global, Performance, SongBook, Sounds, Style...).



5. Select the folder containing the type of data you are looking for, and press Open to open the selected folder. A list of User banks appears.



6. Select the bank you are looking for, and press Open to open it. A list of User items appears.



7. Select the item you are looking for, and press Load to confirm the load. A dialog box appears, asking you to select one of the available User locations in memory.



In the dialog box above, the previously selected Style will be loaded into location 01 of the bank U01 (USER1 button) in memory. The existing Style at the same memory location will be deleted and overwritten.

Empty locations are named <empty>.

8. Select the target location, and press OK to load the source file.

**Warning:** After confirming, the item you are overwriting in memory will be deleted.

## Loading i-Series data

Pa1X is compatible with the Styles of the older i-Series instruments. You can load them as if they were ordinary Pa1X data.

1. Insert an older i-Series floppy disk into the disk drive.
2. Press DISK to go to the Disk mode. Select the Load page if needed.
3. While in the Load page, select the floppy disk (FD) from the Device pop-up menu.
4. If you are reading an i30 disk, select the ".SET" folder and press the Open button in the display.
5. Select the ".STY" folder.
6. At this point, you can load the whole ".STY" folder, or open it and select a single Style.
  - To load the whole folder, press the Load button in the display. If it contains more than 16 Styles, they will be loaded into the USER banks sequentially, otherwise you will be prompted to select one of the three USER Style banks in memory. Once the target bank is selected, press Load to load the bank. The "Are you sure?" message will appear. Press OK to confirm, or Cancel to abort.
  - To load a single Style, press Open in the display to open the ".STY" folder. Since a conversion will be started at this point, please wait some seconds for the operation to be completed.

Select the Style to load, then press Load. You will be prompted to select a target location in memory. Once the target location is selected, press Load to load the Style. The "Are you sure?" message will appear. Press OK to confirm, or Cancel to abort.

**Note:** Loading a whole ".SET" folder from an i30 disk may take very long. You are advised to load a single bank or a single Style a time.

7. Go to the Style Play mode, and select (one of) the loaded Style. Adjust the Tempo, then select the "Write Current

- Style Performance” to write changes to the Style Performance. Press OK twice to confirm.
- Due to difference in Sounds, you will probably make some adjustment to the old Styles, once they are loaded in Pa1X (changing the Sound, Volume, Pan, Tempo, Drum Mapping, Wrap Around...).
  - To make the Sound assignment to the Style tracks effective, be sure the “Original Style Sounds” parameter is not checked (see page 78).
  - Save the Style Performance again. Select the “Write Current Style Performance” to write changes to the Style Performance. Press OK to confirm.

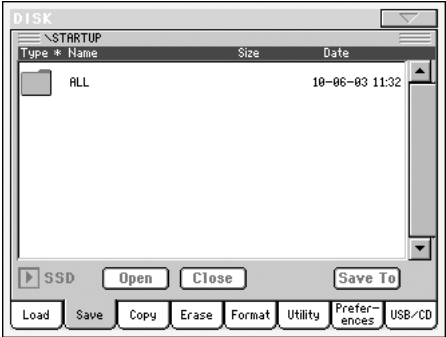
Loading Pa80/60 data

You can load Pa80/60 data exactly as if they were Pa1X data. The only difference is that the “SOUND” folder of Pa1X is called “PROGRAM” in the Pa80/60. Therefore, to load Sounds from Pa80/60 disks, you must accomplish one of the following operations:

- Either rename the “PROGRAM” folder “SOUND” (by using a personal computer) before loading a “.SET” folder; or
- First load the “.SET” folder, then separately load the “.PCG” file from the “PROGRAM” folder.

Save

In this page, you can save User data from the internal memory to a disk. You can save single files, banks, or all the User files of the internal memory (i.e., the SSD device).



**Note:** While in this page, only data allowed for saving are shown. All other files are hidden.

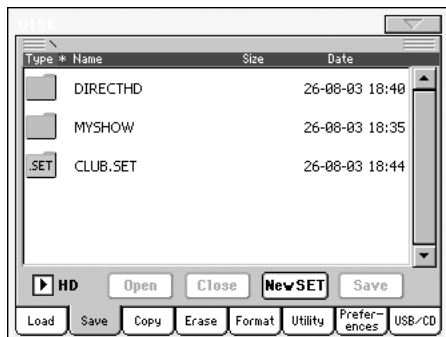
Here are the various types of files contained in the internal memory:

The file/folder type...	...contains...	...and will create on disk...
All	All the User data in memory	A .SET folder
Style	The USER 01-03 Styles	A STYLE folder inside a .SET folder
Sound	The USER Sounds and Drum Kits	A SOUNDS folder inside a .SET folder
Perform (Performances)	The Performances	A PERFORM folder inside a .SET folder
SongBook	The SongBook database	A SONGBOOK folder inside a .SET folder
PCM	All the Multisamples contained in the SSD, and the Samples contained in RAM	A PCM folder inside a .SET folder
Global	The Global. All parameters marked with ►GBL through the various chapters are saved in the Global. Voice Processor presets are saved too.	A GLOBAL folder inside a .SET folder. A .VOC file will be created inside the GLOBAL folder, containing Voice Processor presets

## Saving the full memory content

You can save the full memory content with a single operation.

1. If saving to a floppy disk, insert the disk into the disk drive.
2. The full content ("All") of the internal memory is already shown. Select it, and press Save to confirm the selection. The list of files of the target device is shown.



3. If needed, select a different target device, by using the Device pop-up menu. When the target device is selected, its content will appear in the display.
4. At this point, you can:
  - Press the New SET button and create a new ".SET" folder (see "Creating a new ".SET" folder" on page 261), or
  - Select an existing ".SET" folder.
5. Press Save to confirm. A dialog box appears, asking you to select the type of data to save:



In the above dialog box, check all data type you wish to save to disk.

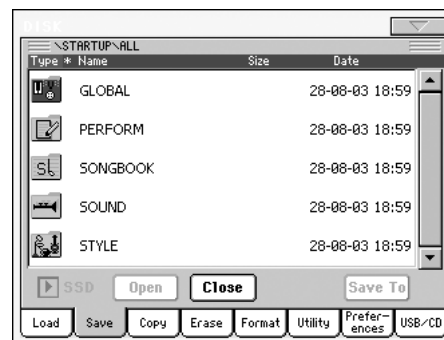
6. Press OK to confirm, or Cancel to abort.

**Warning:** After confirming, all data of the selected type in the target folder is deleted.

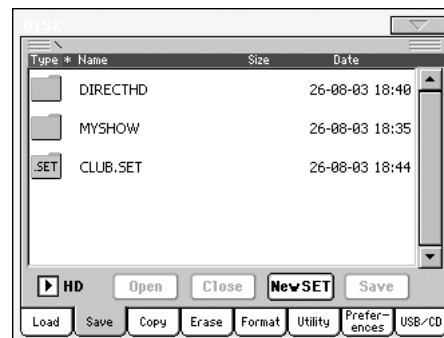
## Saving all data of a specified type

In addition to the above, you can save all data of a specified type by selecting the corresponding folder.

1. If saving to a floppy disk, insert the disk into the disk drive.
2. The full content ("All") of the internal memory is already shown. Select it, and press Open to open it. A list of User data types appear (each type is a separate folder).



3. Select the folder containing the type of data you wish to save, and press Save To to confirm the selection. The list of files of the target device is shown.



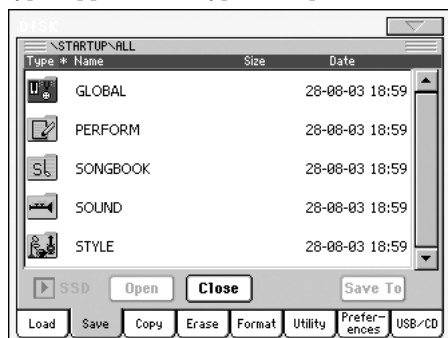
4. If needed, select a different target device, by using the Device pop-up menu. When the target device is selected, its content will appear in the display.
5. At this point, you can:
  - Press the New SET button and create a new ".SET" folder (see "Creating a new ".SET" folder" on page 261), or
  - Select an existing ".SET" folder.
6. Press Save to confirm.

**Warning:** After confirming, all data of the selected type in the target folder is deleted.

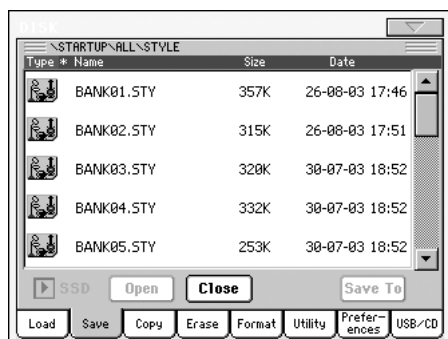
## Saving a single bank

You can save a single User bank with a single operation. A bank corresponds to a button on the control panel of the instrument (i.e. a button of the STYLE section).

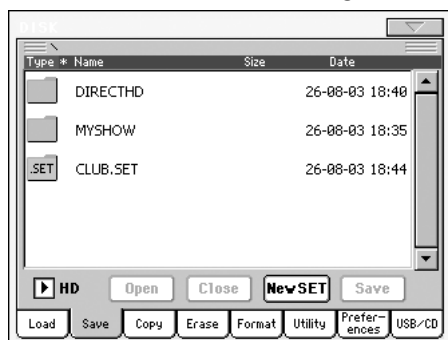
1. If saving to a floppy disk, insert the disk into the disk drive.
2. The full content ("All") of the internal memory is already shown. Select it, and press Open to open it. A list of User data types appear (each type is a separate folder).



3. Select the folder containing the type of data you wish to save, and press Open to open it. The list of contained banks is shown.

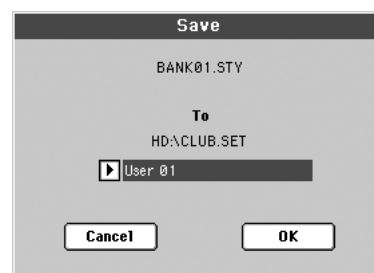


4. Select the bank to be saved, and press Save To to confirm the selection. The list of files of the target device is shown.



5. If needed, select a different target device, by using the Device pop-up menu. When the target device is selected, its content will appear in the display.
6. At this point, you can:
  - Press the New SET button and create a new ".SET" folder (see "Creating a new ".SET" folder" on page 261), or
  - Select an existing ".SET" folder.

7. Press Save to confirm. A dialog box appears, asking you to select one of the available User locations inside the folder:



In the dialog box above, the previously selected bank of Styles will be saved to the bank User 01 (corresponding to the USER1 button) inside the selected folder. Three User banks are available.

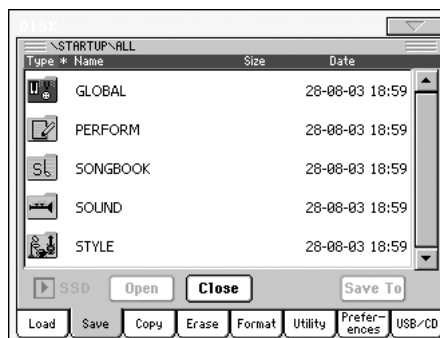
8. Press OK to confirm, or Cancel to abort.

**Warning:** After confirming, the same bank in the target folder is deleted.

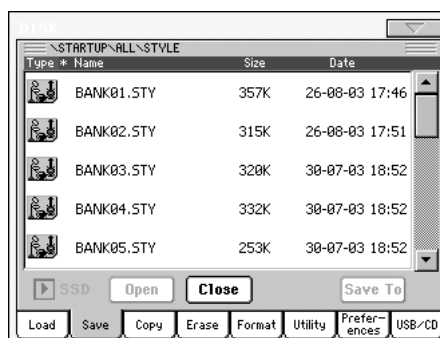
## Saving a single item

You can save a single User item with a single operation.

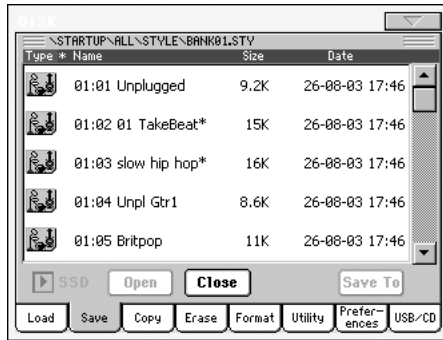
1. If saving on a floppy disk, insert the disk into the disk drive.
2. The full content ("All") of the internal memory is already shown. Select it, and press Open to open it. A list of User data types appear (each type is a separate folder).



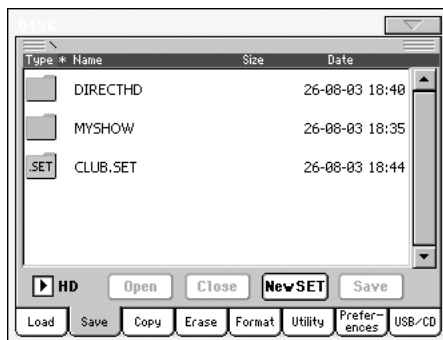
3. Select the folder containing the type of data you wish to save, and press Open to open it. The list of contained banks is shown.



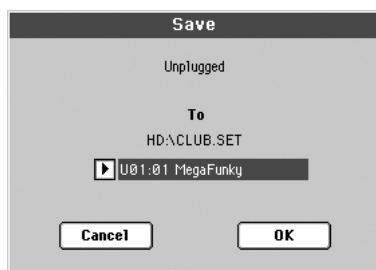
4. Select the desired bank, and press Open to gain access to the single files.



5. Once you have selected the file that you want to save, press Save To confirm the selection. The list of files of the target device is shown.



6. If needed, select a different target device, by using the Device pop-up menu. When the target device is selected, its content will appear in the display.
7. At this point, you can:
  - Press the New SET button and create a new “.SET” folder (see “Creating a new “.SET” folder” on page 261), or
  - Select an existing “.SET” folder.
8. Press Save to confirm. A dialog box appears, asking you to select one of the available User locations inside the selected folder



In the dialog box above, the previously selected Style will be saved to location 01 inside the bank U01 (corresponding to the USER1 button) inside the selected folder.

9. Press OK to confirm, or Cancel to abort.

**Warning:** After confirming, the same item in the target folder is deleted.

## Creating a new “.SET” folder

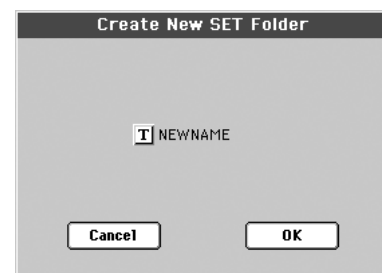
Pa1X proprietary data must be saved in special folder with the “.SET” extension. These special folders can be saved inside ordinary folders.

When saving, you can save onto existing “.SET” folders, or you can create a new folder of this type. Here is how to do it.

1. When the directory of the target device is shown in the display, the “New SET” button appears among the buttons below the file list.



2. Press the New SET button. A dialog box appears, asking you to enter a name for the new “.SET” folder.

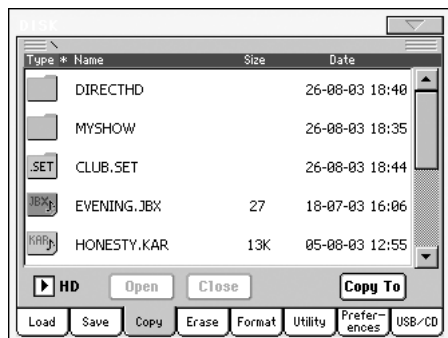


3. Press the **T** (Text Edit) button to open the Text Edit window. Enter the name, then press OK to confirm and close the Text Edit window.
4. Press OK to create the new folder and exit the dialog box.

## Copy

In this page you can copy single files, whole folders (generic or “.SET” folders), or a generic folder’s content. You can copy inside the same device, or from a device to a different one.

To preserve the data structure integrity, during Copy operations you can’t open “.SET” folders to copy only one of the files it contains. You can only open generic folders.



### Copying a whole folder or folder’s content

You can copy the selected folder (generic or “.SET”) into a different disk or folder. If nothing is selected while a folder is open in the display, the folder’s content will be copied, without copying the folder itself. If copying a whole folder, a new folder with the same name will be created at the target location.

**Note:** During the Copy procedure, you can’t open a “.SET” folder. You can, anyway, open any generic folder.

1. If copying from or to a floppy disk, insert the disk into the disk drive.
2. Select the source device, by using the Device pop-up menu.
3. If the folder you are looking for is inside another folder, select this latter and press the Open button to open it. Press the Close button to go back to the parent folder.
4. Select the data to copy:
  - To copy a folder, select the folder you want to copy.
  - To copy the current folder’s content, without copying the folder itself, do not select anything.

5. Press Copy To to confirm. The target device appears.

**Note:** If the selected device is not available, the “Device not found, or unknown format” message will appear. A different device will be automatically selected.

6. If needed, select the target device, by using the Device pop-up menu.
7. If you want to select a different folder, use the Open and Close buttons to move through the directories.
  - To copy into an existing generic folder (not a “.SET” folder), select that folder.
  - To copy into the current folder, do not select anything.
8. Once the target is selected, press Copy.

The “Overwrite existing files?” message will appear. Press Yes to confirm overwriting, or No to cancel.

When you choose to **overwrite**, the data you are copying will replace the same data on the target. For example, if a file with the same name and extension exists on the target folder, it will be overwritten. If a USER bank exists, it will be overwritten.

Data that does not exist on the source folder is left unchanged. For example, if a midifile exists on the target folder, but not in the source folder, it is left untouched after copying the other files.

When you choose **not to overwrite**, any file already existing on the target folder is left unchanged, therefore files in memory with the same name and extension are not copied. All other files are copied.

### Copying a single file

You can copy a single file from a generic folder to a different folder. The file must reside on the root (the main/highest folder in the disk hierarchy) or in a generic folder. You can’t copy single files from a “.SET” folder.

1. If copying from or to a floppy disk, insert the disk into the disk drive.
2. Select the source device, by using the Device pop-up menu.
3. Select the folder containing the file you wish to copy. If it is contained in another folder, press the Open button to open it. Press Close to go back to the previous hierarchic level.
4. Press Open to open the folder containing the file to copy.
5. Select the file to copy, and press Copy To to confirm its selection. The target device appears.

**Note:** If the selected device is not available, the “Device not found, or unknown format” message will appear. A different device will be automatically selected.

6. If needed, select the target device, by using the Device pop-up menu.
7. When the target device content appears in the display, select the target folder. Press Open to open a folder, or Close to close it.
8. Once the target is selected, press Copy.

The “Overwrite existing files?” message will appear. Press Yes to confirm overwriting, or No to cancel.

When you choose to **overwrite**, the data you are copying will replace existing data with the same name and extension on the target. For example, if the same midifile exists on the target folder, it will be overwritten.

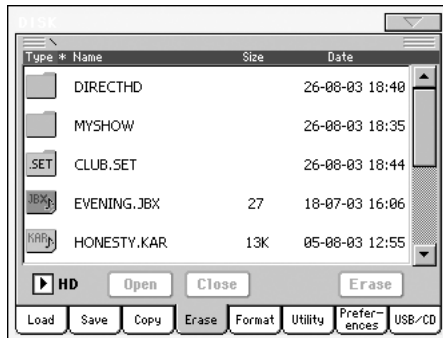
Data that does not exist on the source folder is left unchanged. For example, if the MYSONG01.MID midifile exists on the target folder, but not in the source folder, it is left untouched after copying the other data.

When you choose **not to overwrite**, data already existing on the target folder is left unchanged, therefore files in memory with the same name and extension are not copied. All other files are copied.



## Erase

The Erase function lets you erase files and folders from disks.



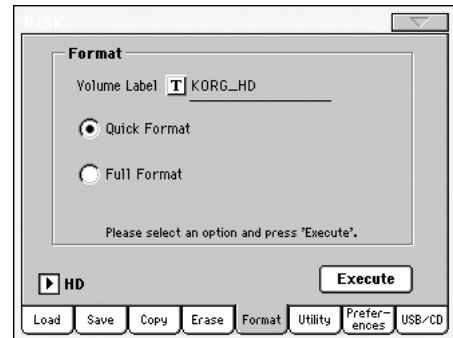
With the Erase function you will be able to select the internal memory (SSD device), and erase files from there. You cannot, however, delete folders from the internal memory, since they are used by the operating system.

### Erase procedure

1. If erasing from a floppy disk, insert the disk into the disk drive.
2. If needed, select a different device, by using the Device pop-up menu.
3. If the file or folder you are looking for is inside another folder, select this latter and press the Open button to open it. Press the Close button to go back to the parent folder.
4. Select the file or folder to erase.
5. Press Erase to delete the selected item.

## Format

The Format function lets you initialize a device.



**Warning:** When formatting a device, all data it contains is lost forever!

### Volume Label

Use this parameter to assign a name to the device to be formatted.

Press the **T** (Text Edit) button to open the Text Edit window. Enter the name, then press OK to confirm and close the Text Edit window.

### Quick Format

This is a very fast format command, that you can use on previously formatted disks. This command rewrites just the FAT (File Allocation Table) of the disk, without actual reformatting of all sectors.

If it cannot be executed, the “Quick Format failed. Full Format?” message appears. Press Yes to proceed with the Full Format, or No to cancel.

1. If formatting a floppy disk, insert a 3.5” HD or DD/DS floppy disk into the disk drive, and select this option to format it.  
If formatting a CD-RW, insert it into the CD drive.
2. Select the Quick Format option.
3. Press the Execute button in the display to confirm formatting.
4. The “If you confirm, all data in the HD/FD will be lost. Are you sure?” message appears in the display. Press Yes to confirm, or No to cancel.

**Note:** When formatting the hard disk, an additional warning appears, to avoid accidental data loss.

### Full Format

This is the complete format command, where each sector of the disk is formatted. It is slower than the Quick Format command, but sometimes more reliable.

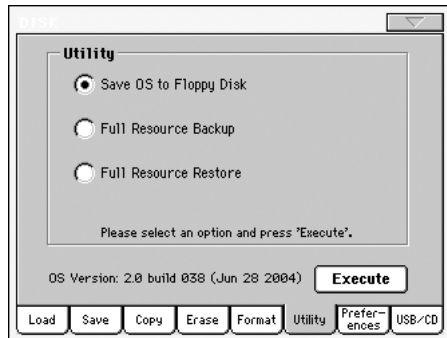
See above for the procedure.

### Execute button

Press this button, after setting all the options in this page, to execute the Format command.

## Utility

This page includes a set of backup utilities.



### Save OS to Floppy Disk

This command starts an Operating System backup, to save a copy of the instrument's Operating System on three floppy disks.

**Note:** Should you not do a back-up and your internal data becomes damaged, you can download the data from [www.korgpa.com](http://www.korgpa.com), or ask your local Korg dealer.

1. Prepare three formatted, **empty** disks (1.44MB, MS-DOS formatted). You can prepare this kind of disk using a PC or the Pa1X itself (see "Format" on page 263). Clearly write the disk progressive number on each disk label.

**Note:** You can't prepare a Pa1X OS disk on a Macintosh. After formatting, the Mac includes some invisible files in the root, that may interfere with the Pa1X OS loading procedure.

2. Select the Save OS to Floppy Disk command, then press the Execute button in the display.
3. When asked, insert a disk and press OK.

If a disk is not formatted or empty, Pa1X asks if you want to format it. Press Yes to format the disk. Pa1X first tries a Quick Format, then makes a Full Format if the former is not possible.

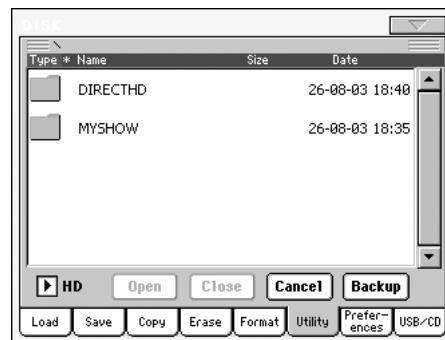
4. When finished, save the disks in a safe place.

### Backup Resources

This command starts a backup of all internal Factory and User data (Styles, Sounds, Performances...) excluding the Operating System. A ".BKP" file is created on disk(s).

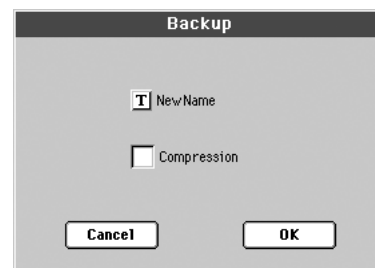
**Note:** Should you not do a back-up and your internal data becomes damaged, you can download the original data from [www.korgpa.com](http://www.korgpa.com). On the Pa1X Pro, a backup file has been provided on the hard disk, under the name "PA1X\_100".

1. If you are making a backup on floppy disks, prepare at least six disks. Disks don't need to be formatted, because Pa1X will format them for you during the Backup procedure.
2. Select the Backup Resources command, then press Execute. The target device appears.



3. If backing up to floppy disks, insert the first backup disk.
4. If needed, select a different device, by using the Device pop-up menu.
5. If you wish to save data inside another folder, select this latter and press the Open button to open it. Press the Close button to go back to the parent folder.
6. Select the folder where to save data, and press Backup to save it. If nothing is selected, data will be saved to the current directory.

After pressing Backup, a dialog box will appear, asking you to select a name for the backup file, and whether compression must be turned on or off during the backup.



Press the **T** (Text Edit) button to open the Text Edit window. Enter the name, and confirm by pressing OK.

We suggest you check Compression, to save space on the backup device. However, with compression turned on, the operation will last longer.

7. Press OK to start the backup.
8. If backing up to floppy disks, when the Pa1X asks for it insert a new disk into the floppy disk drive. Write the disk number on each disk's label.

If a disk is not formatted or empty, Pa1X asks if you want to format it. Press Yes to format the disk. Pa1X first tries a Quick Format, then makes a Full Format if the former is not possible.

9. When finished, save the disks in a safe place.

### Restore Resources

This command restores the backup of the internal Factory and User data, created with the "Backup Resources" command.

**Note:** Should you not do a back-up and your internal data becomes damaged, you can download the original data from

[www.korgpa.com](http://www.korgpa.com). On the Pa1X Pro, a backup file has been provided on the hard disk, under the name “PA1X\_100”.

**Warning:** Don’t play the keyboard while restoring data, and stay in the Disk mode. Wait until the “Wait” message disappears.

1. If you are restoring from a set of floppy disks or from a CD, prepare the disk(s) containing the backup file to be restored.
2. Select the Restore Resources command, then press Execute. The source device appears.
3. If restoring from floppy disks, insert the first backup disk. If restoring from CD, insert it in the CD drive.
4. If needed, select a different device, by using the Device pop-up menu.
5. Browse through the files to find the backup file.
6. When the backup file (“BKP” file) is in the display, select it and press the Restore command.
7. If restoring from floppy disks, wait until the first backup disk has been loaded. A message will appear, asking you to insert the following disk. Insert the second backup disk and press OK.
8. Repeat the same procedure with the following backup disks. When the last backup disk has been loaded, the backup data is restored into the internal memory.
9. Turn the instrument off, then on again to allow rebooting.

### OS Version Number

This line shows the installed Operating System version. A newer version may be available on [www.korgpa.com](http://www.korgpa.com).

## Preferences

This page includes various protect options, plus the PCM Auto-load option and settings for the hard disk sleep time.



### Global Protect

►GBLDsk

When loading a “.SET” file (see “Loading all the User data” on page 255), this parameter (if On) prevents Global parameters from being reprogrammed when loading all data. All Global parameters are therefore left unchanged.

When loading a single “.GLB” file, this parameter is ignored, and the Global is overwritten by the loaded data.

**Note:** This parameter is saved to memory, but not to disk.

### Hard Disk Protect

►GBLDsk

When on, this parameter protects the Hard Disk from writing.

**Note:** This parameter is saved to memory, but not to disk.

### Factory Style and Pad Protect

When On, this parameter protects the Factory Styles (from the “8/16 BEAT 1” to the “TRADITIONAL” bank) and Factory Pads (named “Hit” and “Sequence” in the Pad Select window) from being overwritten when loading data from disk. Furthermore, you can’t access these banks when saving data.

When Off, you can load or save User Styles or Pads even into the Factory Style banks (from “8/16 BEAT 1” to “TRADITIONAL”) and Factory Pad banks (named “Hit” and “Sequence” in the Pad Select window). This way, you can personalize your Factory Style and Pad banks.

Please note that the Save All procedure always saves only the USER Style banks.

**Note:** This parameter is automatically set to On when turning the instrument off.

**Note:** Should you accidentally delete some Factory Data, reload the Backup data, contact your Korg dealer or service center, or download the data from [www.korgpa.com](http://www.korgpa.com).

### PCM Autoload

►GBLDsk

While most Sounds use samples, or PCM data, contained in ROM – therefore always available –, some other Sounds may use external samples, that must be loaded to RAM to be used. These Sounds may have been loaded from disk, or created in Sampling mode.

Since loading may take time, you can choose whether to automatically load or not these samples when turning the instrument on.

If samples have not been loaded when turning the instrument on, you can press the Load PCM button in this page to load them.

**Warning:** When loading PCM data, all existing PCM data in memory are deleted. Save them before loading the folder, by selecting the “PCM” option during a Save All operation (see “Saving the full memory content” on page 259).

**On** When turning the instrument on, external samples used by some Sounds are automatically loaded to RAM.

**Off** When turning the instrument on, external samples used by some Sounds are not automatically loaded. Therefore, these Sound will be muted, until you use the Load PCM button to load them to RAM.

### Load PCM button

Press this button to load to RAM all sample (or PCM data) used by some Sounds loaded from disk, or created in Sampling mode. Not available if no User PCM Samples are used by any Sound.

### Hide Unknown Files

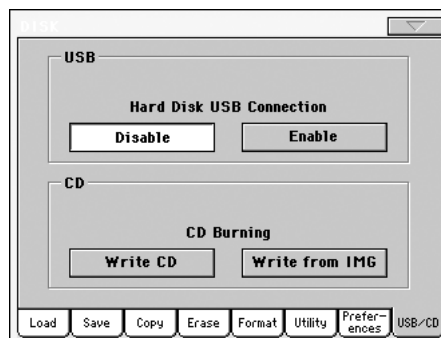
When this option is checked, non-proprietary files are hidden when using Disk operations, therefore making browsing directories easier.

### HD Sleep Time

Use this parameter to set the number of seconds after which, if inactive, the hard disk will stop. If Off, the hard disk will never go to sleep.

## USB/CD

Use this page to enable or disable the USB interface, and to write a CD or a CD image file.



- For information on the use of the USB interface, see “USB/CD: USB” below.
- For information on CD writing, see “USB/CD: CD” on page 267.

## USB/CD: USB

The USB interface allows you to access the internal hard disk from a personal computer (Windows or Macintosh), by just connecting the Pa1X to its USB interface. This way, you can quickly backup data from the internal hard disk of the Pa1X to your personal computer, or exchange data between the Pa1X and a personal computer.



**Note:** Windows 2000 and XP, as well as Mac OSX, can be directly connected to the Pa1X. To connect a Windows 98 computer you need a dedicated driver, available on [www.korgpa.com](http://www.korgpa.com).

**Hint:** While USB communication is enabled, you cannot access other functions on the Pa1X. We suggest you use the USB just after turning the instrument on, and turn the instrument off and on again after using and disconnecting it, to be sure USB activities will not interfere with other disk operations.

### Hard Disk USB Connection

Normally, USB is not activated on the Pa1X. Press the Enable button to turn it on, or the Disable button (with all caveats) to turn it off.

#### Enable

After connecting Pa1X to a personal computer by using a standard USB cable (Pa1X is the B – or slave – device, while the personal computer is the A – or master – device), press this button to enable communication.

The DISK LED will start blinking, while the personal computer reads the internal hard disk of the Pa1X. When finished (this may take some minutes, depending on the hard disk size), the icon of

the hard disk will appear among the other storage devices connected to the computer:



**Caveat:** Do not modify “.SET” folders, or you will no longer be able to use them on the Pa1X. Only use the USB connection for backup purpose, or to modify ordinary folders.

**Note:** After starting USB connection, accessing Pa1X data from the computer may take some time, depending on the size of the hard disk and contained data.

**Disable** Press this button to disconnect the USB connection. Be careful to press it only when you are totally sure data transfer has been completed.

**Note:** USB connection is also automatically disconnected when disconnecting the USB communication on the personal computer side.

To disconnect USB communication on a PC, you usually select the dedicated command by clicking on the USB device icon with the right mouse button. On the Mac, select the USB device icon, then select the Eject command or drag it to the eject icon in the Dock.

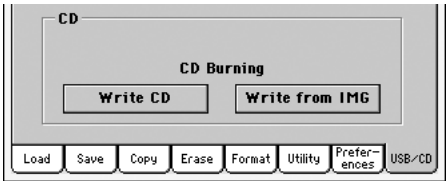
**Hint:** We suggest to disconnect USB connection from the personal computer, instead of pressing this button on the Pa1X.

**Caveat:** Do not disconnect USB communication before the personal computer has really finished transferring files. Sometimes, the on-screen indicator tells the procedure has been completed, BEFORE it is actually finished.

**Disconnecting USB communication (or disconnecting the USB cable) before data transfer has been completed may cause loss of data.**

## USB/CD: CD

You can use the (optional) Korg CDRW-1 CD Player/Writer to write data on CD and CD-RW disks.



**Note:** A hard disk must be installed for CD writing to work.

**Note:** Audio CDs cannot be written on the Pa1X/Pa1X Pro.

### Write CD

Press this button to create a list of files, to be directly written to CD or saved as an image file. The image file can later be read

with the “Write from IMG” command on the Pa1X, or by common CD-writing software applications on a personal computer.

After pressing this button, the “Select Files” page appears. See “Select Files page” below.

### Write from IMG

Press this button to write a CD from an ISO image file (.ISO), either generated by the “Write CD” command on the Pa1X, or by a CD-burning software application on a personal computer. Pa1X complies with the ISO9660 Mode 1/2048 format (or CDROM format). It does not comply with Mode 2 (or CDROM-XA format).

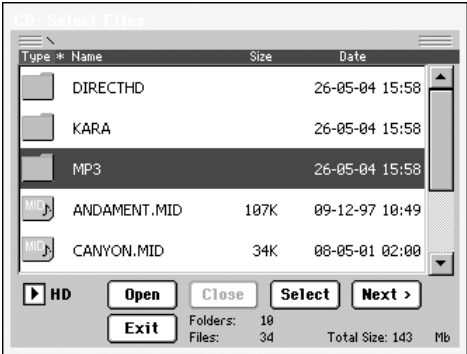
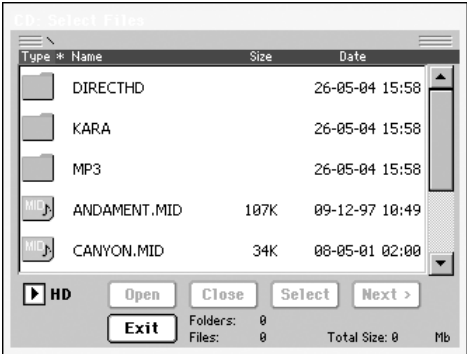
**Note:** While image files can be generated by most CD-burning applications, such as Ahead Software™ Nero®, Roxio™ Easy CD Creator®, or Roxio™ Toast®, we cannot warrant full compatibility with them, due to the fast-changing way their features are implemented.

If you create the “.ISO” image file on a computer, you must move it to the internal hard disk of the Pa1X via the USB connection, prior to selecting this command. The needed ISO image file must reside in the internal hard disk of the Pa1X.

After pressing this button, a standard File Selector appears, allowing you to select an image file. After the ISO image file has been selected and the Select button has been pressed, the “Write CD” dialog box will appear (see “Write CD dialog box” below).

### Select Files page

After pressing the “Write CD” button in the Disk > USB/CD page, this page appears.



While in this page, you can select files or folders, and press the Select button in the display to add them to the list of files to be written on a CD.

After having selected all the desired files and/or folders, press the Next> button to go to the “Edit List” page. When in the “Edit




List” page you will be able to return back to this page and continue adding files or folders.

### Device pop-up menu

Use this menu to select one of the available storage devices. Note you can also select removable devices, like a floppy disk or a CD, but you cannot remove them until the Pa1X has finished creating the image file (see “Save IMG” below).

### Open button

Opens the selected folder (whose name begins with the “” icon.

### Close button

Closes the current folder, returning to the parent (“upper”) level.

### Select

Selects the highlighted file or folder, and adds it to the list of files to be written to CD. *Greyed-out until a file or folder is selected.*

### Next>

Jumps to the “Edit List” page. *Greyed-out until a file or folder has been added to the list.*

### Exit

Exits from the CD Writing mode, and returns to the “USB/CD” page. The mastering list will remain in memory.

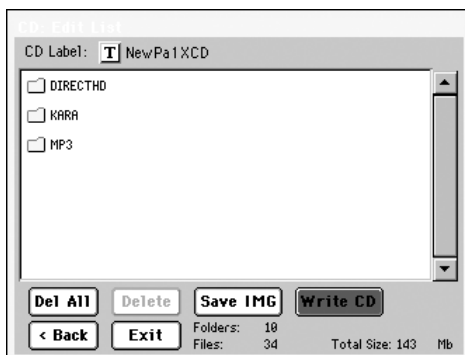
### Folders, Files, Total Size

These (non-editable) indicators show the total number of folders and files included in the list, and their overall size.

When the total size of added data exceeds about 650 MB, the Total Size parameter turns to red, showing that there are too many data to fit in a normal CD.

## Edit List page


While in this page, you can see and edit the list of files and/or folders to be written to a CD or image file.



While in this page, you can delete files or folders by pressing the Delete or Del All button, or press the <Back button to go back to the “Select Files” page and add other files.

When the list is done, you can either save it to disk as an image file by pressing the Save IMG button, or write a CD by pressing the Write CD button.

### CD Label

Press the  (Text Edit) button to open the Text Edit window, and assign a name to the CD. Enter the name, then press OK to confirm and close the Text Edit window.

### Del All

Press this button to delete the whole list.

### Delete

Select an item in the list, then press this button to delete it.

### Save IMG

Press this button to save an ISO image file to disk. The generated image complies with the ISO9660 Mode 1/2048 format (common to most CD-burning applications, such as Ahead Software™ Nero®, Roxio™ Easy CD Creator®, or Roxio™ Toast®).

After you press this button, listed data are collected, and the “Writing ISO image file” message appears in the display.



**Note:** Please do not remove any removable media (such as floppy disks or CDs) during this phase.

This procedure may last for several minutes, depending on the amount of data to be written. It is split in three consecutive steps:

- 1) Folders/files are scanned in the source devices.
- 2) The ISO image file is prepared.
- 3) The ISO image file is written to the hard disk.

A progress bar will inform you of the step's status.

### Write CD

Press this button to open the “Write CD” dialog box, and write a CD. See “Write CD dialog box” below.

### <Back

Press this button to return to the “Select Files” page and add other files to the list.

### Exit

Exits from the CD Writing mode, and returns to the “USB/CD” page. The mastering list will remain in memory.

### Folders, Files, Total Size

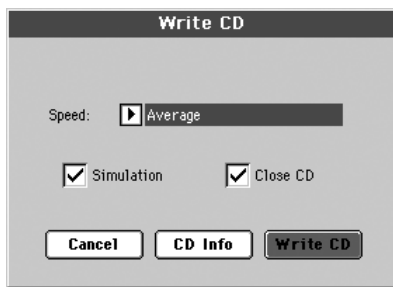
These (non-editable) indicators show the total number of folders and files included in the list, and their overall size.

When the total size of added data exceeds about 650 MB, the Total Size parameter turns to red, showing that there are too many data to fit in a normal CD.



## Write CD dialog box

This dialog box allows you to set the parameters for CD writing.



### Speed

Use this pop-up menu to select the writing speed. Depending on the blank CD quality, higher speeds may also mean less-reliable data writing.

### Simulation

When this parameter is checked, the CD will not be actually written. Instead, a simulation procedure will start, to let you see if the writing speed is too high, and should be lowered.

While in simulation mode, the Write CD dialog box's title will change to "Write CD - Simulation Mode".

At the end of the simulation procedure, the CD is automatically ejected.

### Close CD

With operating system version 2.0, Pa1X can only write a single session on a CD. However, the CD can be left open, to let you add other sessions from a PC or Mac on the same CD.

- Check this parameter if you want to close ("finalize") the CD. When the CD is closed, you cannot add further data to it. This is useful when the CD's content is complete and the disk must be delivered or archived.
- Leave it unchecked if you want to add further data later.

**Note:** If this parameter is not checked, Pa1X needs an additional 13MB (approx.) of space on the CD. However, if this space is not available, the disk is automatically closed (and this parameter is automatically checked).

**Note:** While Pa1X-generated CDs, left open for further addition of data, can be used by most CD-burning applications, we cannot warrant full compatibility with them, due to the fast-changing way their features are implemented.

### Cancel

Exits from the dialog box, and returns to the previous page.

### CD Info

Select this command to see various info on the selected CD.

### Write CD

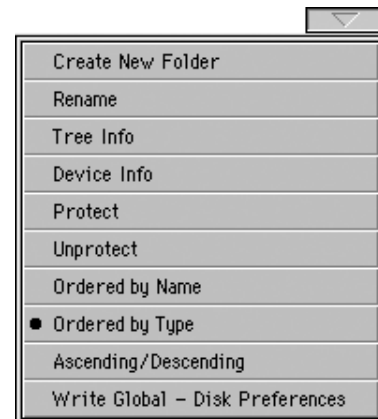
Press this button to start writing the CD, or the Simulation procedure. You will be asked to insert a blank CD into the CD Writer.

In case you insert a CD-RW (rewritable) containing data, you are asked if you want to delete all its content. **Warning:** This will delete all the data already contained on the CD-RW!

**Note:** If the Write operation fails on a rewritable CD (CD-RW), the CD is automatically erased. Please try again with a slower writing speed. If this doesn't work, go to the Disk > Format page, and perform a Full Format of the CD.

## Page menu

Press the page menu icon to open the menu. Press a command to select it. Press anywhere in the display to close the menu without selecting a command.



### Create New Folder

This command lets you create a new folder in the root of any disk, or inside any generic folder. You can't create or open ".SET" folders with this command, since these are reserved folders, to be created during a Save operation by using the New SET button.



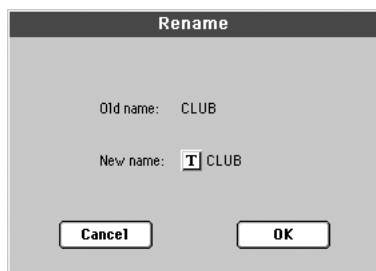
By pressing the **T** (Text Edit) button you can open the Text Edit window. Enter the name, then press OK to confirm and close the Text Edit window.

### Rename

Available only when an item is selected in a file list.

Use this function to change the name of a file or folder. To preserve consistency through the data structure, you cannot rename single files inside a ".SET" folder. Also, you cannot change the 3-

character extension of files and “.SET” folders, identifying the type of file or folder.



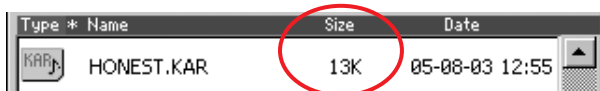
Press the **T** (Text Edit) button to open the Text Edit window. Enter the new name, then press OK to confirm and close the Text Edit window.

### Object info

Select this command to see the size of any selected file or folder on disk. Also, the number of files and directories it contains are shown.



**Note:** The **single file** size is always shown on the right of the file name in any file list:



### Device Info

Select this command to see various info on the selected device. To select a different device, use the Device pop-up menu on the lower left corner of most Disk pages.



### Protect

Select this command to protect the selected file or folder from writing/erasing. The lock icon will appear next to the file or folder name.

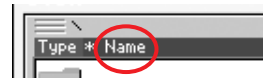


### Unprotect

Select this command to unprotect the selected file or folder – if protected.

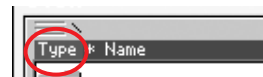
### Ordered by Name

Select this display option to see the list of files and folders in rough alphabetical order, with different file types mixed in the list. The File label, above the file list, is shown in red.



### Ordered by Type

Select this display option to see the list of files and folders ordered by type. Inside any type group, files are still in alphabetical order. The Type label, above the file list, is shown in red.



### Ascending/Descending

Use this command to switch between the ascending (Numbers, A...Z) and descending (Z...A, Numbers) order.

### Write Global-Disk Preference

Select this command to open the Write Global-Disk Preferences dialog box, and save settings executed in the Preferences page (see “Preferences” on page 265).



Parameters saved in the Disk Preferences area of the Global are marked with the **GBL<sup>Dsk</sup>** symbol through the user's manual.

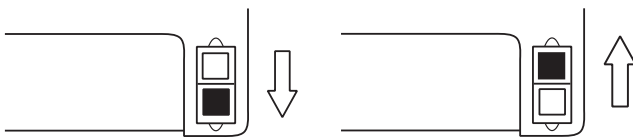
## Disk handling

The Pa1X can save most of the data contained in memory on the internal hard disk (if fitted), or on a 3.5" DS-DD disk (720KB capacity) or HD (1,44MB capacity), MS-DOS®-formatted. Here are some precautions when handling disks.

### Floppy disk write protection

You can protect a disk from the accidental overwriting of data, by opening the write protect hole. To protect the disk from overwriting, slide the protection flap so that the hole becomes visible.

To write-protect the disk: move the flap and open the hole      To write-enable the disk: move the flap to close the hole



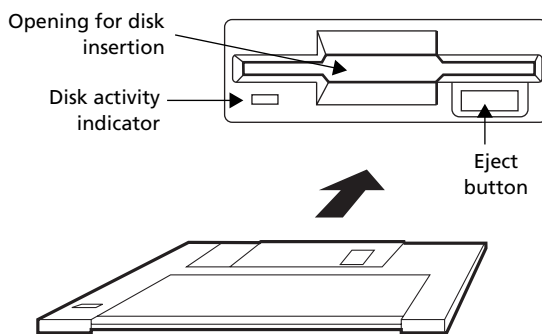
### Hard disk write protection

You can protect your hard disk from writing, by using the software protection found in Disk mode (see "Hard Disk Protect" on page 265).

### Inserting a floppy disk

Insert the disk delicately into the disk drive, with the label facing upwards and the metal part to the front. Press it in as far as it will go.

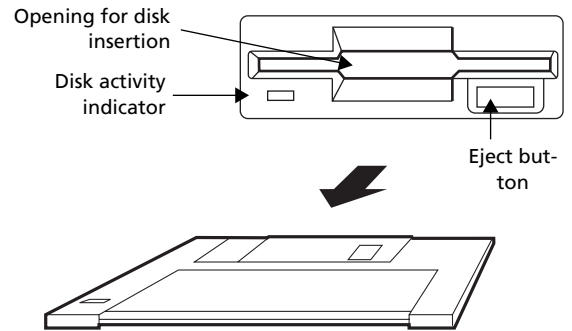
**Note:** The Pa1X incorporates a new type of disk drive and you cannot hear "click" when the disk is inserted into place.



### Removing a floppy disk

Before removing a disk, make sure that the disk activity indicator is off. If the LED is off, remove the disk by pressing the eject button.

**Warning:** Do not remove the disk if the disk activity indicator is lit up.



### Cleaning the floppy disk heads

The disk drive read/write heads get dirty with use and become less accurate. You can clean the heads with a special cleaning disk, you can purchase from any computer or musical instrument store. Use a 3.5" DS wet type head cleaning disk; and carefully follow the instructions included with it.

### Precautions

- Do not remove a floppy disk or move the instrument while the disk drive or hard disk is operating.
- Make a backup copy of the disks, in order not to lose data forever in case of damage. You can backup your floppy disks to the internal hard disk or on a personal computer. The internal hard disk can be backed up on a personal computer's hard disk, by using the USB connection.
- Do not open the metallic shutter on a floppy disk, and do not touch the surface of the magnetic media inside it. If the magnetic media becomes scratched or soiled, data can be lost.
- Do not leave a disk in the disk drive while carrying the instrument: the read/write heads may scratch the disk and damage saved data.
- Keep the floppy disks or the instrument away from sources of magnetic fields, for example televisions, refrigerators, computers, monitors, speakers and transformers. Magnetic fields can alter the contents of the disks.
- Do not keep floppy disks in very hot or wet places, do not expose them to direct sunlight and do not store them without use in dusty or dirty places.
- Do not place heavy objects on top of the disks.
- After use, replace the disks in a case.

### Possible problems

- In exceptional cases, a floppy disk can get stuck in the disk drive. In order to avoid this happening, you should only use high quality disks. If the disk does get stuck, do not try to force it out using sharp objects. Contact your local dealer or your nearest Korg Service Center.
- Magnetic fields, dirt, humidity and usage can damage data on disk. You can try to recover the data with disk repair utilities for personal computers. It is, however, advisable to make a backup copy of data.

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## Bonus software

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With Pa1X Pro, three “.SET” folders have been saved in the internal hard disk, with the whole content of Korg’s “Real Drums” and “Turkish/Arabic World” collections, formerly available as separate cards for the Pa80/Pa60 series.

These are high quality sound sets, based on additional RAM PCM Samples. Go to [www.korgpa.com](http://www.korgpa.com) for more information.

To load these sounds, select either the REALDRUM.SET or TA\_WORLD.SET folder from the hard disk. By loading the BONUS\_SW.SET folder, you can load both collections at the same time.

**Warning:** When loading the above folders, all User data in memory is deleted. Save important data to disk, before loading the bonus software.

**Note:** After turning the instrument off, all samples are deleted from the RAM memory. You can either have them automatically reloaded when turning the instrument on again (see “PCM Auto-load” on page 265), or manually load them (see “Load PCM button” on page 266).

# MIDI

## What is MIDI?

Here is a brief overview of MIDI, as related to the Pa1X. If interested, you may find more information on the general use of MIDI in the various specialized magazines and dedicated books.

### In general

MIDI stands for Musical Instruments Digital Interface. This interface lets you connect two musical instruments, or a computer and various musical instruments.

Physically, MIDI is composed of three different connectors. The MIDI IN receives data from another device; the MIDI OUT sends data to another device; the MIDI THRU sends to another device exactly what was received on the MIDI IN (this is useful to daisy-chain more instruments).

On the Pa1X there are two separate sets of MIDI ports, labeled IN A, OUT A, IN B, OUT B. Each OUT port may work as a THRU port, depending on the status of the “MIDI A Out/Thru Mode” and “MIDI B Out/Thru Mode” parameters in the Global mode (see page 231).

### Channels and messages

Basically, a MIDI cable transmits 16 channels of data. Think to each MIDI channel as a TV channel: the receiver must be set on the same channel of the transmitter. The same happens with MIDI messages: when you send a Note On message on channel 1, it will be received on channel 1 only. This allows for multitimbricity: you can have more than one sound playing on the same MIDI instrument.

There are various messages, but here are the most commonly used:

**Note On** – This message instructs an instrument to play a note on a specific channel. Notes have both a name (C4 standing for the center C) and a number (60 being the equivalent for C4). A Note Off message is often used to say the note has been released. In some case, a Note On with value “0” is used instead.

Together with the Note On message, a Velocity value is always sent. This value tells the instrument how loud the note must play.

**After Touch** – This message is generated by pressing on the keyboard, after the note has been struck. It usually activates vibrato, or other sound parameters.

**Pitch Bend (PB)** – You can generate this message acting on the joystick (X direction). The pitch is translated up or down.

**Program Change (PC)** – When you select a Sound, a Program Change message is generated on the channel. Use this message, together with Control Change 00 and 32, to remotely select Pa1X data from a sequencer or a master keyboard.

**Control Change (CC)** – This is a wide array of messages, controlling most of the instrument parameters. Some examples:

- CC00, or Bank Select MSB, and CC32, or Bank Select LSB. This message pair is used to select a Sound Bank. Together with the Program Change message, they are used to select a Sound.
- CC01, or Modulation. This is the equivalent of pressing up the joystick. A vibrato effect is usually triggered on.
- CC07, or Master Volume. Use this controller to set the channel's volume.
- CC10, or Pan. This one sets the channel's position on the stereo front.
- CC11, or Expression. Use this controller to set the relative volume of tracks, with the maximum value matching the current setting of the CC07 control.
- CC64, or Damper Pedal. Use this controller to simulate the Damper pedal.

### Tempo

Tempo is a global MIDI message, that is not tied to a particular channel. Each Song includes Tempo data.

### Lyrics

Lyrics are non-standard MIDI events, made to display text together with the music. Pa1X can read many of the available Lyrics format on the market.

## Standard MIDI Files

Midifiles, or Standard MIDI Files (a.k.a. SMF), are a practical way of exchanging songs between different instruments and computers. Pa1X uses the SMF format as its default song format, so reading a song from a computer, or saving a song that a computer software can read, is not a problem at all.

The Pa1X sequencers are compatible with the SMF in format 0 (all data in one track; it is the most common format) and 1 (multitrack). It can read the SMF in Song Play mode and modify/save them in Sequencer mode. It can save a song in SMF 0 format in the Sequencer mode.

When in Song Play mode, the Pa1X can also display SMF lyrics in Solton, M-Live (Midisoft), Tune1000, Edirol, GMX, HitBit, and XF formats, and the chord abbreviations of SMF in Solton, M-live (Midisoft), GMX, and XF format.

***Note:** The above trademarks are the property of their respective holders. No endorsement is intended by inclusion in this list.*

Standard MIDI Files usually have the “.MID” or “.KAR” filename extension.

## The General MIDI standard

Some years ago, the musical instruments world felt a need for some further standardization. Then, the General MIDI Standard (GM) was born. This extension of the basic MIDI sets new rules for compatibility between instruments:

- A minimum of 16 MIDI channels was required.
- A basic set of 128 Sounds, correctly ordered, was mandatory.
- The Drum Kit had a standard order.
- Channel 10 had to be devoted to the Drum Kit.

A most recent extension is the GM2, that further expands the Sounds database. The Pa1X is soundwise-compatible with the GM2 standard.

## The Global channel

Any channels with the Global option assigned (see “MIDI: MIDI In Channels” on page 232) can simulate the Pa1X integrated keyboard. When the Pa1X is connected to a master keyboard, transmission should take place over the Global channel of the Pa1X.

The MIDI messages received over a Global channel and not over a standard channel are affected by the buttons of the KEYBOARD MODE section, as well from the split point. Therefore, if the SPLIT button LED is lit up, the notes that arrive to the Pa1X over this channel will be divided by the split point into the Upper (above the split point) and Lower (below the split point) parts.

The notes that arrive to a Global channel are used for the chord recognition of the automatic accompaniment. If the KEYBOARD MODE is SPLIT, only the notes below the split point will be used. These notes will be combined with the ones of the special Chord 1 and Chord 2 channels.

## The Chord 1 and Chord 2 channels

You can set two special Chord channels (see page 232) to send to the Pa1X notes for the chord recognition. The notes will be combined with the notes that go through the channel set as Global (Global notes are recognized only under the split point, if the SPLIT LED is lit up).

The Chord channels are not affected by the split point and the KEYBOARD MODE section of the control panel. All the notes – both above and below the split point – will be sent to the chord recognition.

The buttons of the CHORD SCANNING section have a particular effect on the Chord channels:

- if you have selected LOWER, the chord recognition mode will be set by the “Chord Recognition Mode” parameter in the Style Play mode (see page 93);

- if you have selected UPPER or FULL, the chord recognition mode will always be Fingered 2 (you need to play at least three notes in order for the chord to be detected).

These two channels are especially useful for accordion players to assign a different Chord channel to the chords and the bass played with the left hand. In this way, chords and bass will participate to the creation of chords for the chord recognition of the automatic accompaniment.

## The Control channel

You can set a MIDI IN channel as the Control channel (see page 232), to select Styles and Performance from an external device. See the Appendix for a list of messages corresponding to Pa1X internal data.

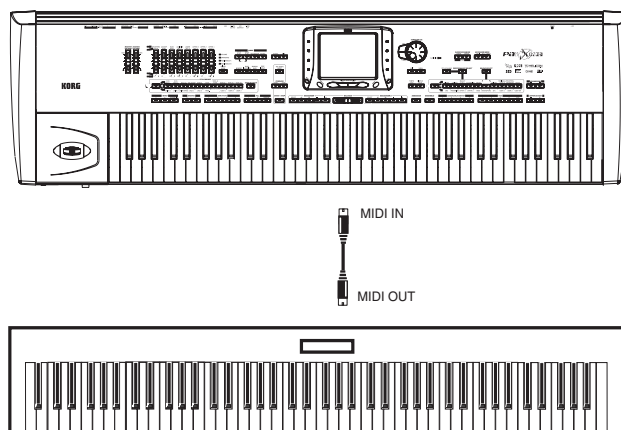
## MIDI Setup

You can play Pa1X with an external controller, and use it simply as a powerful sound generator. To help you configure the MIDI channels, we have provided a set of MIDI Setups (see “Midi Setup” on page 94 for the Style Play mode, “Midi Setup” on page 149 for the Song Play mode, and “MIDI Setup” on page 230 for the Global mode).

We recommend you to consider each MIDI Setup as a starting point you can freely tweak. Once you have selected the most appropriate MIDI Setup for the connection to be made, you can modify the parameters as necessary and save them in a MIDI Setup (see “Write Global - Midi Setup dialog box” on page 251).

## Connecting Pa1X to a Master keyboard

You can control the Pa1X with a master keyboard or any other MIDI keyboard. You only need to connect the MIDI OUT connector of the master keyboard to the MIDI IN connector of the Pa1X. The master keyboard will become the integrated keyboard of the Pa1X if it transmits over the same channel programmed as Global in the Pa1X.



If the master keyboard transmits over the Global channel of the Pa1X, the split point and the status of the KEYBOARD MODE



section in the control panel will affect the notes received from the master keyboard.

## Connections and settings

To connect the master keyboard to the Pa1X follow this procedure:

1. Connect the MIDI OUT connector of the master keyboard to one of the MIDI IN connectors of the Pa1X (IN A suggested).
2. Program the master keyboard to transmit over the Global channel of the Pa1X (see “MIDI: MIDI In Channels” on page 232).

For information on the master keyboard programming, see the master keyboard own user’s manual.

3. Select the MIDI Setup parameter. You can do this by going to the “MIDI: MIDI Setup / General Controls” page of the Global mode, or in the dedicated page of the Style Play, Song Play or Sequencer mode (see “Midi Setup” on page 94, “Midi Setup” on page 149, and “Midi Setup” on page 181).

**Note:** A different MIDI Setup may be selected for the Style Play, Song Play and Sequencer modes. The “1-Default” MIDI Setup is automatically selected when entering the Sound Edit mode. MIDI settings are therefore modified when switching to a different operating mode. The current MIDI Setup is also shown in the Global mode.

4. Select the “Master Keyboard” MIDI Setup.

**Note:** Settings may change when new Global data is loaded from disk. To protect settings from loading, use the Global Protect function (see “Global Protect” on page 265).

5. To save the assigned MIDI Setup for the selected operative mode into the Global, select the “Write Global-Style Setup”, the “Write Global-Song Play Setup”, the “Write Global-Seq. Setup”, or the “Write Global-Global Setup” command from the page menu.
6. If needed, press one of the buttons in the MODE section to go to the desired operative mode.

## Connecting the Pa1X to a MIDI accordion

There are various types of MIDI accordions, each one requiring different MIDI settings. Pa1X is provided with a series of “Accordion” MIDI Setups, each one suitable for a different MIDI accordion (see page 230).

### Connection and settings

To connect the accordion to the Pa1X follow this procedure:

1. Connect the MIDI OUT connector of the accordion to one of the MIDI IN connectors of the Pa1X (IN A suggested).
2. Select the MIDI Setup parameter. You can do this by going to the “MIDI: MIDI Setup / General Controls” page of the Global mode, or in the dedicated page of the Style Play, Song Play or Sequencer mode (see “Midi Setup” on page 94 and “Midi Setup” on page 149).

**Note:** A different MIDI Setup may be selected for the Style Play, Song Play and Sequencer modes. The “1-Default” MIDI Setup is automatically selected when entering the Sound Edit mode. MIDI settings are therefore modified when switching to a different operating mode. The current MIDI Setup is also shown in the Global mode.

3. Select one of the available “Accordion” MIDI Setups.

**Note:** Settings may change when new Global data is loaded from disk. To protect settings from loading, use the Global Protect function (see “Global Protect” on page 265).

4. To save the assigned MIDI Setup for the selected operative mode into the Global, select the “Write Global-Style Setup”, the “Write Global-Song Play Setup”, the “Write Global-Seq. Setup”, or the “Write Global-Global Setup” command from the page menu.
5. If needed, press one of the buttons in the MODE section to go to the desired operative mode.

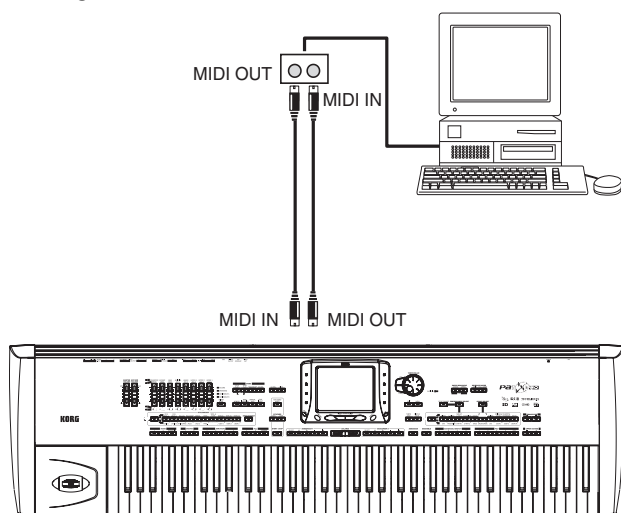
## Connecting the Pa1X to an external sequencer

You can program a new song on an external sequencer, using Pa1X as a multi-timbral expander.

### Connections and settings

In order to connect the Pa1X to a computer, you need to have a computer with the MIDI interface.

1. Connect the Pa1X and the computer as in the following diagram.



2. Activate the “MIDI Thru” function on the external sequencer.
3. Press GLOBAL, and go to the “MIDI: MIDI Setup / General Controls” page. uncheck the “Local Control On” parameter (see page 231). This is called the “Local Off status”.
4. Press SEQUENCER to go to the Sequencer mode. Go to the “Preferences: Global Setup” page (see page 181). Select the “Extern.Seq.” MIDI Setup.

**Note:** Settings may change when new Global data is loaded from disk. To protect settings from loading, use the Global Protect function (see “Global Protect” on page 265).

5. Select the “Write Global-Seq. Setup” command from the page menu to save the assigned MIDI Setup to the Global.
6. Play the keyboard. Notes played on the keyboard go from the MIDI OUT of the Pa1X to the MIDI IN of the computer/MIDI interface.

Notes generated by the computer (i.e. a song played by its sequencer) are sent through the MIDI OUT of the MIDI interface to the MIDI IN connector of the Pa1X.

### The Local Off

When the Pa1X is connected to an external sequencer, we recommend you to set the Pa1X in Local Off mode (see “Local Control On” on page 231) to avoid that the notes are simultaneously played by the keyboard and by the MIDI events sent by the external sequencer.

When the Pa1X is in Local Off, the Pa1X keyboard transmits data to the external sequencer, but not to the internal sound generation. The sequencer will receive the notes played on the Pa1X keyboard and send them to the selected track of the song. The track will transmit the data to the internal sound generation of the Pa1X.

**Note:** In order to send data to the Pa1X sound generation, the “MIDI Thru” function must be activated in the external sequencer (normally active; the name may be different according to the type of sequencer). For more information refer to the instructions manual of the sequencer.

### The Sounds

The song that is played back by the computer sequencer can select Pa1X Sounds through the MIDI messages Bank Select MSB, Bank Select LSB (bank selection, two messages), and Program Change (Sound selection). For a list of Sounds and MIDI values, see “Sounds” on page 285.

A suggestion for those who program songs on computer: Even though it is not essential, you usually set the bass on channel 2, melody on channel 4, drum kit on channel 10, control of the Pa1X voice harmonizer on channel 5.

# Playing another instrument with the Pa1X

You can use the Pa1X as the master controller for your MIDI setup.

1. Connect one of Pa1X MIDI OUT connectors to the other instrument's MIDI IN.
2. Set the other instrument to the same channels you want to play from Pa1X. For example, if you wish to play the Upper 1 and Upper 2 tracks with sounds of the other instrument, enable the other instrument to receive on the same channels Pa1X is transmitting from tracks Upper 1 and Upper 2 (by default, channels 1 and 2).
3. Set the master volume of the other instrument with its own volume controls.
4. Mute/unmute any track right from the Pa1X. Adjust each track's volume by using Pa1X sliders.
5. Play the keyboard of the Pa1X.

## The Keyboard

Pa1X's keyboard can drive up to four tracks via the MIDI OUT (Upper 1-3 and Lower). MIDI output channels are set in Global mode (see "MIDI: MIDI Out Channels" on page 232).

As a default situation ("1-Default" MIDI Setup), each of Pa1X Keyboard tracks transmit on the following channels:

Track	Out Channel
Upper1	1
Upper2	2
Upper3	3
Lower	4

When a track is muted, it cannot transmit any MIDI data to an external expander or sequencer connected Pa1X's MIDI OUT.

To hear only the expander's sounds, you can lower the MASTER VOLUME control on the Pa1X, or set the Keyboard tracks to the External status (see "Track Controls: Mode" on page 176).

## The Sequencer

Any Sequencer's track can drive a channel on an external instrument. To set each track's MIDI output channel, see "MIDI: MIDI Out Channels" on page 232.

To hear only the expander's sounds, you can lower the MASTER VOLUME control on the Pa1X, or set the Song tracks to the External status (see "Track Controls: Mode" on page 176).

Select the "Sequencer 1" or "Sequencer 2" MIDI Setup (depending on the Sequencer you are using on the Pa1X) to set the channels as follows.

Track	Out Channel
Song 1...16	1...16

## The Arranger

One of the most interesting aspect of MIDI, is that you can use your Pa1X to play an external instrument with its onboard arranger. Yes, it's hard to beat the audio quality of Pa1X, but you could wish to use that old faithful synth you are still accustomed to...

To assign some of Pa1X Style tracks to an external instrument, set them to the External status (see "Track Controls: Mode" on page 176).

Select the "Default" MIDI Setup to set the channels as follows (this is the default status of Pa1X).

Track	Out Channel
Bass	9
Drums	10
Percussion	11
Acc1...5	12...16





# Appendix

## Factory data

### Styles

**Note:** You can remotely select Styles on the Pa1X, by sending it Bank Select MSB (CC#0), Bank Select LSB (CC#32) and Program Change messages on the Control channel (see “MIDI: MIDI In Channels” on page 232).

#	CC#0	CC#32	PC	Bank: 8/16 Beat 1	CC#0	CC#32	PC	Bank: 8/16 Beat 2	CC#0	CC#32	PC	Ballad
1	0	0	0	Moonlight Ballad	0	1	0	Kool Beat	0	2	0	Funky Ballad
2			1	Easy Beat			1	Unplugged 16 Bt			1	Easy Ballad 3
3			2	Slow HipHop			2	Real 16 Beat			2	Analog Ballad
4			3	Unplugged Gtr1			3	Guitar Beat			3	Groove Ballad
5			4	British Pop 1			4	Easy Pop			4	Unplugged Gtr 3
6			5	Pop Chart 1			5	Standard 16 Bt 1			5	Pop & Sea
7			6	Soft Ballad			6	Unplugged Rock			6	Meditando
8			7	Easy Ballad 1			7	Pop Hits			7	Unplugged Gtr 4
9			8	British Pop 2			8	Half Time Lite			8	Unplugged Gtr 5
10			9	Classic 8 Bt 1			9	Analog Beat 1			9	Serenade
11			10	Classic 8 Bt 2			10	Analog Beat 2			10	Unplugged Bld 1
12			11	Soft Beat 1			11	Guitar Ballad 1			11	Acoustic Ballad
13			12	Unplugged 8 Bt 1			12	Guitar Ballad 2			12	Unplugged Bld 2
14			13	Light Rock 1			13	8 Beat Analog 1			13	Pop Jazz
15			14	Light Rock 2			14	Analogyst			14	Diva
16			15	Easy Ballad 2			15	8 Beat Analog 2			15	Rock Ballad 1
17			16	Soft Beat 2			16	Trendy Beat			16	Folk Ballad
18			17	Pop Beat 2			17	Slow Ballad			17	Pop Ballad 2
19			18	Standard 8 Beat			18	6 Strings Beat			18	Half Time Ballad
20			19	Unplugged 8 Bt 2			19	Half Time Guitar			19	Country Ballad 1
21			20	Love 8 Beat			20	Standard 16 Bt 2			20	4/4 Ballad
22			21	Half Beat			21	Pop 16 Beat 1			21	Love Ballad
23			22	UK 8 Beat			22	Pop 16 Beat 2			22	Natural Beat
24			23	8 Beat Groove			23	Cinema Ballad			23	Celtic Ballad
25			24	UK R & B			24	Windy Beat			24	16 Beat Analog 1
26			25	Pop Ballad 1			25	Home Beat			25	Color Beat
27			26	HipHop Beat			26				26	Pop Ballad 3
28			27	Miami Beat			27				27	8 Beat Analog 3
29			28	Classic Beat 3			28				28	16 Beat Analog 2
30			29	Real 8 Beat			29				29	
31			30	Easy Groove			30				30	
32			31				31				31	



#	CC#0	CC#32	PC	Bank: Ballroom	CC#0	CC#32	PC	Bank: Dance	CC#0	CC#32	PC	Bank: Rock
1	0	3	0	Easy Listening	0	4	0	Dance Fever	0	5	0	Big Band Jump
2			1	Pop Shuffle			1	Groove It Up			1	English Rock
3			2	Slow Band			2	Club Latin			2	Open Rock 1
4			3	Foxtrot 1			3	Barry Dance			3	Open Rock 2
5			4	Organ Foxtrot			4	Sister & Girl			4	Pop Rock
6			5	Movie Ballad			5	Philly Disco			5	Fire Rock
7			6	Pop Chart 2			6	Oriental Dance 1			6	Hard Rock
8			7	Candy & Sweet			7	Twist			7	Heavy Rock
9			8	Organ Waltz			8	House Garage			8	South Strait
10			9	Slow Waltz 1			9	House			9	South Shuffle
11			10	Slow Waltz 2			10	Dream			10	Rock Shuffle
12			11	Slow Waltz 3			11	Techno			11	Rock Ballad 2
13			12	Slow Waltz 4			12	Underground			12	Half Time
14			13	Slow Waltz 5			13	Progressive			13	Rock 6/8
15			14	Slow 6/8			14	Jungle			14	Abbey Road
16			15	Slow Pop			15	Rap			15	Soft Rock
17			16	Slow Rock 1			16	HipHop			16	Surf Rock
18			17	Slow Rock 2			17	Disco 70			17	Pop Shuffle 1
19			18	Unpl. Slow Rock			18	80's Dance			18	Blues Shuffle
20			19	Big Band Fox 1			19	Love Disco			19	60's Rock
21			20	Big Band Fox 2			20	Disco Party			20	Rock & Roll
22			21	Big Band Fox 3			21	Disco Funky			21	
23			22	Operetta			22	Disco Gully			22	
24			23	Quick Step 1			23	Dance 80			23	
25			24	Quick Step 2			24				24	
26			25	New Jive			25				25	
27			26	Charleston			26				26	
28			27	Foxtrot 2			27				27	
29			28	Slow Fox			28				28	
30			29	Foxtrot 3			29				29	
31			30				30				30	
32			31				31				31	
#	CC#0	CC#32	PC	Bank: Soul & Funk	CC#0	CC#32	PC	Bank: World 1	CC#0	CC#32	PC	Bank: World 2
1	0	6	0	Kool Funk	0	7	0	Oberkr. Waltz 1	0	8	0	Hawaiian
2			1	Swing HipHop			1	Oberkr. Waltz 2			1	Country Beat
3			2	Funky Sisters			2	Oberkr. Waltz 3			2	Folk Beat
4			3	Steely Feel			3	Oberkr. Polka 1			3	Kountry Pop
5			4	Al Funk			4	Oberkr. Polka 2			4	Bluegrass
6			5	Elektrik Funk			5	German Polka 1			5	Country 8 Beat
7			6	Classic Funk			6	German Polka 2			6	Country 16 Beat
8			7	Talkin' Jazz			7	Oberkr. Polka			7	Country Beat
9			8	Pop Shuffle			8	Bavarian Pop 1			8	Modern Country
10			9	Easy Funk			9	Bavarian Pop 2			9	Country Boogie
11			10	Dance Funk			10	Polka Pop 1			10	Country Shuffle 1
12			11	Club Funk			11	Polka Pop 2			11	Country Shuffle 2
13			12	Blues Ballad			12	Party Polka			12	Country Ballad 2
14			13	Modern Gospel 1			13	Classic Flipper			13	Country 3/4
15			14	Modern Gospel 2			14	Flipper 6/8			14	Orleans
16			15	Gospel Shuffle			15	Flipper 4/4			15	Celtic Waltz
17			16	Rubber Funk			16	Dance Schlager			16	Mexican Waltz
18			17	Groove Funk			17	Fox Schlager			17	Norteno 1
19			18	Acid Jazz 1			18	Medium Schlager			18	Banda 2/4
20			19	Double Beat			19	Disco Schlager			19	Norteno 2
21			20	Groove			20	Schlager 1			20	Quebradita
22			21	Jazz Funk			21	Schlager 2			21	Tejano
23			22	Al Swing			22	Schlager 3			22	Cajun
24			23	HipHop Funk			23	Schlager 4			23	Zydeco
25			24	HipHop Soul			24	Pop Schlager			24	Celtic Dream
26			25	Motown Shuffle			25	Petry Rock 1			25	
27			26	Pop Ballad 4			26	Petry Rock 2			26	
28			27	Rhythm & Blues			27	Trucker			27	
29			28	Soul 1			28	Schlager 5			28	
30			29	Memphis			29	Volkst.Schlager			29	
31			30	Motown 1			30	Sambamedley			30	
32			31	Gospel			31	Partymix			31	

#	CC#0	CC#32	PC	Bank: World 3	CC#0	CC#32	PC	Bank: Latin 1	CC#0	CC#32	PC	Bank: Latin 2
1	0	9	0	Flamenco	0	10	0	Guitar Bossa	0	11	0	Salsa 1
2			1	Oriental Dance 2			1	Unplugged Bossa			1	Salsa 2
3			2	Oriental Ballad			2	Cool Bossa			2	Mambo 1
4			3	Hora			3	Orchestral Bossa			3	Mambo Party
5			4	Sevillana 1			4	Meditation Bossa			4	English Tango
6			5	Sevillana 2			5	Basic Bossa			5	Orchestral Tango
7			6	Jota			6	L.A. Bossa			6	Tango.it
8			7	Copla			7	Groove Bossa			7	Italian Tango
9			8	Classic 3/4			8	New Bossa			8	Habanera 1
10			9	Bolero			9	Lite Bossa			9	Habanera 2
11			10	Minuetto			10	Lite Beguine			10	Mambo 2
12			11	Baroque			11	Latin Pop			11	Mambo 3
13			12	New Age			12	Latin Rock 1			12	Mambo 2000
14			13	Tarantella			13	Latin Rock 2			13	Salsa 3
15			14	Raspa			14	Latin Funk			14	Salsa 4
16			15	Vahde			15	Unplugged Latin			15	Mariachi
17			16	Oriental			16	Cha Cha 1			16	Reggae 1
18			17	Roman			17	Pop Cha Cha			17	Happy Reggae
19			18	Ciftetelli			18	Disco Cha Cha 1			18	Reggae 2
20			19				19	Disco Cha Cha 2			19	Reggae 3
21			20				20	Cha Cha 2			20	Pasodoble 1
22			21				21	Funky Cha Cha			21	Pasodoble Banda
23			22				22	Beguine 1			22	Pasodoble 2
24			23				23	Pop Beguine			23	Argentina Tango
25			24				24	Tradit. Bolero			24	
26			25				25	Slow Bolero			25	
27			26				26	Sabor			26	
28			27				27				27	
29			28				28				28	
30			29				29				29	
31			30				30				30	
32			31				31				31	
#	CC#0	CC#32	PC	Bank: Latin Dance	CC#0	CC#32	PC	Bank: Jazz 1	CC#0	CC#32	PC	Bank: Jazz 2
1	0	12	0	Brazilian Samba	0	13	0	Bigger Band	0	14	0	Fast Big Band 1
2			1	Andean			1	Big Band 1			1	Dance Band
3			2	Gipsy Dance			2	Soft Jazz			2	Show Time
4			3	Latin Dance 1			3	BeBop 1			3	Movie Swing
5			4	Slow Latin Rock			4	Jazz Brush			4	Xmas Swing
6			5	Samba			5	Medium Swing			5	Django
7			6	Sambalegre			6	Slow Swing			6	Hollywood 1
8			7	Disco Samba			7	Swing Ballad 1			7	Hollywood 2
9			8	Samba Funk			8	50's Swing			8	Broadway
10			9	Rhumba 1			9	Swing Ballad 2			9	Dixieland
11			10	Merengue 1			10	Unplug. Swing 1			10	Big Band 4
12			11	Merengue 2			11	Swing Ballad 3			11	Swing Shuffle
13			12	Cumbia			12	BeBop 2			12	Fast Big Band 2
14			13	Latin Dance 2			13	Big Band Medium			13	Latin Big Band
15			14	Batucada			14	Big Band 40's			14	Big Band Fox 4
16			15	Rhumba 2			15	Big Band 2			15	Acid Jazz 2
17			16	Gipsy			16	Jazz Waltz 1			16	New Jazz
18			17	Pop Rhumba			17	Jazz Waltz 2			17	Latin Jazz
19			18	Calypso			18	Jazz Waltz 3			18	Fusion
20			19	Lambada			19	5/4 Swing			19	Ragtime Piano
21			20	Meneito			20	Vocal Swing			20	Shuffle Piano
22			21	Macarena			21	Big Band 3			21	Boogie Piano
23			22				22	Mood Swing			22	Bossa Piano
24			23				23	Unplug. Swing 2			23	
25			24				24	Big Band Ballad			24	
26			25				25				25	
27			26				26				26	
28			27				27				27	
29			28				28				28	
30			29				29				29	
31			30				30				30	
32			31				31				31	

#	CC#0	CC#32	PC	Bank: Traditional	CC#0	CC#32	PC	Bank: User 1-3	CC#0	CC#32	PC	Bank: Direct FD 1-3
1	0	15	0	Italian Waltz 1	0	17-19	0		0	20-22	0	
2			1	German Waltz 1			1				1	
3			2	Walzer Musette			2				2	
4			3	Vienna Waltz			3				3	
5			4	Viennese			4				4	
6			5	Tradit. Polka			5				5	
7			6	French March			6				6	
8			7	March			7				7	
9			8	Italian Waltz 2			8				8	
10			9	Italian Waltz 3			9				9	
11			10	Italian Waltz 4			10				10	
12			11	Valzer			11				11	
13			12	Italian Waltz 5			12				12	
14			13	German Waltz 2			13				13	
15			14	German Waltz 3			14				14	
16			15	Laendler			15				15	
17			16	Mazurka 1			16				16	
18			17	Mazurka 2			17				17	
19			18	Mazurka 3			18				18	
20			19	Italian Polka			19				19	
21			20	Polka 1			20				20	
22			21	Polka 2			21				21	
23			22	German Polka			22				22	
24			23	Mazurka 4			23				23	
25			24	Polka 3			24				24	
26			25				25				25	
27			26				26				26	
28			27				27				27	
29			28				28				28	
30			29				29				29	
31			30				30				30	
32			31				31				31	
#	CC#0	CC#32	PC	Bank: Direct HD 1-9								
1	0	23-31	0				0				0	
2			1				1				1	
3			2				2				2	
4			3				3				3	
5			4				4				4	
6			5				5				5	
7			6				6				6	
8			7				7				7	
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27			26				26				26	
28			27				27				27	
29			28				28				28	
30			29				29				29	
31			30				30				30	
32			31				31				31	

## Style Elements

**Note:** You can remotely select the various Style Elements on the Pa1X, by sending it Program Change messages on the Control channel (see “MIDI: MIDI In Channels” on page 232).

PC	Style Element	PC	Style Element	PC	Style Element	PC	Style Element	PC	Style Element
80	Variation 1	81	Variation 2	82	Variation 3	83	Variation 4	84	Intro 1
85	Intro 2	86	Fill 1	87	Fill 2	88	Ending 1	89	Ending 2
90	Fill 3/Break	91	Fade In/Out	92	Memory	93	Bass Inversion	94	Manual Bass
95	Tempo Lock	96	Single Touch	97	Style Change	98	Intro 3/Count In		

## Single Touch Settings (STS)

**Note:** You can remotely select Single Touch Settings (STS) on the Pa1X, by sending it Bank Select MSB (CC#0), Bank Select LSB (CC#32) and Program Change messages on the Control channel (see “MIDI: MIDI In Channels” on page 232). If a Style is already selected, just send the Program Change message.

CC#0	CC#32	PC	STS	PC	STS	PC	STS	PC	STS
The same as the Style to which the STS belongs		64	STS 1	65	STS 2	66	STS 3	67	STS 4

## Sounds

The following table lists all Pa1X Factory Sounds in order of Bank Select-Program Change number.

**Legend:** The table also includes MIDI data used to remotely select the Sounds. **CC00:** Control Change 0, or Bank Select MSB. **CC32:** Control Change 32, or Bank Select LSB. **PC:** Program Change. **Bank:** Sound/Performance Select button.

CC00	CC32	PC	Name	Bank	GM2
121	0	0	Acoustic Piano	Piano	✓
121	1	0	Ac. Piano Wide	Piano	✓
121	2	0	Ac. Piano Dark	Piano	✓
121	3	0	Grand Piano	Piano	
121	4	0	Classic Piano	Piano	
121	5	0	L/R Piano	Piano	
121	6	0	Piano & Vibes	Piano	
121	7	0	Piano & Strings	Piano	
121	0	1	Bright Piano	Piano	✓
121	1	1	Bright PianoWide	Piano	✓
121	2	1	Piano Pad 1	Piano	
121	3	1	Piano Pad 2	Piano	
121	4	1	Piano StringPad	Piano	
121	0	2	E. Gran Piano	Piano	✓
121	1	2	E. Grand Wide	Piano	✓
121	2	2	M1 Piano	Piano	
121	3	2	90's Piano	Piano	
121	4	2	2000's Piano	Piano	
121	5	2	Chorus Piano	Piano	
121	6	2	Piano Layers	Piano	
121	0	3	Honky-Tonk	Piano	✓
121	1	3	Honky Wide	Piano	✓
121	0	4	Electric Piano 1	E. Piano	✓
121	1	4	Detuned EP 1	E. Piano	✓
121	2	4	EP1 Veloc.sw	E. Piano	✓
121	3	4	60's E. Piano	E. Piano	✓
121	4	4	Vintage EP	E. Piano	
121	5	4	Pro Dyno EP	E. Piano	
121	6	4	Pro Stage EP	E. Piano	
121	7	4	Studio EP	E. Piano	
121	8	4	R&B E. Piano	E. Piano	
121	9	4	Thin E. Piano	E. Piano	
121	10	4	Dyno Tine EP	E. Piano	
121	11	4	Club E. Piano	E. Piano	
121	12	4	Classic Wurly	E. Piano	
121	13	4	Soft Wurly	E. Piano	
121	14	4	Hard Wurly	E. Piano	
121	15	4	Vel. Wurly	E. Piano	
121	16	4	Tremolo Wurly	E. Piano	
121	0	5	Electric Piano 2	E. Piano	✓
121	1	5	Detuned EP 2	E. Piano	✓
121	2	5	EP2 Veloc.sw	E. Piano	✓
121	3	5	EP Legend	E. Piano	✓
121	4	5	EP Phase	E. Piano	✓
121	5	5	Syn Piano X	E. Piano	
121	6	5	Stereo Dig. EP	E. Piano	
121	7	5	Classic Dig. EP	E. Piano	
121	8	5	Hybrid EP	E. Piano	
121	9	5	Classic Tines	E. Piano	
121	10	5	Phantom Tine	E. Piano	
121	11	5	DW8000 EP	E. Piano	

CC00	CC32	PC	Name	Bank	GM2
121	12	5	Sweeping EP	E. Piano	
121	13	5	White Pad EP	E. Piano	
121	0	6	Harpsichord	Piano	✓
121	1	6	Harpsi Octave	Piano	✓
121	2	6	Harpsi Wide	Piano	✓
121	3	6	Harpsi Key Off	Piano	✓
121	4	6	Harpsi Korg	Piano	
121	0	7	Clav	Piano	✓
121	1	7	Pulse Clav	Piano	✓
121	2	7	Clav Wah	Piano	
121	3	7	Clav Snap	Piano	
121	4	7	Sticky Clav	Piano	
121	0	8	Celesta	Mallet & Bell	✓
121	0	9	Glocken	Mallet & Bell	✓
121	1	9	Sistro	Mallet & Bell	
121	0	10	Music Box	Mallet & Bell	✓
121	1	10	Orgel	Mallet & Bell	
121	0	11	Vibraphone 1	Mallet & Bell	✓
121	1	11	Vibrap. Wide	Mallet & Bell	✓
121	2	11	Vibraphone 2	Mallet & Bell	
121	0	12	Marimba	Mallet & Bell	✓
121	1	12	Marimba Wide	Mallet & Bell	✓
121	2	12	Marimba Key Off	Mallet & Bell	
121	3	12	Monkey Skuls	Mallet & Bell	
121	4	12	Log Drum	Drum & Perc.	
121	5	12	Mallet Clock	Mallet & Bell	
121	6	12	Balaphon	Mallet & Bell	
121	0	13	Xylophone	Mallet & Bell	✓
121	0	14	Tubular Bell	Mallet & Bell	✓
121	1	14	Church Bell 1	Mallet & Bell	✓
121	2	14	Carillon	Mallet & Bell	✓
121	3	14	Church Bell 2	Mallet & Bell	
121	0	15	Dulcimer	Mallet & Bell	✓
121	1	15	Santur	Mallet & Bell	
121	0	16	Drawbars Organ1	Organ	✓
121	1	16	Det.DrawbarsOrg.	Organ	✓
121	2	16	lt. 60's Organ	Organ	✓
121	3	16	Drawbars Organ2	Organ	✓
121	4	16	Dark Jazz Organ	Organ	
121	5	16	Iper Dark Organ	Organ	
121	6	16	Full Drawbars	Organ	
121	7	16	DWGS Organ	Organ	
121	8	16	Jazz Organ	Organ	
121	9	16	Gospel Organ	Organ	
121	10	16	Good Old B	Organ	
121	11	16	VOX Legend	Organ	
121	12	16	Arabian Organ	Organ	
121	13	16	Gospel Organ Vel	Organ	
121	0	17	Perc. Organ 1	Organ	✓
121	1	17	Det.Perc.Organ	Organ	✓
121	2	17	Perc. Organ 2	Organ	✓
121	3	17	Old Wheels	Organ	
121	4	17	Percuss. BX3	Organ	
121	5	17	M1 Organ	Organ	
121	6	17	Techno Org.Bass	Organ	
121	7	17	BX3 Short Decay	Organ	
121	8	17	Rotary Organ	Organ	
121	9	17	Perc.StereoOrgan	Organ	
121	0	18	Rock Organ	Organ	✓
121	1	18	BX3 Vel. Sw	Organ	
121	2	18	Killer B	Organ	
121	3	18	Dirty B	Organ	

CC00	CC32	PC	Name	Bank	GM2
121	4	18	Classic Click	Organ	
121	5	18	Distortion Organ	Organ	
121	6	18	Super BX Perc.	Organ	
121	7	18	Dirty Jazz Organ	Organ	
121	8	18	Perc.Short Decay	Organ	
121	9	18	Perc. Wheels	Organ	
121	10	18	Jimmy Organ	Organ	
121	0	19	Church Organ	Organ	√
121	1	19	Church Oct. Mix	Organ	√
121	2	19	Detuned Church	Organ	√
121	3	19	Pipe Mixture	Organ	
121	4	19	Church Pipes	Organ	
121	5	19	Full Pipes	Organ	
121	6	19	Pipe Tutti 1	Organ	
121	7	19	Positive Organ	Organ	
121	8	19	Pipe Tutti 2	Organ	
121	9	19	Pipe Tutti 3	Organ	
121	0	20	Reed Organ	Organ	√
121	1	20	Puff Organ	Organ	√
121	2	20	Small Pipe	Organ	
121	3	20	Flauto Pipes	Organ	
121	4	20	Pipe Flute	Organ	
121	0	21	Accordion 1	Accordion	√
121	1	21	Accordion 2	Accordion	√
121	2	21	Akordeon	Accordion	
121	3	21	Musette 1	Accordion	
121	4	21	Musette 2	Accordion	
121	5	21	Musette Clar.	Accordion	
121	6	21	Fisa 16, 8'	Accordion	
121	7	21	Fisa 16, 4'	Accordion	
121	8	21	Fisa Master	Accordion	
121	9	21	Cassotto	Accordion	
121	10	21	Arabic Accordion	Accordion	
121	11	21	Sweet Musette	Accordion	
121	12	21	Cassotto 16'	Accordion	
121	13	21	Cassotto Or.Tune	Accordion	
121	14	21	Cassotto NorTune	Accordion	
121	15	21	Detune Accordion	Accordion	
121	16	21	2 Voices Musette	Accordion	
121	17	21	3 Voices Musette	Accordion	
121	18	21	France Musette	Accordion	
121	19	21	Acc.Clarinet OT	Accordion	
121	20	21	Acc. Clarinet NT	Accordion	
121	21	21	Acc. Piccolo OT	Accordion	
121	22	21	Acc. Piccolo NT	Accordion	
121	23	21	Master Accordion	Accordion	
121	0	22	Harmonica 1	Accordion	√
121	1	22	Sweet Harmonica	Accordion	
121	2	22	Harmonica 2	Accordion	
121	3	22	Harmonica AT	Accordion	
121	0	23	Tango Accordion	Accordion	√
121	1	23	Fisa Tango!	Accordion	
121	2	23	Accordion 16 8'	Accordion	
121	3	23	Accordion16 8 4'	Accordion	
121	4	23	Acc.16 8' & Bass	Accordion	
121	5	23	Accordion Bass	Accordion	
121	6	23	Acc.Voice Change	Accordion	
121	7	23	Accordion 16 4'	Accordion	
121	8	23	Acc.16 8 4' Plus	Accordion	
121	9	23	Acc. & Acc. Bass	Accordion	
121	0	24	Nylon Guitar 1	Guitar	√
121	1	24	Ukulele	Guitar	√

CC00	CC32	PC	Name	Bank	GM2
121	2	24	Nylon Key Off	Guitar	√
121	3	24	Nylon Guitar 3	Guitar	√
121	4	24	Nylon Bossa	Guitar	
121	5	24	Ac.Guitar KeyOff	Guitar	
121	6	24	Spanish Guitar	Guitar	
121	7	24	Guitar Strings	Guitar	
121	8	24	Nylon Gtr Pro1	Guitar	
121	9	24	Brazilian Guitar	Guitar	
121	10	24	Nylon Vel. Harm.	Guitar	
121	11	24	Nylon Gtr Pro2	Guitar	
121	12	24	Nylon Gtr RX1	Guitar	
121	13	24	Nylon Gtr RX2	Guitar	
121	14	24	Nylon Slide Pro	Guitar	
121	15	24	Nylon Guitar 2	Guitar	
121	0	25	Steel Guitar 1	Guitar	√
121	1	25	12 Strings Gtr	Guitar	√
121	2	25	Mandolin	Guitar	√
121	3	25	Steel & Body	Guitar	√
121	4	25	Steel Guitar 2	Guitar	
121	5	25	Steel 12 Strings	Guitar	
121	6	25	Hackbrett	Guitar	
121	7	25	Finger Key Off	Guitar	
121	8	25	Finger Tips	Guitar	
121	9	25	Steel Folk Gtr	Guitar	
121	10	25	Mandolin Key Off	Guitar	
121	11	25	Mandolin Trem.	Guitar	
121	12	25	Reso. Guitar	Guitar	
121	13	25	Steel Slide Pro1	Guitar	
121	14	25	Steel Slide Pro2	Guitar	
121	15	25	Steel Guitar RX1	Guitar	
121	16	25	Steel Guitar RX2	Guitar	
121	17	25	12 Strings Pro	Guitar	
121	18	25	12 Strings RX	Guitar	
121	19	25	Steel Guitar Pro	Guitar	
121	20	25	Steel Guitar 3	Guitar	
121	0	26	Jazz Guitar	Guitar	√
121	1	26	Pedal Steel Gtr1	Guitar	√
121	2	26	Club Jazz Gtr 1	Guitar	
121	3	26	Club Jazz Gtr 2	Guitar	
121	4	26	Pedal Steel Gtr2	Guitar	
121	5	26	Soft Jazz Guitar	Guitar	
121	6	26	JazzGtr SlidePro	Guitar	
121	0	27	Clean Guitar 2	Guitar	√
121	1	27	Det. Clean Gtr	Guitar	√
121	2	27	Mid Tone Gtr	Guitar	√
121	3	27	Chorus Guitar	Guitar	
121	4	27	Vintage S.2	Guitar	
121	5	27	Proces.E.Guitar	Guitar	
121	6	27	Single Coil	Guitar	
121	7	27	New Stra.Guitar	Guitar	
121	8	27	Guitarish	Guitar	
121	9	27	L&R E.Guitar 1	Guitar	
121	10	27	L&R E.Guitar 2	Guitar	
121	11	27	Country Nu	Guitar	
121	12	27	Funky Wah Sw.	Guitar	
121	13	27	Clean Gtr Pro1	Guitar	
121	14	27	Single Coil Pro	Guitar	
121	15	27	Clean Gtr Pro2	Guitar	
121	16	27	Stra. Vel. Pro	Guitar	
121	17	27	Stra. Gtr Slide	Guitar	
121	18	27	Chorus Gtr Pro	Guitar	
121	19	27	Vintage S.1	Guitar	



CC00	CC32	PC	Name	Bank	GM2
121	20	27	Clean Guitar 1	Guitar	
121	21	27	Solid Guitar	Guitar	
121	22	27	Stein Guitar 1	Guitar	
121	23	27	Stein Guitar 2	Guitar	
121	24	27	Stein Guitar 3	Guitar	
121	0	28	Muted Guitar	Guitar	√
121	1	28	Funky Cut Gtr	Guitar	√
121	2	28	Mute Vel. Gtr	Guitar	√
121	3	28	Jazz Man	Guitar	√
121	4	28	R&R Guitar	Guitar	
121	5	28	Stra. Chime	Guitar	
121	6	28	Clean Mute Gtr	Guitar	
121	7	28	Rhythm E.Guitar	Guitar	
121	8	28	Clean Funk	Guitar	
121	9	28	Disto Mute	Guitar	
121	10	28	Clean Funk RX1	Guitar	
121	11	28	Clean Funk RX2	Guitar	
121	12	28	Funk Stein RX1	Guitar	
121	13	28	Funk Stein RX2	Guitar	
121	14	28	Clean Guitar RX1	Guitar	
121	15	28	Clean Guitar RX2	Guitar	
121	16	28	Clean Guitar RX3	Guitar	
121	17	28	Clean Guitar RX4	Guitar	
121	18	28	Clean Guitar RX5	Guitar	
121	0	29	Overdrive Guitar	Guitar	√
121	1	29	Guitar Pinch	Guitar	√
121	0	30	Distortion Gtr	Guitar	√
121	1	30	Feedback Guitar	Guitar	√
121	2	30	Dist.Rhythmic Gtr	Guitar	√
121	3	30	Joystick Gtr Y-	Guitar	
121	4	30	Power Chords	Guitar	
121	5	30	Mute Monster	Guitar	
121	6	30	Wet Dist. Guitar	Guitar	
121	7	30	Solo Dist. Guitar	Guitar	
121	8	30	Stereo Dist. Gtr	Guitar	
121	9	30	Dist. Guitar RX1	Guitar	
121	10	30	Dist. Guitar RX2	Guitar	
121	0	31	Guitar Harmonic	Guitar	√
121	1	31	Guitar Feedback	Guitar	√
121	2	31	E.Gtr Harmonics	Guitar	
121	0	32	Acoustic Bass	Bass	√
121	1	32	Ac. Bass Buzz	Bass	
121	2	32	Bass & Ride 2	Bass	
121	3	32	Acous. Bass Pro1	Bass	
121	4	32	Acous. Bass Pro2	Bass	
121	5	32	DarkWoody A.Bass	Bass	
121	6	32	Bass & Ride 1	Bass	
121	7	32	Acous. Bass RX	Bass	
121	0	33	Finger Bass 3	Bass	√
121	1	33	Finger Slap 2	Bass	√
121	2	33	Finger E.Bass1	Bass	
121	3	33	Finger E.Bass2	Bass	
121	4	33	Finger E.Bass3	Bass	
121	5	33	Stick Bass	Bass	
121	6	33	Finger Bass 1	Bass	
121	7	33	Finger Bass 2	Bass	
121	8	33	Chorus Fing.Bass	Bass	
121	9	33	Bright Finger B.	Bass	
121	10	33	Finger Bass Vel.	Bass	
121	11	33	More mid! Bass	Bass	
121	12	33	Finger Slap 1	Bass	
121	13	33	Finger Bass RX	Bass	

CC00	CC32	PC	Name	Bank	GM2
121	14	33	FingerB.& Guitar	Bass	
121	0	34	Picked E.Bass 3	Bass	√
121	1	34	Picked E.Bass 1	Bass	
121	2	34	Picked E.Bass 2	Bass	
121	3	34	Stein Bass	Bass	
121	4	34	Guitar Bass	Bass	
121	5	34	Bass Mute	Bass	
121	6	34	Bass&Gtr Double	Bass	
121	7	34	Pick Bass Vel.1	Bass	
121	8	34	Pick Bass Vel.2	Bass	
121	9	34	Ticktacing Bass	Bass	
121	10	34	Picked Bass RX	Bass	
121	0	35	Fretless Bass 1	Bass	√
121	1	35	Fretless Bass2	Bass	
121	2	35	Fretless Sw.	Bass	
121	3	35	Sweet Fretless	Bass	
121	4	35	Dark R&B Bass1	Bass	
121	5	35	Dark R&B Bass2	Bass	
121	6	35	Woofet Pusher B.	Bass	
121	0	36	Slap Bass 2	Bass	√
121	1	36	Super Sw.Bass1	Bass	
121	2	36	Super Sw.Bass2	Bass	
121	3	36	FunkSlap Bass RX	Bass	
121	4	36	SlapFing Bass RX	Bass	
121	5	36	SlapPick Bass RX	Bass	
121	0	37	Slap Bass 3	Bass	√
121	1	37	Thumb Bass	Bass	
121	2	37	Dyna Bass	Bass	
121	3	37	Slap Bass Vel.	Bass	
121	4	37	Chorus Slap Bass	Bass	
121	5	37	The Other Slap	Bass	
121	6	37	Slap Bass 1	Bass	
121	0	38	Synth Bass 1	Bass	√
121	1	38	Syn Bass Warm	Bass	√
121	2	38	Syn Bass Reso	Bass	√
121	3	38	Clav Bass	Bass	√
121	4	38	Hammer	Bass	√
121	5	38	30303 Bass	Bass	
121	6	38	30303 Square	Bass	
121	7	38	Bass Square	Bass	
121	8	38	Syn Bass Res	Bass	
121	9	38	Digi Bass 1	Bass	
121	10	38	Digi Bass 2	Bass	
121	11	38	Digi Bass 3	Bass	
121	12	38	Blind as a Bat	Bass	
121	13	38	Jungle Bass	Bass	
121	14	38	Auto Pilot 1	Synth 2	
121	15	38	Hybrid Bass	Bass	
121	16	38	Dr. Octave	Bass	
121	17	38	Drive Bass	Bass	
121	0	39	Synth Bass 2	Bass	√
121	1	39	Attack Bass	Bass	√
121	2	39	Rubber Bass	Bass	√
121	3	39	Attack Pulse	Bass	√
121	4	39	Euro Bass	Bass	
121	5	39	Jungle Rez	Bass	
121	6	39	Nasty Bass	Bass	
121	7	39	Phat Bass	Bass	
121	8	39	Poinker Bass	Bass	
121	9	39	Synth Bass 80ish	Bass	
121	10	39	Autofilter Bass	Bass	
121	11	39	Monofilter Bass	Bass	

CC00	CC32	PC	Name	Bank	GM2
121	12	39	Reso Bass	Bass	
121	13	39	Auto Pilot 2	Bass	
121	14	39	Bass4 Da Phunk	Bass	
121	0	40	Violin	Strings & Vocal	✓
121	1	40	Slow Att.Violin	Strings & Vocal	✓
121	2	40	Solo Violin	Strings & Vocal	
121	3	40	Slow Violin	Strings & Vocal	
121	0	41	Viola	Strings & Vocal	✓
121	0	42	Cello	Strings & Vocal	✓
121	0	43	Contrabass	Strings & Vocal	✓
121	0	44	Tremolo Strings	Strings & Vocal	✓
121	0	45	Pizzicato Str.	Strings & Vocal	✓
121	1	45	Pizz. Ensemble	Strings & Vocal	
121	2	45	Pizz. Section	Strings & Vocal	
121	3	45	Double Strings	Strings & Vocal	
121	0	46	Orchestral Harp	Strings & Vocal	✓
121	1	46	Yang Chin	Strings & Vocal	✓
121	0	47	Timpani	Drum & Perc.	✓
121	0	48	Strings Ens. 1	Strings & Vocal	✓
121	1	48	Strings & Brass	Strings & Vocal	✓
121	2	48	60's Strings	Strings & Vocal	✓
121	3	48	Stereo Strings	Strings & Vocal	
121	4	48	Legato Strings	Strings & Vocal	
121	5	48	i3 Strings	Strings & Vocal	
121	6	48	N Strings	Strings & Vocal	
121	7	48	Arco Strings	Strings & Vocal	
121	8	48	Octave Strings	Strings & Vocal	
121	9	48	Strings Quartet	Strings & Vocal	
121	10	48	Symphonic Bows	Strings & Vocal	
121	11	48	Ensemble & Solo	Strings & Vocal	
121	12	48	Camera Strings	Strings & Vocal	
121	13	48	Arabic Strings	Strings & Vocal	
121	14	48	Orchestra Tutti1	Strings & Vocal	
121	15	48	Strings & Horns	Strings & Vocal	
121	16	48	Orch. & Oboe 1	Strings & Vocal	
121	17	48	Orch. & Oboe 2	Strings & Vocal	
121	18	48	Strings & Glock.	Strings & Vocal	
121	19	48	Orchestra Tutti2	Strings & Vocal	
121	20	48	Orchestra&Flute	Strings & Vocal	
121	0	49	Strings Ens. 2	Strings & Vocal	✓
121	1	49	Sweeper Strings	Strings & Vocal	
121	2	49	Full Strings	Strings & Vocal	
121	0	50	Synth Strings 1	Strings & Vocal	✓
121	1	50	Synth Strings 3	Strings & Vocal	✓
121	2	50	Analog Strings 2	Strings & Vocal	
121	3	50	Analog Velve	Strings & Vocal	
121	4	50	Odissey	Strings & Vocal	
121	5	50	Analog Strings 1	Strings & Vocal	
121	0	51	Synth Strings 2	Strings & Vocal	✓
121	0	52	Choir Aahs 1	Strings & Vocal	✓
121	1	52	Choir Aahs 2	Strings & Vocal	✓
121	2	52	Oooh Voices	Strings & Vocal	
121	3	52	Oooh Slow Voice	Strings & Vocal	
121	4	52	Take Voices 1	Strings & Vocal	
121	5	52	Take Voices 2	Strings & Vocal	
121	6	52	Oooh Choir	Strings & Vocal	
121	7	52	Aaah Choir	Strings & Vocal	
121	8	52	Mmmh Choir	Strings & Vocal	
121	9	52	Oh-Ah Voices	Strings & Vocal	
121	10	52	Slow Choir	Strings & Vocal	
121	11	52	Grand Choir	Strings & Vocal	
121	12	52	Choir Light	Strings & Vocal	

CC00	CC32	PC	Name	Bank	GM2
121	13	52	Strings Choir	Strings & Vocal	
121	0	53	Voice Ooohs	Strings & Vocal	✓
121	1	53	Humming	Strings & Vocal	✓
121	2	53	Doolally	Strings & Vocal	
121	3	53	Airways	Strings & Vocal	
121	0	54	Synth Voice	Strings & Vocal	✓
121	1	54	Analog Voice	Strings & Vocal	✓
121	2	54	Vocalesque	Strings & Vocal	
121	3	54	Vocalscape	Strings & Vocal	
121	4	54	Classic Vox	Strings & Vocal	
121	5	54	Dream Voice	Strings & Vocal	
121	0	55	Orchestra Hit	Brass	✓
121	1	55	Bass Hit Plus	Brass	✓
121	2	55	6th Hit	Brass	✓
121	3	55	Euro Hit	Brass	✓
121	4	55	Brass Impact	Brass	
121	5	55	Hit in India	SFX	
121	6	55	Wild Arp	Synth 2	
121	7	55	Flip Blip	Synth 2	
121	8	55	Netherland Hit	Brass	
121	0	56	Trumpet 1	Trumpet & Trbn.	✓
121	1	56	Dark Trumpet	Trumpet & Trbn.	✓
121	2	56	Trumpet 2	Trumpet & Trbn.	
121	3	56	Mono Trumpet	Trumpet & Trbn.	
121	4	56	Trumpet Expr	Trumpet & Trbn.	
121	5	56	Trumpet Pitch	Trumpet & Trbn.	
121	6	56	Dual Trumpets	Trumpet & Trbn.	
121	7	56	Flugel Horn	Trumpet & Trbn.	
121	8	56	Warm Flugel	Trumpet & Trbn.	
121	9	56	BeBop Cornet	Trumpet & Trbn.	
121	10	56	Trumpet Pro 1	Trumpet & Trbn.	
121	11	56	Trumpet Pro 2	Trumpet & Trbn.	
121	12	56	Sweet FlugelHorn	Trumpet & Trbn.	
121	13	56	Flugel Horn Pro	Trumpet & Trbn.	
121	0	57	Trombone 1	Trumpet & Trbn.	✓
121	1	57	Trombone 2	Trumpet & Trbn.	✓
121	2	57	Bright Trombone	Trumpet & Trbn.	✓
121	3	57	Hard Trombone	Trumpet & Trbn.	
121	4	57	Soft Trombone	Trumpet & Trbn.	
121	5	57	Pitch Trombone	Trumpet & Trbn.	
121	6	57	Trombone Expr. 1	Trumpet & Trbn.	
121	7	57	Trombone Expr. 2	Trumpet & Trbn.	
121	8	57	Trombone Vel. 1	Trumpet & Trbn.	
121	9	57	Trombone Vel. 2	Trumpet & Trbn.	
121	10	57	Trombone Vel. 3	Trumpet & Trbn.	
121	11	57	Trombone Pro Vel	Trumpet & Trbn.	
121	0	58	Tuba	Trumpet & Trbn.	✓
121	1	58	Oberkr. Tuba	Trumpet & Trbn.	
121	2	58	Tuba Gold	Trumpet & Trbn.	
121	3	58	Dynabone	Trumpet & Trbn.	
121	0	59	Mute Trumpet 1	Trumpet & Trbn.	✓
121	1	59	Mute Trumpet 2	Trumpet & Trbn.	✓
121	2	59	Wah Trumpet	Trumpet & Trbn.	
121	3	59	Mute Ensemble 1	Brass	
121	4	59	Mute Ensemble 2	Brass	
121	0	60	French Horn 1	Brass	✓
121	1	60	French Horn 2	Brass	✓
121	2	60	French Section	Brass	
121	3	60	Classic Horns	Brass	
121	4	60	Horns & Ensemble	Brass	
121	0	61	Brass Section 1	Brass	✓
121	1	61	Brass Section 2	Brass	✓

CC00	CC32	PC	Name	Bank	GM2
121	2	61	Tight Brass 3	Brass	
121	3	61	Glen & Friends	Brass	
121	4	61	Big Band Brass	Brass	
121	5	61	Sax & Brass	Brass	
121	6	61	Glen & Boys	Brass	
121	7	61	Trumpet & Brass	Brass	
121	8	61	Attack Brass	Brass	
121	9	61	Trumpet Ens.	Brass	
121	10	61	Trombone Ens.	Brass	
121	11	61	Trombones	Brass	
121	12	61	Tight Brass 4	Brass	
121	13	61	Fat Brass	Brass	
121	14	61	Dyna Brass 1	Brass	
121	15	61	Brass Expr.	Brass	
121	16	61	Brass Band	Brass	
121	17	61	Film Brass	Brass	
121	18	61	Brass Slow	Brass	
121	19	61	Fanfare	Brass	
121	20	61	Movie Brass	Brass	
121	21	61	Power Brass	Brass	
121	22	61	Dyna Brass 2	Brass	
121	23	61	Sforzato Brass	Brass	
121	24	61	Double Brass	Brass	
121	25	61	Brass Hit	Brass	
121	26	61	Brass Fall	Brass	
121	27	61	Tight Brass 1	Brass	
121	28	61	Tight Brass Pro	Brass	
121	29	61	Tight Brass 2	Brass	
121	30	61	Brass of Power	Brass	
121	0	62	Synth Brass 1	Brass	√
121	1	62	Synth Brass 3	Brass	√
121	2	62	Analog Brass 1	Brass	√
121	3	62	Jump Brass	Brass	√
121	4	62	Electrik Brass	Brass	
121	5	62	Synth Brass 5	Brass	
121	0	63	Synth Brass 2	Brass	√
121	1	63	Synth Brass 4	Brass	√
121	2	63	Analog Brass 2	Brass	√
121	3	63	Brass Pad	Brass	
121	4	63	Big Panner	Synth 1	
121	0	64	Soprano Sax	Sax	√
121	1	64	Sweet Soprano 3	Sax	
121	2	64	Soprano Pro	Sax	
121	3	64	Sweet Soprano 1	Sax	
121	4	64	Sweet Soprano 2	Sax	
121	0	65	Alto Sax	Sax	√
121	1	65	Alto Breath	Sax	
121	2	65	Sax Ensemble	Sax	
121	3	65	Breathy Alto Sax	Sax	
121	4	65	Alto Sax Growl	Sax	
121	5	65	Sweet Alto Sax 1	Sax	
121	6	65	Sweet Alto Sax 2	Sax	
121	7	65	Soft Alto Sax	Sax	
121	8	65	Alto Sax Pro	Sax	
121	0	66	Tenor Sax	Sax	√
121	1	66	Tenor Sax Noise1	Sax	
121	2	66	Soft Tenor	Sax	
121	3	66	Tenor Breath	Sax	
121	4	66	Tenor Growl	Sax	
121	5	66	Folk Sax	Sax	
121	6	66	Tenor Sax Noise2	Sax	
121	7	66	Tenor Sax Expr.1	Sax	

CC00	CC32	PC	Name	Bank	GM2
121	8	66	Tenor Sax Expr.2	Sax	
121	9	66	Jazz Tenor Vel.1	Sax	
121	10	66	Jazz Tenor Vel.2	Sax	
121	11	66	Reed of Power	Sax	
121	0	67	Baritone Sax	Sax	√
121	1	67	Baritone Growl	Sax	
121	2	67	Breathy Baritone	Sax	
121	3	67	Baritone Sax Pro	Sax	
121	0	68	Oboe	Woodwind	√
121	1	68	Double Reed	Woodwind	
121	0	69	English Horn 1	Woodwind	√
121	1	69	English Horn 2	Woodwind	
121	0	70	Bassoon	Woodwind	√
121	0	71	Clarinet	Woodwind	√
121	1	71	Jazz Clarinet	Woodwind	
121	2	71	Clarinet G	Woodwind	
121	3	71	Section Winds 1	Woodwind	
121	4	71	Section Winds 2	Woodwind	
121	5	71	Clarinet Ens.	Woodwind	
121	6	71	Woodwinds	Woodwind	
121	7	71	Folk Clarinet	Woodwind	
121	0	72	Piccolo	Woodwind	√
121	1	72	Small Orchestra	Woodwind	
121	2	72	Nay	Woodwind	
121	0	73	Flute 1	Woodwind	√
121	1	73	Jazz Flute	Woodwind	
121	2	73	Flute Switch	Woodwind	
121	3	73	Flute Dyn. 5th	Woodwind	
121	4	73	Flute Frullato	Woodwind	
121	5	73	Orchestra Flute	Woodwind	
121	6	73	Flute Muted	Brass	
121	7	73	Wooden Flute	Woodwind	
121	8	73	Bambu Flute	Woodwind	
121	9	73	Flute 2	Woodwind	
121	0	74	Recorder 1	Woodwind	√
121	1	74	Recorder 2	Woodwind	
121	0	75	Pan Flute	Woodwind	√
121	1	75	Kawala	Woodwind	
121	0	76	Blown Bottle	Woodwind	√
121	0	77	Shakuhachi 1	Woodwind	√
121	1	77	Old Shakuhachi	Woodwind	
121	2	77	Shakuhachi 2	Woodwind	
121	0	78	Whistle 1	Woodwind	√
121	1	78	Whistle 2	Woodwind	
121	0	79	Ocarina	Woodwind	√
121	0	80	Lead Square 1	Synth 2	√
121	1	80	Lead Square 2	Synth 2	√
121	2	80	Lead Sine	Synth 2	√
121	3	80	Old Portamento	Synth 2	
121	4	80	Dance Lead	Synth 2	
121	5	80	Wave Lead	Synth 2	
121	6	80	Sine Wave	Synth 2	
121	7	80	Analog Lead	Synth 2	
121	8	80	Old & Analog	Synth 2	
121	9	80	Gliding Square	Synth 2	
121	10	80	Sine Switch	Synth 2	
121	11	80	Square Rez	Synth 2	
121	12	80	Port Whine	Synth 2	
121	13	80	2VCO Planet Lead	Synth 2	
121	0	81	Lead Saw 1	Synth 2	√
121	1	81	Lead Saw 2	Synth 2	√
121	2	81	Lead Saw Pulse	Synth 2	√

CC00	CC32	PC	Name	Bank	GM2
121	3	81	Lead Double Saw	Synth 2	✓
121	4	81	Seq. Analog	Synth 2	✓
121	5	81	Power Saw	Synth 2	
121	6	81	Octo Lead	Synth 2	
121	7	81	Seq Lead	Synth 2	
121	8	81	Phat Saw Lead	Synth 2	
121	9	81	Glide Lead	Synth 2	
121	10	81	Fire Wave	Synth 2	
121	11	81	Rezbo	Synth 2	
121	12	81	Synth Pianoid	Synth 2	
121	0	82	Calliope	Synth 2	✓
121	0	83	Chiff	Synth 2	✓
121	0	84	Charang	Synth 2	✓
121	1	84	Wire Lead	Synth 2	✓
121	2	84	Synchro City	Synth 2	
121	3	84	Sync Kron	Synth 2	
121	4	84	Metallic Rez	Synth 2	
121	5	84	Brian Sync	Synth 2	
121	6	84	Arp Twins	Synth 2	
121	7	84	LoFi Ethnic	Synth 2	
121	0	85	Voice Lead	Strings & Vocal	✓
121	1	85	Ether Voices	Strings & Vocal	
121	2	85	Cyber Choir	Strings & Vocal	
121	0	86	Fifths Lead	Synth 2	✓
121	1	86	Crimson 5ths	Synth 1	
121	0	87	Bass & Lead	Synth 2	✓
121	1	87	Soft Wrl	Synth 2	✓
121	2	87	Electro Lead	Synth 2	
121	3	87	Rich Lead	Synth 2	
121	4	87	Thin Analog Lead	Synth 2	
121	5	87	Express. Lead	Synth 2	
121	6	87	HipHop Lead	Synth 2	
121	7	87	Square Bass	Synth 2	
121	8	87	Big & Raw	Synth 2	
121	9	87	Cat Lead	Synth 2	
121	10	87	OB Lead	Synth 2	
121	11	87	A Leadload	Synth 2	
121	0	88	New Age Pad	Synth 2	✓
121	1	88	Virtual Traveler	Synth 1	
121	2	88	Arp Angeles	Synth 2	
121	0	89	Warm Pad	Synth 1	✓
121	1	89	Sine Pad	Synth 1	✓
121	2	89	Master Pad	Strings & Vocal	
121	3	89	Power Synth	Synth 2	
121	4	89	The Pad	Synth 1	
121	5	89	Money Pad	Synth 1	
121	6	89	Dark Pad	Synth 1	
121	7	89	Freedom Pad	Synth 1	
121	8	89	Analog Pad 1	Synth 1	
121	9	89	Analog Pad 2	Synth 1	
121	10	89	Analog Pad 3	Synth 1	
121	11	89	Vintage Pad	Synth 1	
121	12	89	OB Pad	Synth 1	
121	13	89	Dark Anna	Synth 1	
121	14	89	Symphonic Ens.	Synth 1	
121	0	90	Polysynth	Synth 2	✓
121	1	90	Reso Sweep	Synth 2	
121	2	90	Sky Watcher	Synth 1	
121	3	90	Synth Sweeper	Synth 2	
121	4	90	Super Sweep	Synth 1	
121	5	90	Wave Sweep	Synth 1	
121	6	90	Cross Sweep	Synth 1	

CC00	CC32	PC	Name	Bank	GM2
121	7	90	Digital PolySix	Synth 2	
121	8	90	Noisy Stabb	Synth 2	
121	9	90	Mega Synth	Synth 2	
121	10	90	Tecno Phonic	Synth 2	
121	11	90	Farluce	Synth 1	
121	12	90	Big Sweep Stab	Synth 1	
121	13	90	Korgmatose	Synth 1	
121	0	91	Choir Pad	Strings & Vocal	✓
121	1	91	Itopia Pad	Synth 1	✓
121	2	91	Fresh Air	Strings & Vocal	
121	3	91	Heaven	Strings & Vocal	
121	4	91	Pop Synth Pad	Synth 2	
121	5	91	Future Pad	Synth 1	
121	6	91	Tsunami Wave	Synth 1	
121	7	91	Fresh Breath	Strings & Vocal	
121	8	91	Ravelian Pad	Synth 1	
121	9	91	Full Vox Pad	Strings & Vocal	
121	10	91	Dance ReMix	Synth 1	
121	0	92	Bowed Glass	Synth 2	✓
121	0	93	Metallic Pad	Synth 2	✓
121	1	93	Cosmic	Synth 2	
121	0	94	Halo Pad	Strings & Vocal	✓
121	0	95	Sweep Pad	Synth 1	✓
121	1	95	Astral Dream	Synth 1	
121	2	95	Meditate	Synth 1	
121	3	95	Dark Element	Synth 2	
121	4	95	Mellow Pad	Synth 1	
121	5	95	Cinema Pad	Synth 1	
121	6	95	Reoccurring Astra	Synth 1	
121	7	95	Vintage Sweep	Synth 1	
121	8	95	You Decide	Synth 1	
121	0	96	Ice Rain	SFX	✓
121	1	96	Motion Ocean	Synth 1	
121	2	96	Caribbean	Synth 2	
121	0	97	Soundtrack	Synth 1	✓
121	1	97	Air Clouds	Synth 1	
121	2	97	Reso Down	Synth 1	
121	3	97	Tinklin Pad	Synth 1	
121	4	97	Pods In Pad	Synth 1	
121	5	97	Noble Pad	Synth 1	
121	6	97	Rave	Synth 1	
121	7	97	Elastick Pad	Synth 1	
121	0	98	Crystal	Synth 2	✓
121	1	98	Synth Mallet	SFX	✓
121	2	98	Vs Bell Boy	Mallet & Bell	
121	3	98	Krystal Bell	Mallet & Bell	
121	4	98	Digi Bell	Mallet & Bell	
121	5	98	Moving Bell	Synth 1	
121	6	98	Bell Pad	Synth 1	
121	7	98	Bell Choir	Synth 1	
121	0	99	Atmosphere	Synth 2	✓
121	0	100	Brightness	Synth 2	✓
121	1	100	Lonely Spin	Synth 1	
121	2	100	Synth Ghostly	Synth 1	
121	0	101	Goblins	SFX	✓
121	1	101	Motion Raver	Synth 2	
121	2	101	Digi Ice Pad	Synth 1	
121	3	101	VCF Modulation	Synth 2	
121	0	102	Echo Drops	SFX	✓
121	1	102	Echo Bell	SFX	✓
121	2	102	Echo Pan	SFX	✓
121	3	102	Band Passed	Synth 2	

CC00	CC32	PC	Name	Bank	GM2
121	4	102	Pan Reso	Synth 2	
121	5	102	Moon Cycles	Synth 1	
121	0	103	Star Theme	SFX	✓
121	0	104	Sitar 1	Guitar	✓
121	1	104	Sitar 2	Guitar	✓
121	2	104	Sitar Tambou	Guitar	
121	3	104	Indian Stars	Guitar	
121	4	104	Indian Frets	Guitar	
121	5	104	Bouzouki	Guitar	
121	6	104	Tambra	Guitar	
121	7	104	Sitar Sitar	Guitar	
121	0	105	Banjo	Guitar	✓
121	1	105	Banjo Key Off	Guitar	
121	2	105	Oud	Guitar	
121	3	105	Jaw Harp	SFX	
121	0	106	Shamisen	Guitar	✓
121	0	107	Koto	Guitar	✓
121	1	107	Taisho Koto	Guitar	✓
121	2	107	Kanun	Guitar	
121	3	107	Kanun Trem.	Guitar	
121	4	107	Kanun Mix	Guitar	
121	0	108	Kalimba	Mallet & Bell	✓
121	1	108	Kalimba Vel.	Mallet & Bell	
121	0	109	Bag Pipes	Woodwind	✓
121	1	109	War Pipes	Woodwind	
121	2	109	Uilleann BagPipes	Woodwind	
121	3	109	HighlandBagPipes	Woodwind	
121	0	110	Fiddle	Strings & Vocal	✓
121	0	111	Shanai	Woodwind	✓
121	1	111	Zurna	Woodwind	
121	2	111	Hichiriki	Woodwind	
121	0	112	Tinkle Bell	Mallet & Bell	✓
121	1	112	Gamelan	Mallet & Bell	
121	2	112	Bali Gamelan	Mallet & Bell	
121	3	112	Garbage Mall	Mallet & Bell	
121	0	113	Agogo	Drum & Perc.	✓
121	0	114	Steel Drums	Mallet & Bell	✓
121	1	114	Warm Steel	Mallet & Bell	
121	0	115	Woodblock	Drum & Perc.	✓
121	1	115	Castanets	Drum & Perc.	✓
121	0	116	Taiko Drum	Drum & Perc.	✓
121	1	116	Concert BassDrum	Drum & Perc.	✓
121	0	117	Melodic Tom 1	Drum & Perc.	✓
121	1	117	Melodic Tom 2	Drum & Perc.	✓
121	2	117	Reverse Tom	Drum & Perc.	
121	0	118	Synth Drum	Drum & Perc.	✓
121	1	118	Rhythm Box Tom	Drum & Perc.	✓
121	2	118	Electric Drum	Drum & Perc.	✓
121	3	118	Reverse Snare	Drum & Perc.	
121	0	119	Reverse Cymbal	Drum & Perc.	✓
121	1	119	Dragon Gong	Drum & Perc.	
121	0	120	Guitar FretNoise	SFX	✓
121	1	120	Guitar Cut Noise	SFX	✓
121	2	120	Ac. Bass String	SFX	✓
121	3	120	Vox Wah Chick	Guitar	
121	0	121	Breath Noise	SFX	✓
121	1	121	Flute Click	Woodwind	✓
121	0	122	Seashore	SFX	✓
121	1	122	Rain	SFX	✓
121	2	122	Thunder	SFX	✓
121	3	122	Wind	SFX	✓
121	4	122	Stream	SFX	✓

CC00	CC32	PC	Name	Bank	GM2
121	5	122	Bubble	SFX	✓
121	0	123	Bird Tweet 1	SFX	✓
121	1	123	Dog	SFX	✓
121	2	123	Horse Gallop	SFX	✓
121	3	123	Bird Tweet 2	SFX	✓
121	0	124	Telephone 1	SFX	✓
121	1	124	Telephone 2	SFX	✓
121	2	124	Door Creak	SFX	✓
121	3	124	Door	SFX	✓
121	4	124	Scratch	SFX	✓
121	5	124	Wind Chime	SFX	✓
121	0	125	Helicopter	SFX	✓
121	1	125	Car Engine	SFX	✓
121	2	125	Car Stop	SFX	✓
121	3	125	Car Pass	SFX	✓
121	4	125	Car Crash	SFX	✓
121	5	125	Siren	SFX	✓
121	6	125	Train	SFX	✓
121	7	125	Jet Plane	SFX	✓
121	8	125	Starship	SFX	✓
121	9	125	Burst Noise	SFX	✓
121	0	126	Applause	SFX	✓
121	1	126	Laughing	SFX	✓
121	2	126	Screaming	SFX	✓
121	3	126	Punch	SFX	✓
121	4	126	Heart Beat	SFX	✓
121	5	126	Footsteps	SFX	✓
121	6	126	Stadium	SFX	
121	0	127	Gun Shot	SFX	✓
121	1	127	Machine Gun	SFX	✓
121	2	127	Laser Gun	SFX	✓
121	3	127	Explosion	SFX	✓
121	127	16	Digital Drawbars	Digi Organ	
121	64	0-127	...	User 1	
121	65	0-127	...	User 2	
121	68	0-127	...	EXB1 Bank 1	
121	69	0-127	...	EXB1 Bank 2	
121	70	0-127	...	EXB2 Bank 1	
121	71	0-127	...	EXB2 Bank 2	

## Drum Kits

The following table lists all Pa1X Factory Drum Kits in order of Bank Select-Program Change number.

**Legend:** The table also includes MIDI data used to remotely select the Drum Kits. **CC00:** Control Change 0, or Bank Select MSB. **CC32:** Control Change 32, or Bank Select LSB. **PC:** Program Change.

CC00	CC32	PC	Name	GM2
120	0	0	Standard Kit RX1	√
120	0	1	Standard Kit RX2	
120	0	2	Standard Kit RX3	
120	0	3	Acoustic Kit	
120	0	4	Pop Std. Kit RX	
120	0	5	Standard Kit 1	
120	0	6	Standard Kit 2	
120	0	7	Standard Kit 3	
120	0	8	Room Kit 1	√
120	0	9	HipHop Kit 1	
120	0	10	Jungle Kit	
120	0	11	Techno Kit 1	
120	0	12	Room Kit 2	
120	0	13	HipHop Kit 2	
120	0	14	Techno Kit 2	
120	0	15	Techno Kit 3	
120	0	16	Power Kit 1	√
120	0	17	Power Kit 2	
120	0	18	Power Kit RX1	
120	0	19	Power Kit RX2	
120	0	20-23 (remap to 16)		
120	0	24	Electro Kit	√
120	0	25	Analog Kit	√
120	0	26	House Kit 1	
120	0	27	House Kit 2	
120	0	28	House Kit 3	
120	0	29	House Kit 4	
120	0	30	House Kit RX1	
120	0	31	House Kit RX2	
120	0	32	Jazz Kit RX1	√
120	0	33	Jazz Kit	

CC00	CC32	PC	Name	GM2
120	0	34	Jazz Kit RX2	
120	0	35	Jazz Kit RX3	
120	0	36-39 (remap to 32)		
120	0	40	Brush Kit 1	√
120	0	41	Brush Kit 2 VS	
120	0	42	Brush Kit RX	
120	0	43-47 (remap to 40)		
120	0	48	Orchestra Kit	√
120	0	49 (remap to 48)		
120	0	50	Bdrum & Sdrum	
120	0	51	Arabian Kit 1	
120	0	52-55 (remap to 48)		
120	0	56	SFX Kit	√
120	0	57-63 (remap to 56)		
120	0	64	Percussion Kit	
120	0	65	Latin Perc. Kit	
120	0	66	Trinity Perc.Kit	
120	0	67	i30 Perc. Kit	
120	0	68-71 (remap to 64)		
120	0	72	Hip Hop Kit RX	
120	0	73	Techno Kit RX	
120	0	74	Dance Kit RX	
120	0	75-87 (remap to 5)		
120	0	88	Standard Kit 4	
120	0	89	Pop Std. Kit 1	
120	0	90	Pop Std. Kit 2	
120	0	91-95 (remap to 5)		
120	0	96	Elektro Kit 1	
120	0	97	Elektro Kit 2	
120	0	98-115 (remap to 5)		
120	0	116 (remap to 51)		
120	0	117	Arabian Kit 2	
120	0	118-127 (remap to 5)		
120	64	0-63	User DrumKits (1-64)	
120	68	0-63	EXB1 DrumKits (1-64)	
120	70	0-63	EXB2 DrumKits (1-64)	



## Drum Kit maps

**Legend:** In the following Drum Kit tables, the number **120-x-x** before each Drum Kit's name represents the Bank Select MSB (CC00) - Bank Select LSB (CC32) - Program Change (PC) combo. The **Sample** columns contain each sample's number and name. **Excl** is the Exclusive parameter: when a note is struck, all other notes with the same Exclusive number assigned are stopped. A number between round parentheses (**n**) means a velocity switch, and the number of used velocity layers.

120-0-0: Standard Kit RX1				120-0-1: Standard Kit RX2				120-0-2: Standard Kit RX3				120-0-3: Acoustic Kit			
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.
0	C-1	45 SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off
1	C#-1	60 SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off
2	D-1	79 SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off
3	D#-1	75 SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off
4	E-1	69 SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off
5	F-1	63 SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off
6	F#-1	57 SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off
7	G-1	53 SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off
8	G#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off
9	A-1	25 BD House 4	Off	25	BD House 4	Off	25	BD House 4	Off	25	BD House 4	Off	25	BD House 4	Off
10	A#-1	228 99 SD	Off	228	99 SD	Off	228	99 SD	Off	228	99 SD	Off	228	99 SD	Off
11	B-1	40 BD Deep 88	Off	40	BD Deep 88	Off	40	BD Deep 88	Off	40	BD Deep 88	Off	40	BD Deep 88	Off
12	C0	227 88 SD	Off	227	88 SD	Off	227	88 SD	Off	227	88 SD	Off	227	88 SD	Off
13	C#0	53~56 SD Piccolo2 pp~f (4)	Off	69~74 SD Maple2 pp~ff (6)	Off	45~48 SD Wood 2 pp~f (4)	Off	89 SD Off Center	Off	89	SD Off Center	Off	89	SD Off Center	Off
14	D0	49~52 SD Piccolo1 pp~f (4)	Off	63~68 SD Maple1 pp~ff (6)	Off	42~44 SD Wood 1 p~f (3)	Off	100 SD Cracker Room	Off	100	SD Cracker Room	Off	100	SD Cracker Room	Off
15	D#0	10 BD Jazz (2)	Off	10 BD Jazz (2)	Off	10 BD Jazz (2)	Off	11 BD Pillow	Off	11	BD Pillow	Off	11	BD Pillow	Off
16	E0	7 BD Dry 3	Off	1 BD Acoust.1 mf	Off	1 BD Acoust.1 mf	Off	38 BD Amb.Rocker	Off	38	BD Amb.Rocker	Off	38	BD Amb.Rocker	Off
17	F0	57~59 SD Solid1 p~f (3)	Off	49~52 SD Piccolo1 pp~f (4)	Off	63~68 SD Maple1 pp~ff (6)	Off	91 SD Amb.Piccolo	Off	91	SD Amb.Piccolo	Off	91	SD Amb.Piccolo	Off
18	F#0	160~165 HH2 Closed pp~ff (6)	Off	152~155 HH1 Closed pp~f (4)	Off	152~155 HH1 Closed pp~f (4)	Off	171 HH3 Closed2	1	171	HH3 Closed2	1	171	HH3 Closed2	1
19	G0	8 BD Normal	Off	4 BD Acoust.2 f	Off	4 BD Acoust.2 f	Off	10 BD Jazz	Off	10	BD Jazz	Off	10	BD Jazz	Off
20	G#0	129 Rim Shot f	Off	129 Rim Shot f	Off	129 Rim Shot f	Off	130 Side Stick Dry	Off	130	Side Stick Dry	Off	130	Side Stick Dry	Off
21	A0	45~48 SD Wood 2 pp~f (4)	Off	60~62 SD Solid2 p~f (3)	Off	53~56 SD Piccolo2 pp~f (4)	Off	220 SD Orchestra	7	220	SD Orchestra	7	220	SD Orchestra	7
22	A#0	42~44 SD Wood 1 p~f (3)	Off	57~59 SD Solid1 p~f (3)	Off	49~52 SD Piccolo1 pp~f (4)	Off	219 SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7
23	B0	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off
24	C1	78~80 SD Brass2 p~f (3)	Off	78~80 SD Brass2 p~f (3)	Off	78~80 SD Brass2 p~f (3)	Off	220 SD Orchestra	7	220	SD Orchestra	7	220	SD Orchestra	7
25	C#1	81 SD Roll	7	81 SD Roll	7	81 SD Roll	7	219 SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7
26	D1	221 Finger Snaps	Off	221 Finger Snaps	Off	221 Finger Snaps	Off	221 Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off
27	D#1	270 Zap2	Off	270 Zap2	Off	270 Zap2	Off	270 Zap2	Off	270	Zap2	Off	270	Zap2	Off
28	E1	410 Noise White	Off	410 Noise White	Off	410 Noise White	Off	410 Noise White	Off	410	Noise White	Off	410	Noise White	Off
29	F1	272 DJ Scratch2	7	272 DJ Scratch2	7	272 DJ Scratch2	7	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7
30	F#1	272 DJ Scratch2	7	272 DJ Scratch2	7	272 DJ Scratch2	7	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7
31	G1	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off
32	G#1	269 Zap1	Off	269 Zap1	Off	269 Zap1	Off	269 Zap1	Off	269	Zap1	Off	269	Zap1	Off
33	A1	376 Click	Off	376 Click	Off	376 Click	Off	376 Click	Off	376	Click	Off	376	Click	Off
34	A#1	340 Triangle Open	Off	340 Triangle Open	Off	340 Triangle Open	Off	340 Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off
35	B1	3~4 BD Acoust.2 mf~f (3)	Off	0~2 BD Acoust.1 p~f (4)	Off	0~2 BD Acoust.1 p~f (4)	Off	8 BD Normal	Off	8	BD Normal	Off	8	BD Normal	Off
36	C2	0~2 BD Acoust.1 P~f (4)	Off	3~4 BD Acoust.2 mf~f (3)	Off	3~4 BD Acoust.2 mf~f (3)	Off	11~5 BD Pillow-Dry 1 (2)	Off	11~5	BD Pillow-Dry 1 (2)	Off	11~5	BD Pillow-Dry 1 (2)	Off
37	C#2	128~129 Rim Shot p~f (2)	Off	128~129 Rim Shot p~f (2)	Off	128 Rim Shot p~f (2)	Off	131 Side Stick Amb	Off	131	Side Stick Amb	Off	131	Side Stick Amb	Off
38	D2	69~74 SD Maple2 pp~ff (6)	Off	45~48 SD Wood 2 pp~f (4)	Off	60~62 SD Solid2 p~f (3)	Off	86~87 SD Ghost p~f (2)	Off	86~87	SD Ghost p~f (2)	Off	86~87	SD Ghost p~f (2)	Off
39	D#2	230 88 Claps	Off	230 88 Claps	Off	230 88 Claps	Off	225 Claps 4	Off	225	Claps 4	Off	225	Claps 4	Off
40	E2	63~68 SD Maple1 pp~ff (6)	Off	42~44 SD Wood 1 p~f (3)	Off	57~59 SD Solid1 p~f (3)	Off	86~87 SD Ghost p~f (2)	Off	86~87	SD Ghost p~f (2)	Off	86~87	SD Ghost p~f (2)	Off
41	F2	139~140 Tom1 Floor p~f (2)	Off	139~140 Tom1 Floor p~f (2)	Off	139~140 Tom1 Floor p~f (2)	Off	145 Tom3 Floor	Off	145	Tom3 Floor	Off	145	Tom3 Floor	Off
42	F#2	160~165 HH2 Closed pp~ff (6)	1	152~155 HH1 Closed pp~f (4)	1	152~155 HH1 Closed pp~f (4)	1	174 HH3 Open 2	1	174	HH3 Open 2	1	174	HH3 Open 2	1
43	G2	137~138 Tom1 Low p~f (2)	Off	137~138 Tom1 Low p~f (2)	Off	137~138 Tom1 Low p~f (2)	Off	145 Tom3 Floor	Off	145	Tom3 Floor	Off	145	Tom3 Floor	Off
44	G#2	166~167 HH2 Foot p~F (2)	1	156~157 HH1 Foot mp~mf (2)	1	156~157 HH1 Foot mp~mf (2)	1	178 HH4 Foot	1	178	HH4 Foot	1	178	HH4 Foot	1
45	A2	135~136 Tom1 Mid p~F (2)	Off	135~136 Tom1 Mid p~f (2)	Off	135~136 Tom1 Mid p~f (2)	Off	144 Tom3 Low	Off	144	Tom3 Low	Off	144	Tom3 Low	Off
46	A#2	168~169 HH2 Open p~f (2)	1	158~159 HH1 Open mp~mf (2)	1	158~159 HH1 Open mp~mf (2)	1	173 HH3 Open 1	1	173	HH3 Open 1	1	173	HH3 Open 1	1
47	B2	135~136 Tom1 Mid p~f (2)	Off	135~136 Tom1 Mid p~f (2)	Off	135~136 Tom1 Mid p~f (2)	Off	144 Tom3 Low	Off	144	Tom3 Low	Off	144	Tom3 Low	Off
48	C3	133~134 Tom1 Hi p~f (2)	Off	133~134 Tom1 Hi p~f (2)	Off	133~134 Tom1 Hi p~f (2)	Off	143 Tom3 Hi	Off	143	Tom3 Hi	Off	143	Tom3 Hi	Off
49	C#3	195 Crash 19'open2 (2)	Off	193 Crash 17'edge2 (2)	Off	193 Crash 17'edge2 (2)	Off	196 Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off
50	D3	133~134 Tom1 Hi p~f (2)	Off	133~134 Tom1 Hi p~f (2)	Off	133~134 Tom1 Hi p~f (2)	Off	143 Tom3 Hi	Off	143	Tom3 Hi	Off	143	Tom3 Hi	Off
51	D#3	207~209 Ride 20' mp2~mf2 (2)	Off	207~209 Ride 20' mp2~mf2 (2)	Off	207 Ride 20' mp2	Off	213 Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off
52	E3	198 China	Off	198 China	Off	198 China	Off	198 China	Off	198	China	Off	198	China	Off
53	F3	215 Ride Cup	Off	215 Ride Cup	Off	215 Ride Cup	Off	215 Ride Cup	Off	215	Ride Cup	Off	215	Ride Cup	Off
54	F#3	339 Tambourine Acc2	Off	339 Tambourine Acc2	Off	339 Tambourine Acc2	Off	339 Tambourine Acc2	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off
55	G3	199 Splash 8'edge1	Off	199 Splash 8'edge1	Off	199 Splash 8'edge1	Off	201 Splash	Off	201	Splash	Off	201	Splash	Off
56	G#3	352 Cowbell	Off	352 Cowbell	Off	352 Cowbell	Off	352 Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off
57	A3	193 Crash 17'edge2 (2)	Off	191 Crash 15'edge2 (2)	Off	191 Crash 15'edge2 (2)	Off	196 Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off
58	A#3	325 Vibraslap	Off	325 Vibraslap	Off	325 Vibraslap	Off	325 Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off
59	B3	206~208 Ride 20' mp1~mf1 (2)	Off	206~208 Ride 20' mp1~mf1 (2)	Off	208 Ride 20' mf1	Off	214 Ride Jazz	Off	214	Ride Jazz	Off	214	Ride Jazz	Off
60	C4	298 Bongo Hi Open	Off	298 Bongo Hi Open	Off	298 Bongo Hi Open	Off	298 Bongo Hi Open	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off
61	C#4	295 Bongo Lo Open	Off	295 Bongo Lo Open	Off	295 Bongo Lo Open	Off	295 Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off
62	D4	292 Conga Hi Slap2	Off	286 Conga Lo Mt Slap	Off	286 Conga Lo Mt Slap	Off	290 Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off
63	D#4	288 Conga Hi Open	Off	288 Conga Hi Open	Off	288 Conga Hi Open	Off	288 Conga Hi Open	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off
64	E4	285 Conga Lo Open	Off	285 Conga Lo Open	Off	285 Conga Lo Open	Off	285 Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off
65	F4	334 Timbale Hi Rim2	Off	334 Timbale Hi Rim2	Off	334 Timbale Hi Rim2	Off	334 Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off
66	F#4	329 Timbale Lo Open	Off	329 Timbale Lo Open	Off	329 Timbale Lo Open	Off	329 Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off
67	G4	351 Agogo Bell	Off	351 Agogo Bell	Off	351 Agogo Bell	Off	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off
68	G#4	351 Agogo Bell	Off	351 Agogo Bell	Off	351 Agogo Bell	Off	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off
69	A4	346 Cabasa Up	Off	346 Cabasa Up	Off	346 Cabasa Up	Off	346 Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off
70	A#4	309 Maracas Push	Off	309 Maracas Push	Off	309 Maracas Push	Off	309 Maracas Push	Off	309	Maracas Push	Off	309	Maracas Push	Off
71	B4	361 Samba Whistle	2	361 Samba Whistle	2	361 Samba Whistle	2	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2

		120-0-0: Standard Kit RX1		120-0-1: Standard Kit RX2		120-0-2: Standard Kit RX3		120-0-3: Acoustic Kit	
Note		Sample	Excl.	Sample	Excl.	Sample	Excl.	Sample	Excl.
72	C5	361 Samba Whistle	2	361 Samba Whistle	2	361 Samba Whistle	2	361 Samba Whistle	2
73	C#5	308 Guiro Short	3	308 Guiro Short	3	308 Guiro Short	3	308 Guiro Short	3
74	D5	307 Guiro Long	3	307 Guiro Long	3	307 Guiro Long	3	307 Guiro Long	3
75	D#5	326 Claves	Off	326 Claves	Off	326 Claves	Off	326 Claves	Off
76	E5	327 Woodblock1	Off	327 Woodblock1	Off	327 Woodblock1	Off	327 Woodblock1	Off
77	F5	327 Woodblock1	Off	327 Woodblock1	Off	327 Woodblock1	Off	327 Woodblock1	Off
78	F#5	342 Cuica Hi	4	342 Cuica Hi	4	342 Cuica Hi	4	342 Cuica Hi	4
79	G5	343 Cuica Lo	4	343 Cuica Lo	4	343 Cuica Lo	4	343 Cuica Lo	4
80	G#5	341 Triangle Mute	5	341 Triangle Mute	5	341 Triangle Mute	5	341 Triangle Mute	5
81	A5	340 Triangle Open	5	340 Triangle Open	5	340 Triangle Open	5	340 Triangle Open	5
82	A#5	347 Cabasa Down	Off	347 Cabasa Down	Off	347 Cabasa Down	Off	347 Cabasa Down	Off
83	B5	355 Sleigh Bell	Off	355 Sleigh Bell	Off	355 Sleigh Bell	Off	355 Sleigh Bell	Off
84	C6	358 Marc Tree	Off	358 Marc Tree	Off	358 Marc Tree	Off	358 Marc Tree	Off
85	C#6	305 Castanet Single	Off	305 Castanet Single	Off	305 Castanet Single	Off	305 Castanet Single	Off
86	D6	330 Timbale Lo Mute	6	330 Timbale Lo Mute	6	330 Timbale Lo Mute	6	330 Timbale Lo Mute	6
87	D#6	329 Timbale Lo Open	6	329 Timbale Lo Open	6	329 Timbale Lo Open	6	329 Timbale Lo Open	6
88	E6	370 Stadium	Off	370 Stadium	Off	370 Stadium	Off	370 Stadium	Off

		120-0-4: Pop Std.Kit RX		120-0-5 (75-87, 89-115, 118-127): Standard Kit 1		120-0-6: Standard Kit 2		120-0-7: Standard Kit 3	
Note		Sample	Excl.	Sample	Excl.	Sample	Excl.	Sample	Excl.
0	C-1	45 SD Wood 2 pp	Off	45 SD Wood 2 pp	Off	45 SD Wood 2 pp	Off	45 SD Wood 2 pp	Off
1	C#-1	60 SD Solid2 p	Off	60 SD Solid2 p	Off	60 SD Solid2 p	Off	60 SD Solid2 p	Off
2	D-1	79 SD Brass2 mf	Off	79 SD Brass2 mf	Off	79 SD Brass2 mf	Off	79 SD Brass2 mf	Off
3	D#-1	75 SD Brass1 p	Off	75 SD Brass1 p	Off	75 SD Brass1 p	Off	75 SD Brass1 p	Off
4	E-1	69 SD Maple2 pp	Off	69 SD Maple2 pp	Off	69 SD Maple2 pp	Off	69 SD Maple2 pp	Off
5	F-1	63 SD Maple1 pp	Off	63 SD Maple1 pp	Off	63 SD Maple1 pp	Off	63 SD Maple1 pp	Off
6	F#-1	57 SD Solid1 p	Off	57 SD Solid1 p	Off	57 SD Solid1 p	Off	57 SD Solid1 p	Off
7	G-1	53 SD Piccolo2 pp	Off	53 SD Piccolo2 pp	Off	53 SD Piccolo2 pp	Off	53 SD Piccolo2 pp	Off
8	G#-1	5 BD Dry 1	Off	5 BD Dry 1	Off	5 BD Dry 1	Off	5 BD Dry 1	Off
9	A-1	18 BD Squash	Off	25 BD House 4	Off	25 BD House 4	Off	25 BD House 4	Off
10	A#-1	115 SD Hip6	Off	228 99 SD	Off	228 99 SD	Off	228 99 SD	Off
11	B-1	226 88 BD	Off	226 88 BD	Off	226 88 BD	Off	226 88 BD	Off
12	C0	52 SD Piccolo1 f	Off	227 88 SD	Off	227 88 SD	Off	227 88 SD	Off
13	C#0	59 SD Solid1 f	Off	88 SD Full Room	Off	91 SD Amb.Piccolo	Off	89 SD Off Center	Off
14	D0	52 SD Piccolo1 f	Off	99 SD Processed	1	99 SD Processed	Off	99 SD Processed	Off
15	D#0	36 BD Ambient	Off	5 BD Dry 1	Off	11 BD Pillow	Off	11 BD Pillow	Off
16	E0	16 BD Gated	Off	17 BD Tight	Off	38 BD Amb.Rocker	Off	38 BD Amb.Rocker	Off
17	F0	59 SD Solid1 f	Off	82 SD Dry 1	Off	90 SD Jazz Ring	Off	93 SD Brush Hit	Off
18	F#0	161-162 HH2 Closed p-mp (2)	1	171 HH3 Closed2	1	171 HH3 Closed2	1	171 HH3 Closed2	1
19	G0	38 BD Amb.Rocker	Off	7 BD Dry 3	Off	5 BD Dry 1	Off	10 BD Jazz	Off
20	G#0	130 Side Stick Dry	Off	131 Side Stick Amb	Off	130 Side Stick Dry	Off	130 Side Stick Dry	Off
21	A0	67 SD Maple1 f	7	220 SD Orchestra	7	83 SD Dry 2	7	125 SD Brasser	7
22	A#0	68 SD Maple1 ff	7	219 SD Orch. Roll	7	100 SD Cracker Room	7	83 SD Dry 2	Off
23	B0	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off
24	C1	59 SD Solid1 f	7	220 SD Orchestra	7	220 SD Orchestra	7	220 SD Orchestra	7
25	C#1	219 SD Orch. Roll	7	219 SD Orch. Roll	7	219 SD Orch. Roll	7	219 SD Orch. Roll	7
26	D1	221 Finger Snaps	Off	221 Finger Snaps	Off	221 Finger Snaps	Off	221 Finger Snaps	Off
27	D#1	270 Zap2	Off	270 Zap2	Off	270 Zap2	Off	270 Zap2	Off
28	E1	410 Noise White	Off	410 Noise White	Off	410 Noise White	Off	410 Noise White	Off
29	F1	272 DJ Scratch2	7	272 DJ Scratch2	7	272 DJ Scratch2	7	272 DJ Scratch2	7
30	F#1	272 DJ Scratch2	7	272 DJ Scratch2	7	272 DJ Scratch2	7	272 DJ Scratch2	7
31	G1	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off
32	G#1	269 Zap1	Off	269 Zap1	Off	269 Zap1	Off	269 Zap1	Off
33	A1	376 Click	Off	376 Click	Off	376 Click	Off	376 Click	Off
34	A#1	340 Triangle Open	Off	340 Triangle Open	Off	340 Triangle Open	Off	340 Triangle Open	Off
35	B1	38 BD Amb.Rocker	Off	7 BD Dry 3	Off	17 BD Tight	Off	5 BD Dry 1	Off
36	C2	38 BD Amb.Rocker	Off	5 BD Dry 1	Off	15 BD Tubby	Off	15 BD Tubby	Off
37	C#2	129 Rim Shot f	Off	131 Side Stick Amb	Off	131 Side Stick Amb	Off	131 Side Stick Amb	Off
38	D2	47-59 SD Wood 2-Solid1 p-f (6)	Off	83 SD Dry 2	Off	89 SD Off Center	Off	90 SD Jazz Ring	Off
39	D#2	230 88 Claps	Off	225 Claps 4	Off	230 88 Claps	Off	230 88 Claps	Off
40	E2	47-59 SD Wood 2-Solid1 p-f (6)	Off	88 SD Full Room	Off	89 SD Off Center	Off	91 SD Amb.Piccolo	Off
41	F2	140 Tom1 Floor f	Off	145 Tom3 Floor	Off	145 Tom3 Floor	Off	145 Tom3 Floor	Off
42	F#2	160-163 HH2 Closed pp-mf (4)	1	174 HH3 Open 2	1	170 HH3 Closed1	1	176 HH4 Closed1	1
43	G2	138 Tom1 Low f	Off	145 Tom3 Floor	Off	145 Tom3 Floor	Off	145 Tom3 Floor	Off
44	G#2	157-156 HH1 Foot mf-mp (2)	1	178 HH4 Foot	1	172 HH3 Foot	1	178 HH4 Foot	1
45	A2	138 Tom1 Low f	Off	144 Tom3 Low	Off	144 Tom3 Low	Off	144 Tom3 Low	Off
46	A#2	168-169 HH2 Open p-f (2)	1	173 HH3 Open 1	1	173 HH3 Open 1	1	173 HH3 Open 1	1
47	B2	136 Tom1 Mid f	Off	144 Tom3 Low	Off	144 Tom3 Low	Off	144 Tom3 Low	Off
48	C3	134 Tom1 Hi f	Off	143 Tom3 Hi	Off	143 Tom3 Hi	Off	143 Tom3 Hi	Off
49	C#3	196 Crash 1	Off	196 Crash 1	Off	196 Crash 1	Off	196 Crash 1	Off
50	D3	134 Tom1 Hi f	Off	143 Tom3 Hi	Off	143 Tom3 Hi	Off	143 Tom3 Hi	Off
51	D#3	207-209 Ride 20' mp2-mf2 (2)	Off	213 Ride Edge 2	Off	213 Ride Edge 2	Off	213 Ride Edge 2	Off
52	E3	198 China	Off	198 China	Off	198 China	Off	198 China	Off
53	F3	206-208 Ride 20' mp1-mf1 (2)	Off	214 Ride Jazz	Off	214 Ride Jazz	Off	214 Ride Jazz	Off
54	F#3	339 Tambourine Acc2	Off	339 Tambourine Acc2	Off	339 Tambourine Acc2	Off	339 Tambourine Acc2	Off
55	G3	201 Splash	Off	201 Splash	Off	201 Splash	Off	201 Splash	Off
56	G#3	352 Cowbell	Off	352 Cowbell	Off	352 Cowbell	Off	352 Cowbell	Off
57	A3	196 Crash 1	Off	196 Crash 1	Off	196 Crash 1	Off	196 Crash 1	Off
58	A#3	325 Vibraslap	Off	325 Vibraslap	Off	325 Vibraslap	Off	325 Vibraslap	Off
59	B3	206 Ride 20' mp1	Off	213 Ride Edge 2	Off	213 Ride Edge 2	Off	213 Ride Edge 2	Off
60	C4	298 Bongo Hi Open	Off	298 Bongo Hi Open	Off	298 Bongo Hi Open	Off	298 Bongo Hi Open	Off

		120-0-4: Pop Std.Kit RX		120-0-5 (75-87, 89-115, 118-127): Standard Kit 1		120-0-6: Standard Kit 2		120-0-7: Standard Kit 3	
Note		Sample	Excl.	Sample	Excl.	Sample	Excl.	Sample	Excl.
61	C#4	295 Bongo Lo Open	Off	295 Bongo Lo Open	Off	295 Bongo Lo Open	Off	295 Bongo Lo Open	Off
62	D4	290 Conga Hi Mt Slap	Off	286 Conga Lo Mt Slap	Off	286 Conga Lo Mt Slap	Off	290 Conga Hi Mt Slap	Off
63	D#4	288 Conga Hi Open	Off	288 Conga Hi Open	Off	288 Conga Hi Open	Off	288 Conga Hi Open	Off
64	E4	285 Conga Lo Open	Off	285 Conga Lo Open	Off	285 Conga Lo Open	Off	285 Conga Lo Open	Off
65	F4	334 Timbale Hi Rim2	Off	334 Timbale Hi Rim2	Off	334 Timbale Hi Rim2	Off	334 Timbale Hi Rim2	Off
66	F#4	329 Timbale Lo Open	Off	329 Timbale Lo Open	Off	329 Timbale Lo Open	Off	329 Timbale Lo Open	Off
67	G4	351 Agogo Bell	Off	351 Agogo Bell	Off	351 Agogo Bell	Off	351 Agogo Bell	Off
68	G#4	351 Agogo Bell	Off	351 Agogo Bell	Off	351 Agogo Bell	Off	351 Agogo Bell	Off
69	A4	346 Cabasa Up	Off	346 Cabasa Up	Off	346 Cabasa Up	Off	346 Cabasa Up	Off
70	A#4	309 Maracas Push	Off	309 Maracas Push	Off	309 Maracas Push	Off	309 Maracas Push	Off
71	B4	361 Samba Whistle	2	361 Samba Whistle	2	361 Samba Whistle	2	361 Samba Whistle	2
72	C5	361 Samba Whistle	2	361 Samba Whistle	2	361 Samba Whistle	2	361 Samba Whistle	2
73	C#5	308 Guiro Short	3	308 Guiro Short	3	308 Guiro Short	3	308 Guiro Short	3
74	D5	307 Guiro Long	3	307 Guiro Long	3	307 Guiro Long	3	307 Guiro Long	3
75	D#5	326 Claves	Off	326 Claves	Off	326 Claves	Off	326 Claves	Off
76	E5	327 Woodblock1	Off	327 Woodblock1	Off	327 Woodblock1	Off	327 Woodblock1	Off
77	F5	327 Woodblock1	Off	327 Woodblock1	Off	327 Woodblock1	Off	327 Woodblock1	Off
78	F#5	342 Cuica Hi	4	342 Cuica Hi	4	342 Cuica Hi	4	342 Cuica Hi	4
79	G5	343 Cuica Lo	4	343 Cuica Lo	4	343 Cuica Lo	4	343 Cuica Lo	4
80	G#5	341 Triangle Mute	5	341 Triangle Mute	5	341 Triangle Mute	5	341 Triangle Mute	5
81	A5	340 Triangle Open	5	340 Triangle Open	5	340 Triangle Open	5	340 Triangle Open	5
82	A#5	347 Cabasa Down	Off	347 Cabasa Down	Off	347 Cabasa Down	Off	347 Cabasa Down	Off
83	B5	355 Sleigh Bell	Off	355 Sleigh Bell	Off	355 Sleigh Bell	Off	355 Sleigh Bell	Off
84	C6	358 Marc Tree	Off	358 Marc Tree	Off	358 Marc Tree	Off	358 Marc Tree	Off
85	C#6	305 Castanet Single	Off	305 Castanet Single	Off	305 Castanet Single	Off	305 Castanet Single	Off
86	D6	330 Timbale Lo Mute	6	330 Timbale Lo Mute	6	330 Timbale Lo Mute	6	330 Timbale Lo Mute	6
87	D#6	329 Timbale Lo Open	6	329 Timbale Lo Open	6	329 Timbale Lo Open	6	329 Timbale Lo Open	6
88	E6	370 Stadium	Off	370 Stadium	Off	370 Stadium	Off	370 Stadium	Off
89	F6							489 Empty	Off
90	F#6							489 Empty	Off
91	G6							489 Empty	Off
92	G#6							489 Empty	Off
93	A6							489 Empty	Off
94	A#6							489 Empty	Off
95	B6							489 Empty	Off
96	C7							489 Empty	Off
97	C#7							489 Empty	Off
98	D7							489 Empty	Off
99	D#7							489 Empty	Off
100	E7							353 Chacha Bell	Off
101	F7							332 Timbale Hi Edge	Off
102	F#7							334 Timbale Hi Rim2	Off
103	G7							333 Timbale Hi Rim1	Off
104	G#7							285 Conga Lo Open (2)	Off
105	A7							286 Conga Lo Mt Slap	Off
106	A#7							288 Conga Hi Open (2)	Off
107	B7							291 Conga Hi Slap1	Off
108	C8							292 Conga Hi Slap2	Off

		120-0-8: Room Kit 1		120-0-9: HipHop Kit 1		120-0-10: Jungle Kit		120-0-11: Techno Kit 1	
Note		Sample	Excl.	Sample	Excl.	Sample	Excl.	Sample	Excl.
0	C-1	45 SD Wood 2 pp	Off	45 SD Wood 2 pp	Off	45 SD Wood 2 pp	Off	45 SD Wood 2 pp	Off
1	C#-1	60 SD Solid2 p	Off	60 SD Solid2 p	Off	60 SD Solid2 p	Off	60 SD Solid2 p	Off
2	D-1	79 SD Brass2 mf	Off	79 SD Brass2 mf	Off	79 SD Brass2 mf	Off	79 SD Brass2 mf	Off
3	D#-1	75 SD Brass1 p	Off	75 SD Brass1 p	Off	75 SD Brass1 p	Off	75 SD Brass1 p	Off
4	E-1	69 SD Maple2 pp	Off	69 SD Maple2 pp	Off	69 SD Maple2 pp	Off	69 SD Maple2 pp	Off
5	F-1	63 SD Maple1 pp	Off	63 SD Maple1 pp	Off	63 SD Maple1 pp	Off	63 SD Maple1 pp	Off
6	F#-1	57 SD Solid1 p	Off	57 SD Solid1 p	Off	57 SD Solid1 p	Off	57 SD Solid1 p	Off
7	G-1	53 SD Piccolo2 pp	Off	53 SD Piccolo2 pp	Off	53 SD Piccolo2 pp	Off	53 SD Piccolo2 pp	Off
8	G#-1	5 BD Dry 1	Off	5 BD Dry 1	Off	5 BD Dry 1	Off	5 BD Dry 1	Off
9	A-1	18 BD Squash	Off	18 BD Squash	Off	18 BD Squash	Off	32 BD Hip 3	Off
10	A#-1	115 SD Hip6	Off	115 SD Hip6	Off	115 SD Hip6	Off	115 SD Hip6	Off
11	B-1	226 88 BD	Off	226 88 BD	Off	226 88 BD	Off	226 88 BD	Off
12	C0	227 88 SD	Off	227 88 SD	Off	227 88 SD	Off	227 88 SD	Off
13	C#0	112 SD Hip3	Off	112 SD Hip3	Off	112 SD Hip3	Off	112 SD Hip3	Off
14	D0	114 SD Hip5	Off	114 SD Hip5	Off	114 SD Hip5	Off	114 SD Hip5	Off
15	D#0	36 BD Ambient	Off	36 BD Ambient	Off	36 BD Ambient	Off	36 BD Ambient	Off
16	E0	16 BD Gated	Off	16 BD Gated	Off	16 BD Gated	Off	16 BD Gated	Off
17	F0	91 SD Amb.Piccolo	Off	91 SD Amb.Piccolo	Off	91 SD Amb.Piccolo	Off	91 SD Amb.Piccolo	Off
18	F#0	174 HH3 Open 2	1	174 HH3 Open 2	1	174 HH3 Open 2	1	174 HH3 Open 2	1
19	G0	11 BD Pillow	Off	11 BD Pillow	Off	11 BD Pillow	Off	11 BD Pillow	Off
20	G#0	130 Side Stick Dry	Off	130 Side Stick Dry	Off	130 Side Stick Dry	Off	130 Side Stick Dry	Off
21	A0	98 SD Yowie	7	98 SD Yowie	Off	98 SD Yowie	Off	98 SD Yowie	Off
22	A#0	115 SD Hip6	7	115 SD Hip6	Off	115 SD Hip6	Off	115 SD Hip6	Off
23	B0	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off	132 Drum Stick Hit	Off
24	C1	220 SD Orchestra	7	220 SD Orchestra	7	220 SD Orchestra	7	220 SD Orchestra	7
25	C#1	219 SD Orch. Roll	7	219 SD Orch. Roll	7	219 SD Orch. Roll	7	219 SD Orch. Roll	7
26	D1	221 Finger Snaps	Off	221 Finger Snaps	Off	221 Finger Snaps	Off	221 Finger Snaps	Off
27	D#1	270 Zap2	Off	270 Zap2	Off	270 Zap2	Off	270 Zap2	Off
28	E1	410 Noise White	Off	410 Noise White	Off	410 Noise White	Off	410 Noise White	Off
29	F1	272 DJ Scratch2	7	272 DJ Scratch2	7	272 DJ Scratch2	7	272 DJ Scratch2	7

			120-0-8: Room Kit 1			120-0-9: HipHop Kit 1			120-0-10: Jungle Kit			120-0-11: Techno Kit 1		
Note			Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
30	F#1	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	
31	G1	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	
32	G#1	269	Zap1	Off	269	Zap1	Off	269	Zap1	Off	269	Zap1	Off	
33	A1	376	Click	Off	376	Click	Off	376	Click	Off	376	Click	Off	
34	A#1	340	Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	
35	B1	15	BD Tubby	Off	39	BD Pop 99	Off	30	BD Hip 1	Off	18	BD Squash	Off	
36	C2	38	BD Amb.Rocker	Off	32	BD Hip 3	Off	40	BD Deep 88	Off	25	BD House 4	Off	
37	C#2	130	Side Stick Dry	Off	229	88 Rim Shot	Off	221	Finger Snaps	Off	369	Comp Voice Noise	Off	
38	D2	100	SD Cracker Room	Off	116	SD Ringy	Off	122	SD Vintage5	Off	228	99 SD	Off	
39	D#2	230	88 Claps	Off	230	88 Claps	Off	230	88 Claps	Off	230	88 Claps	Off	
40	E2	88	SD Full Room	Off	123	SD Vintage6	Off	117	SD Tiny	Off	228	99 SD	Off	
41	F2	145	Tom3 Floor	Off	141	Tom2 Hi	Off	141	Tom2 Hi	Off	266	E.Tom Real	Off	
42	F#2	170	HH3 Closed1	1	181	HH Old Close1	1	232	88 HH Open	1	183	HH Old TiteClose	1	
43	G2	145	Tom3 Floor	Off	141	Tom2 Hi	Off	141	Tom2 Hi	Off	266	E.Tom Real	Off	
44	G#2	178	HH4 Foot	1	184	HH Old Close2	Off	188	HH Hip	Off	189	HH Alpo Close	Off	
45	A2	144	Tom3 Low	Off	141	Tom2 Hi	Off	141	Tom2 Hi	Off	266	E.Tom Real	Off	
46	A#2	180	HH4 Open	1	182	HH Old Open1	1	182	HH Old Open1	1	185	HH Old Open2	1	
47	B2	144	Tom3 Low	Off	141	Tom2 Hi	Off	141	Tom2 Hi	Off	266	E.Tom Real	Off	
48	C3	143	Tom3 Hi	Off	141	Tom2 Hi	Off	141	Tom2 Hi	Off	266	E.Tom Real	Off	
49	C#3	196	Crash 1	Off	196	Crash 1	Off	235	88 Crash	Off	196	Crash 1	Off	
50	D3	143	Tom3 Hi	Off	141	Tom2 Hi	Off	141	Tom2 Hi	Off	266	E.Tom Real	Off	
51	D#3	213	Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	
52	E3	198	China	Off	202	Crash Reverse	Off	202	Crash Reverse	Off	202	Crash Reverse	Off	
53	F3	214	Ride Jazz	Off	214	Ride Jazz	Off	214	Ride Jazz	Off	214	Ride Jazz	Off	
54	F#3	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off	
55	G3	201	Splash	Off	201	Splash	Off	201	Splash	Off	198	China	Off	
56	G#3	352	Cowbell	Off	239	88 Cowbell	Off	239	88 Cowbell	Off	352	Cowbell	Off	
57	A3	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	
58	A#3	325	Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off	
59	B3	213	Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	
60	C4	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	
61	C#4	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	
62	D4	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	
63	D#4	288	Conga Hi Open	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off	
64	E4	285	Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off	
65	F4	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	
66	F#4	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	
67	G4	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	
68	G#4	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	
69	A4	346	Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	
70	A#4	309	Maracas Push	Off	185	HH Old Open2	Off	185	HH Old Open2	Off	309	Maracas Push	Off	
71	B4	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	
72	C5	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	
73	C#5	308	Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	
74	D5	307	Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	
75	D#5	326	Claves	Off	326	Claves	Off	326	Claves	Off	326	Claves	Off	
76	E5	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	
77	F5	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	
78	F#5	342	Cuica Hi	4	342	Cuica Hi	4	342	Cuica Hi	4	342	Cuica Hi	4	
79	G5	343	Cuica Lo	4	343	Cuica Lo	4	343	Cuica Lo	4	343	Cuica Lo	4	
80	G#5	341	Triangle Mute	5	341	Triangle Mute	5	341	Triangle Mute	5	341	Triangle Mute	5	
81	A5	340	Triangle Open	5	340	Triangle Open	5	340	Triangle Open	5	340	Triangle Open	5	
82	A#5	347	Cabasa Down	Off	347	Cabasa Down	Off	347	Cabasa Down	Off	347	Cabasa Down	Off	
83	B5	355	Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	
84	C6	358	Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	
85	C#6	305	Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off	
86	D6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	
87	D#6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	
88	E6	370	Stadium	Off	370	Stadium	Off	370	Stadium	Off	370	Stadium	Off	

			120-0-12: Room Kit 2			120-0-13: HipHop Kit 2			120-0-14: Techno Kit 2			120-0-15: Techno Kit 3		
Note			Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
0	C-1	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	
1	C#-1	60	SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off	
2	D-1	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	
3	D#-1	75	SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off	
4	E-1	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	
5	F-1	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	
6	F#-1	57	SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off	
7	G-1	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	
8	G#-1	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
9	A-1	18	BD Squash	Off	18	BD Squash	Off	18	BD Squash	Off	18	BD Squash	Off	
10	A#-1	115	SD Hip6	Off	115	SD Hip6	Off	115	SD Hip6	Off	115	SD Hip6	Off	
11	B-1	226	88 BD	Off	226	88 BD	Off	226	88 BD	Off	226	88 BD	Off	
12	C0	227	88 SD	Off	227	88 SD	Off	227	88 SD	Off	227	88 SD	Off	
13	C#0	112	SD Hip3	Off	112	SD Hip3	Off	112	SD Hip3	Off	112	SD Hip3	Off	
14	D0	114	SD Hip5	Off	114	SD Hip5	Off	114	SD Hip5	Off	114	SD Hip5	Off	
15	D#0	36	BD Ambient	Off	36	BD Ambient	Off	36	BD Ambient	Off	36	BD Ambient	Off	
16	E0	16	BD Gated	Off	16	BD Gated	Off	16	BD Gated	Off	16	BD Gated	Off	
17	F0	91	SD Amb.Piccolo	Off	91	SD Amb.Piccolo	Off	91	SD Amb.Piccolo	Off	91	SD Amb.Piccolo	Off	
18	F#0	174	HH3 Open 2	1	174	HH3 Open 2	1	174	HH3 Open 2	1	174	HH3 Open 2	1	



		120-0-12: Room Kit 2			120-0-13: HipHop Kit 2			120-0-14: Techno Kit 2			120-0-15: Techno Kit 3		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
19	G0	11 BD Pillow	Off	11	BD Pillow	Off	11	BD Pillow	Off	11	BD Pillow	Off	
20	G#0	130 Side Stick Dry	Off	130	Side Stick Dry	Off	130	Side Stick Dry	Off	130	Side Stick Dry	Off	
21	A0	97 SD Big Rock	Off	98	SD Yowie	Off	98	SD Yowie	Off	98	SD Yowie	Off	
22	A#0	115 SD Hip6	Off	115	SD Hip6	Off	115	SD Hip6	Off	115	SD Hip6	Off	
23	B0	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	
24	C1	220 SD Orchestra	7	220	SD Orchestra	7	220	SD Orchestra	7	220	SD Orchestra	7	
25	C#1	219 SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7	
26	D1	221 Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	
27	D#1	270 Zap2	Off	270	Zap2	Off	270	Zap2	Off	270	Zap2	Off	
28	E1	410 Noise White	Off	410	Noise White	Off	410	Noise White	Off	410	Noise White	Off	
29	F1	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	
30	F#1	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	
31	G1	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	
32	G#1	269 Zap1	Off	269	Zap1	Off	269	Zap1	Off	269	Zap1	Off	
33	A1	376 Click	Off	376	Click	Off	376	Click	Off	376	Click	Off	
34	A#1	340 Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	
35	B1	17 BD Tight	Off	36	BD Ambient	Off	34	BD Pop Kick	Off	34	BD Pop Kick	Off	
36	C2	38 BD Amb.Rocker	Off	35	BD Dance 99	Off	25	BD House 4	Off	25	BD House 4	Off	
37	C#2	130 Side Stick Dry	Off	221	Finger Snaps	Off	229	88 Rim Shot	Off	267	Rim House 1	Off	
38	D2	99 SD Processed	Off	107	SD Rap	Off	108	SD Noise	Off	126	SD Chili	Off	
39	D#2	230 88 Claps	Off	464	Alkis	Off	230	88 Claps	Off	230	88 Claps	Off	
40	E2	98 SD Yowie	Off	111	SD Hip2	Off	270	Zap2	Off	227	88 SD	Off	
41	F2	142 Tom2 Floor	Off	141	Tom2 Hi	Off	236	88 Tom	Off	386	Tribe	Off	
42	F#2	177 HH4 Closed2	1	181	HH Old Close1	1	183	HH Old TiteClose	1	233	99 HH Close	1	
43	G2	142 Tom2 Floor	Off	141	Tom2 Hi	Off	236	88 Tom	Off	402	Wind	Off	
44	G#2	178 HH4 Foot	1	188	HH Hip	Off	189	HH Alpo Close	Off	184	HH Old Close2	Off	
45	A2	141 Tom2 Hi	Off	141	Tom2 Hi	Off	236	88 Tom	Off	425	Amp Noise	Off	
46	A#2	175 HH3 Sizzle	1	182	HH Old Open1	1	185	HH Old Open2	1	234	99 HH Open	1	
47	B2	141 Tom2 Hi	Off	141	Tom2 Hi	Off	236	88 Tom	Off	266	E.Tom Real	Off	
48	C3	141 Tom2 Hi	Off	141	Tom2 Hi	Off	236	88 Tom	Off	266	E.Tom Real	Off	
49	C#3	196 Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	
50	D3	141 Tom2 Hi	Off	141	Tom2 Hi	Off	236	88 Tom	Off	266	E.Tom Real	Off	
51	D#3	213 Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	
52	E3	198 China	Off	202	Crash Reverse	Off	202	Crash Reverse	Off	202	Crash Reverse	Off	
53	F3	214 Ride Jazz	Off	214	Ride Jazz	Off	214	Ride Jazz	Off	214	Ride Jazz	Off	
54	F#3	339 Tambourine Acc2	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off	
55	G3	201 Splash	Off	201	Splash	Off	201	Splash	Off	407	Xylophone Spectr	Off	
56	G#3	352 Cowbell	Off	239	88 Cowbell	Off	239	88 Cowbell	Off	239	88 Cowbell	Off	
57	A3	196 Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	
58	A#3	325 Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off	339	Tambourine Acc2	Off	
59	B3	213 Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	
60	C4	298 Bongo Hi Open	Off	298	Bongo Hi Open	Off	237	88 Conga	Off	298	Bongo Hi Open	Off	
61	C#4	295 Bongo Lo Open	Off	295	Bongo Lo Open	Off	237	88 Conga	Off	295	Bongo Lo Open	Off	
62	D4	290 Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	237	88 Conga	Off	290	Conga Hi Mt Slap	Off	
63	D#4	288 Conga Hi Open	Off	288	Conga Hi Open	Off	237	88 Conga	Off	288	Conga Hi Open	Off	
64	E4	285 Conga Lo Open	Off	285	Conga Lo Open	Off	237	88 Conga	Off	285	Conga Lo Open	Off	
65	F4	334 Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	
66	F#4	329 Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	
67	G4	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	
68	G#4	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	
69	A4	346 Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	
70	A#4	309 Maracas Push	Off	185	HH Old Open2	Off	309	Maracas Push	Off	309	Maracas Push	Off	
71	B4	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	
72	C5	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	
73	C#5	308 Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	
74	D5	307 Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	
75	D#5	326 Claves	Off	326	Claves	Off	326	Claves	Off	326	Claves	Off	
76	E5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	
77	F5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	
78	F#5	342 Cuica Hi	4	342	Cuica Hi	4	342	Cuica Hi	4	366	Uhh	Off	
79	G5	343 Cuica Lo	4	343	Cuica Lo	4	342	Cuica Hi	4	364	Yeah!	Off	
80	G#5	341 Triangle Mute	5	341	Triangle Mute	5	360	Flexatone	5	341	Triangle Mute	5	
81	A5	340 Triangle Open	5	340	Triangle Open	5	360	Flexatone	5	340	Triangle Open	5	
82	A#5	347 Cabasa Down	Off	347	Cabasa Down	Off	347	Cabasa Down	Off	347	Cabasa Down	Off	
83	B5	355 Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	
84	C6	358 Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	
85	C#6	305 Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off	
86	D6	330 Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	
87	D#6	329 Timbale Lo Open	6	329	Timbale Lo Open	6	469	Darbuka1 Tek2	6	329	Timbale Lo Open	6	
88	E6	370 Stadium	Off	370	Stadium	Off	370	Stadium	Off	370	Stadium	Off	

		120-0-16 (20-23): Power Kit 1			120-0-17: Power Kit 2			120-0-18: Power Kit RX1			120-0-19: Power Kit RX2		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
0	C-1	45 SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	
1	C#-1	60 SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off	
2	D-1	79 SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	
3	D#-1	75 SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off	
4	E-1	69 SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	
5	F-1	63 SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	
6	F#-1	57 SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off	
7	G-1	53 SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	

		120-0-16 (20-23): Power Kit 1			120-0-17: Power Kit 2			120-0-18: Power Kit RX1			120-0-19: Power Kit RX2		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
8	G#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
9	A-1	35 BD Dance 99	Off	35	BD Dance 99	Off	18	BD Squash	Off	18	BD Squash	Off	
10	A#-1	228 99 SD	Off	228	99 SD	Off	115	SD Hip6	Off	115	SD Hip6	Off	
11	B-1	226 88 BD	Off	226	88 BD	Off	226	88 BD	Off	226	88 BD	Off	
12	C0	227 88 SD	Off	227	88 SD	Off	52	SD Piccolo1 f	Off	52	SD Piccolo1 f	Off	
13	C#0	121 SD Vintage4	Off	121	SD Vintage4	Off	59	SD Solid1 f	Off	59	SD Solid1 f	Off	
14	D0	120 SD Vintage3	Off	120	SD Vintage3	Off	68	SD Maple1 ff	Off	68	SD Maple1 ff	Off	
15	D#0	38 BD Amb.Rocker	Off	38	BD Amb.Rocker	Off	36	BD Ambient	Off	36	BD Ambient	Off	
16	E0	30 BD Hip 1	Off	30	BD Hip 1	Off	16	BD Gated	Off	16	BD Gated	Off	
17	F0	89 SD Off Center	Off	89	SD Off Center	Off	52	SD Piccolo1 f	Off	52	SD Piccolo1 f	Off	
18	F#0	177 HH4 Closed2	1	177	HH4 Closed2	1	161-162	HH2 Closed p-mp (2)	1	161-162	HH2 Closed p-mp (2)	1	
19	G0	18 BD Squash	Off	18	BD Squash	Off	38	BD Amb.Rocker	Off	38	BD Amb.Rocker	Off	
20	G#0	131 Side Stick Amb	Off	131	Side Stick Amb	Off	130	Side Stick Dry	Off	130	Side Stick Dry	Off	
21	A0	118 SD Vintage1	Off	118	SD Vintage1	Off	67	SD Maple1 f	7	67	SD Maple1 f	7	
22	A#0	125 SD Brasser	Off	125	SD Brasser	Off	68	SD Maple1 ff	7	68	SD Maple1 ff	7	
23	B0	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	
24	C1	220 SD Orchestra	7	220	SD Orchestra	7	56	SD Piccolo2 f	7	56	SD Piccolo2 f	7	
25	C#1	219 SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7	
26	D1	221 Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	
27	D#1	270 Zap2	Off	270	Zap2	Off	270	Zap2	Off	270	Zap2	Off	
28	E1	410 Noise White	Off	410	Noise White	Off	410	Noise White	Off	410	Noise White	Off	
29	F1	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	
30	F#1	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	
31	G1	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	
32	G#1	269 Zap1	Off	269	Zap1	Off	269	Zap1	Off	269	Zap1	Off	
33	A1	376 Click	Off	376	Click	Off	376	Click	Off	376	Click	Off	
34	A#1	340 Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	
35	B1	16 BD Gated	Off	34	BD Pop Kick	Off	38	BD Amb.Rocker	Off	7	BD Dry 3	Off	
36	C2	14 BD Terminator	Off	16	BD Gated	Off	38	BD Amb.Rocker	Off	38	BD Amb.Rocker	Off	
37	C#2	131 Side Stick Amb	Off	130	Side Stick Dry	Off	129	Rim Shot f	Off	129	Rim Shot f	Off	
38	D2	101 SD Dance	Off	99	SD Processed	Off	45-52	SD Wood 2 pp-f (6)	Off	53	SD Piccolo2 pp	Off	
39	D#2	225 Claps 4	Off	225	Claps 4	Off	230	88 Claps	Off	230	88 Claps	Off	
40	E2	100 SD Cracker Room	Off	116	SD Ringy	Off	46-56	SD Wood 2-Piccolo2 p-f (6)	Off	46-56	SD Wood 2-Piccolo2 p-f (6)	Off	
41	F2	148 Tom Processed	Off	148	Tom Processed	Off	140	Tom1 Floor f	Off	140	Tom1 Floor f	Off	
42	F#2	176 HH4 Closed1	1	177	HH4 Closed2	1	160-163	HH2 Closed pp-mf (4)	1	160-163	HH2 Closed pp-mf (4)	1	
43	G2	148 Tom Processed	Off	148	Tom Processed	Off	138	Tom1 Low f	Off	138	Tom1 Low f	Off	
44	G#2	172 HH3 Foot	1	178	HH4 Foot	1	157-156	HH1 Foot mf-mp (2)	1	157-156	HH1 Foot mf-mp (2)	1	
45	A2	148 Tom Processed	Off	148	Tom Processed	Off	138	Tom1 Low f	Off	138	Tom1 Low f	Off	
46	A#2	180 HH4 Open	1	180	HH4 Open	1	168-169	HH2 Open p-f (2)	1	168-169	HH2 Open p-f (2)	1	
47	B2	148 Tom Processed	Off	148	Tom Processed	Off	136	Tom1 Mid f	Off	136	Tom1 Mid f	Off	
48	C3	148 Tom Processed	Off	148	Tom Processed	Off	134	Tom1 Hi f	Off	134	Tom1 Hi f	Off	
49	C#3	196 Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	
50	D3	148 Tom Processed	Off	148	Tom Processed	Off	134	Tom1 Hi f	Off	134	Tom1 Hi f	Off	
51	D#3	213 Ride Edge 2	Off	213	Ride Edge 2	Off	207-209	Ride 20' mp2-mf2 (2)	Off	207-209	Ride 20' mp2-mf2 (2)	Off	
52	E3	198 China	Off	198	China	Off	198	China	Off	198	China	Off	
53	F3	214 Ride Jazz	Off	214	Ride Jazz	Off	206-208	Ride 20' mp1-mf1 (2)	Off	206-208	Ride 20' mp1-mf1 (2)	Off	
54	F#3	339 Tambourine Acc2	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off	
55	G3	201 Splash	Off	201	Splash	Off	201	Splash	Off	201	Splash	Off	
56	G#3	352 Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off	
57	A3	196 Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	
58	A#3	325 Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off	
59	B3	213 Ride Edge 2	Off	213	Ride Edge 2	Off	206	Ride 20' mp1	Off	206	Ride 20' mp1	Off	
60	C4	298 Bongo Hi Open	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	
61	C#4	295 Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	
62	D4	290 Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	
63	D#4	288 Conga Hi Open	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off	
64	E4	285 Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off	
65	F4	334 Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	
66	F#4	329 Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	
67	G4	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	
68	G#4	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	
69	A4	346 Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	
70	A#4	309 Maracas Push	Off	309	Maracas Push	Off	309	Maracas Push	Off	309	Maracas Push	Off	
71	B4	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	
72	C5	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	
73	C#5	308 Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	
74	D5	307 Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	
75	D#5	326 Claves	Off	326	Claves	Off	326	Claves	Off	326	Claves	Off	
76	E5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	
77	F5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	
78	F#5	342 Cuica Hi	4	342	Cuica Hi	4	342	Cuica Hi	4	342	Cuica Hi	4	
79	G5	343 Cuica Lo	4	343	Cuica Lo	4	343	Cuica Lo	4	343	Cuica Lo	4	
80	G#5	341 Triangle Mute	5	341	Triangle Mute	5	341	Triangle Mute	5	341	Triangle Mute	5	
81	A5	340 Triangle Open	5	340	Triangle Open	5	340	Triangle Open	5	340	Triangle Open	5	
82	A#5	347 Cabasa Down	Off	347	Cabasa Down	Off	347	Cabasa Down	Off	347	Cabasa Down	Off	
83	B5	355 Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	
84	C6	358 Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	
85	C#6	305 Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off	
86	D6	330 Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	
87	D#6	329 Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	
88	E6	370 Stadium	Off	370	Stadium	Off	370	Stadium	Off	370	Stadium	Off	



		120-0-24: Electro Kit			120-0-25: Analog Kit			120-0-26: House Kit 1			120-0-27: House Kit 2		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
0	C-1	45 SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45
1	C#-1	60 SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off	60
2	D-1	79 SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	79
3	D#-1	75 SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off	75
4	E-1	69 SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	69
5	F-1	63 SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	63
6	F#-1	57 SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off	57
7	G-1	53 SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53
8	G#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5
9	A-1	30 BD Hip 1	Off	400	Explosion	Off	34	BD Pop Kick	Off	34	BD Pop Kick	Off	34
10	A#-1	228 99 SD	Off	115	SD Hip6	Off	123	SD Vintage6	Off	228	99 SD	Off	228
11	B-1	226 88 BD	Off	8	BD Normal	Off	40	BD Deep 88	Off	40	BD Deep 88	Off	40
12	C0	227 88 SD	Off	98	SD Yowie	Off	227	88 SD	Off	227	88 SD	Off	227
13	C#0	89 SD Off Center	Off	90	SD Jazz Ring	Off	101	SD Dance	Off	101	SD Dance	Off	101
14	D0	120 SD Vintage3	Off	127	SD Whopper	Off	91	SD Amb.Piccolo	Off	91	SD Amb.Piccolo	Off	91
15	D#0	34 BD Pop Kick	Off	34	BD Pop Kick	Off	36	BD Ambient	Off	36	BD Ambient	Off	36
16	E0	36 BD Ambient	Off	35	BD Dance 99	Off	14	BD Terminator	Off	14	BD Terminator	Off	14
17	F0	115 SD Hip6	Off	125	SD Brasser	Off	121	SD Vintage4	Off	121	SD Vintage4	Off	121
18	F#0	231 88 HH Close	1	170	HH3 Closed1	1	270	Zap2	Off	270	Zap2	Off	270
19	G0	25 BD House 4	Off	30	BD Hip 1	Off	33	BD Hip 4	Off	33	BD Hip 4	Off	33
20	G#0	270 Zap2	Off	269	Zap1	Off	269	Zap1	Off	269	Zap1	Off	269
21	A0	99 SD Processed	Off	115	SD Hip6	Off	122	SD Vintage5	Off	122	SD Vintage5	Off	122
22	A#0	121 SD Vintage4	Off	117	SD Tiny	Off	429	Mouth Harp	Off	429	Mouth Harp	Off	429
23	B0	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132
24	C1	220 SD Orchestra	7	220	SD Orchestra	7	220	SD Orchestra	7	220	SD Orchestra	7	220
25	C#1	219 SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7	219
26	D1	221 Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	221
27	D#1	270 Zap2	Off	270	Zap2	Off	270	Zap2	Off	270	Zap2	Off	270
28	E1	410 Noise White	Off	410	Noise White	Off	410	Noise White	Off	410	Noise White	Off	410
29	F1	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272
30	F#1	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272
31	G1	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132
32	G#1	269 Zap1	Off	269	Zap1	Off	269	Zap1	Off	269	Zap1	Off	269
33	A1	376 Click	Off	376	Click	Off	376	Click	Off	376	Click	Off	376
34	A#1	340 Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	340
35	B1	20 BD Dance 2	Off	40	BD Deep 88	Off	32	BD Hip 3	Off	32	BD Hip 3	Off	32
36	C2	265 E.Tom FM	Off	40	BD Deep 88	Off	36	BD Ambient	Off	18	BD Squash	Off	18
37	C#2	268 Rim House2	Off	229	88 Rim Shot	Off	268	Rim House2	Off	446	Rek Jingle	Off	446
38	D2	266 E.Tom Real	Off	227	88 SD	Off	117	SD Tiny	Off	121	SD Vintage4	Off	121
39	D#2	230 88 Claps	Off	230	88 Claps	Off	230	88 Claps	Off	230	88 Claps	Off	230
40	E2	114 SD Hip5	Off	227	88 SD	Off	228	99 SD	Off	107	SD Rap	Off	107
41	F2	266 E.Tom Real	Off	236	88 Tom	Off	386	Tribe	Off	145	Tom3 Floor	Off	145
42	F#2	174 HH3 Open 2	1	231	88 HH Close	1	233	99 HH Close	1	183	HH Old TiteClose	1	183
43	G2	266 E.Tom Real	Off	236	88 Tom	Off	148	Tom Processed	Off	145	Tom3 Floor	Off	145
44	G#2	178 HH4 Foot	1	232	88 HH Open	1	180	HH4 Open	Off	189	HH Alpo Close	Off	189
45	A2	266 E.Tom Real	Off	236	88 Tom	Off	226	88 BD	Off	144	Tom3 Low	Off	144
46	A#2	173 HH3 Open 1	1	232	88 HH Open	1	234	99 HH Open	1	181	HH Old Close1	1	181
47	B2	266 E.Tom Real	Off	236	88 Tom	Off	266	E.Tom Real	Off	144	Tom3 Low	Off	144
48	C3	266 E.Tom Real	Off	236	88 Tom	Off	266	E.Tom Real	Off	143	Tom3 Hi	Off	143
49	C#3	196 Crash 1	Off	235	88 Crash	Off	196	Crash 1	Off	196	Crash 1	Off	196
50	D3	266 E.Tom Real	Off	236	88 Tom	Off	266	E.Tom Real	Off	143	Tom3 Hi	Off	143
51	D#3	213 Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	213
52	E3	202 Crash Reverse	Off	198	China	Off	202	Crash Reverse	Off	202	Crash Reverse	Off	202
53	F3	214 Ride Jazz	Off	214	Ride Jazz	Off	214	Ride Jazz	Off	214	Ride Jazz	Off	214
54	F#3	339 Tambourine Acc2	Off	411	Noise FM Mod	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off	339
55	G3	201 Splash	Off	201	Splash	Off	198	China	Off	198	China	Off	198
56	G#3	352 Cowbell	Off	239	88 Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off	352
57	A3	196 Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	196
58	A#3	325 Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off	325
59	B3	213 Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	213
60	C4	298 Bongo Hi Open	Off	237	88 Conga	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	298
61	C#4	295 Bongo Lo Open	Off	237	88 Conga	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	295
62	D4	290 Conga Hi Mt Slap	Off	237	88 Conga	Off	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	290
63	D#4	288 Conga Hi Open	Off	236	88 Tom	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off	288
64	E4	285 Conga Lo Open	Off	236	88 Tom	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off	285
65	F4	334 Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334
66	F#4	329 Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	329
67	G4	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351
68	G#4	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351
69	A4	346 Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	346
70	A#4	309 Maracas Push	Off	309	Maracas Push	Off	188	HH Hip	Off	336	Tambourine Push	Off	336
71	B4	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361
72	C5	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361
73	C#5	308 Guiro Short	3	308	Guio Short	3	308	Guio Short	3	308	Guio Short	3	308
74	D5	307 Guiro Long	3	307	Guio Long	3	307	Guio Long	3	307	Guio Long	3	307
75	D#5	326 Claves	Off	238	88 Claves	Off	326	Claves	Off	326	Claves	Off	326
76	E5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327
77	F5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327
78	F#5	342 Cuica Hi	4	342	Cuica Hi	4	366	Uhh	Off	342	Cuica Hi	4	342
79	G5	343 Cuica Lo	4	342	Cuica Hi	4	364	Yeah!	Off	343	Cuica Lo	4	343
80	G#5	341 Triangle Mute	5	357	Finger Cymbal	5	341	Triangle Mute	5	341	Triangle Mute	5	341
81	A5	340 Triangle Open	5	357	Finger Cymbal	5	340	Triangle Open	5	340	Triangle Open	5	340
82	A#5	347 Cabasa Down	Off	347	Cabasa Down	Off	185	HH Old Open2	Off	347	Cabasa Down	Off	347
83	B5	355 Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	355

		120-0-24: Electro Kit			120-0-25: Analog Kit			120-0-26: House Kit 1			120-0-27: House Kit 2		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
84	C6	358	Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off
85	C#6	305	Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off
86	D6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6
87	D#6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6
88	E6	370	Stadium	Off	370	Stadium	Off	370	Stadium	Off	370	Stadium	Off

		120-0-28: House Kit 3			120-0-29: House Kit 4			120-0-30: House Kit RX1			120-0-31: House Kit RX2		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
0	C-1	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off
1	C#-1	60	SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off
2	D-1	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off
3	D#-1	75	SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off
4	E-1	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off
5	F-1	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off
6	F#-1	57	SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off
7	G-1	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off
8	G#-1	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off
9	A-1	34	BD Pop Kick	Off	34	BD Pop Kick	Off	39	BD Pop 99	Off	40	BD Deep 88	Off
10	A#-1	228	99 SD	Off	228	99 SD	Off	111	SD Hip2	Off	112	SD Hip3	Off
11	B-1	40	BD Deep 88	Off	40	BD Deep 88	Off	264	Boom	Off	264	Boom	Off
12	C0	227	88 SD	Off	227	88 SD	Off	227	88 SD	Off	228	99 SD	Off
13	C#0	101	SD Dance	Off	101	SD Dance	Off	105	SD House4	Off	122	SD Vintage5	Off
14	D0	91	SD Amb.Piccolo	Off	91	SD Amb.Piccolo	Off	104	SD House3	Off	104	SD House3	Off
15	D#0	36	BD Ambient	Off	36	BD Ambient	Off	24	BD House 3	Off	24	BD House 3	Off
16	E0	14	BD Terminator	Off	14	BD Terminator	Off	29	BD Techno 2	Off	29	BD Techno 2	Off
17	F0	121	SD Vintage4	Off	121	SD Vintage4	Off	106	SD Small	Off	106	SD Small	Off
18	F#0	270	Zap2	Off	270	Zap2	Off	176	HH4 Closed1	1	180	HH4 Open	Off
19	G0	33	BD Hip 4	Off	33	BD Hip 4	Off	20	BD Dance 2	Off	20	BD Dance 2	Off
20	G#0	269	Zap1	Off	269	Zap1	Off	131	Side Stick Amb	Off	131	Side Stick Amb	Off
21	A0	122	SD Vintage5	Off	122	SD Vintage5	Off	111	SD Hip2	Off	116	SD Ringy	Off
22	A#0	429	Mouth Harp	Off	429	Mouth Harp	Off	92	SD Paper	Off	90	SD Jazz Ring	Off
23	B0	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	267	Rim House1	Off
24	C1	220	SD Orchestra	7	220	SD Orchestra	7	220	SD Orchestra	7	220	SD Orchestra	7
25	C#1	219	SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7
26	D1	221	Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off
27	D#1	270	Zap2	Off	270	Zap2	Off	270	Zap2	Off	270	Zap2	Off
28	E1	410	Noise White	Off	410	Noise White	Off	410	Noise White	Off	108	SD Noise	Off
29	F1	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7
30	F#1	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7
31	G1	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off
32	G#1	269	Zap1	Off	269	Zap1	Off	269	Zap1	Off	269	Zap1	Off
33	A1	376	Click	Off	376	Click	Off	376	Click	Off	376	Click	Off
34	A#1	340	Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off
35	B1	39	BD Pop 99	Off	32	BD Hip 3	Off	23	BD House 2	Off	39	BD Pop 99	Off
36	C2	35	BD Dance 99	Off	16	BD Gated	Off	22	BD House 1	Off	24	BD House 3	Off
37	C#2	268	Rim House2	Off	131	Side Stick Amb	Off	268	Rim House2	Off	229	88 Rim Shot	Off
38	D2	98	SD Yowie	Off	82	SD Dry 1	Off	103	SD House2	Off	102	SD House1	Off
39	D#2	230	88 Claps	Off	230	88 Claps	Off	230	88 Claps	Off	223	Claps 2	Off
40	E2	115	SD Hip6	Off	108	SD Noise	Off	87	SD Ghost f	Off	105	SD House4	Off
41	F2	266	E.Tom Real	Off	266	E.Tom Real	Off	145	Tom3 Floor	Off	145	Tom3 Floor	Off
42	F#2	231	88 HH Close	1	231	88 HH Close	1	233	99 HH Close	1	183	HH Old TiteClose	1
43	G2	266	E.Tom Real	Off	266	E.Tom Real	Off	141	Tom2 Hi	Off	141	Tom2 Hi	Off
44	G#2	231	88 HH Close	1	232	88 HH Open	Off	181	HH Old Close1	1	187	HH House Open2	1
45	A2	266	E.Tom Real	Off	266	E.Tom Real	Off	141	Tom2 Hi	Off	141	Tom2 Hi	Off
46	A#2	232	88 HH Open	1	232	88 HH Open	1	186	HH House Open1	1	168	HH2 Open p	1
47	B2	266	E.Tom Real	Off	266	E.Tom Real	Off	141	Tom2 Hi	Off	141	Tom2 Hi	Off
48	C3	266	E.Tom Real	Off	266	E.Tom Real	Off	141	Tom2 Hi	Off	141	Tom2 Hi	Off
49	C#3	196	Crash 1	Off	235	88 Crash	Off	196	Crash 1	Off	196	Crash 1	Off
50	D3	266	E.Tom Real	Off	266	E.Tom Real	Off	141	Tom2 Hi	Off	141	Tom2 Hi	Off
51	D#3	213	Ride Edge 2	Off	205	Ride Dance 99	Off	210	Ride Brush	Off	210	Ride Brush	Off
52	E3	202	Crash Reverse	Off	202	Crash Reverse	Off	202	Crash Reverse	Off	202	Crash Reverse	Off
53	F3	214	Ride Jazz	Off	214	Ride Jazz	Off	214	Ride Jazz	Off	214	Ride Jazz	Off
54	F#3	339	Tambourine Acc2	Off	338	Tambourine Acc1	Off	336	Tambourine Push	Off	339	Tambourine Acc2	Off
55	G3	201	Splash	Off	201	Splash	Off	201	Splash	Off	201	Splash	Off
56	G#3	352	Cowbell	Off	239	88 Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off
57	A3	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off
58	A#3	325	Vibraslap	Off	325	Vibraslap	Off	386	Tribe	Off	386	Tribe	Off
59	B3	213	Ride Edge 2	Off	213	Ride Edge 2	Off	263	Perc. Ahh	Off	263	Perc. Ahh	Off
60	C4	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	296	Bongo Lo Slap	Off
61	C#4	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off
62	D4	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off
63	D#4	288	Conga Hi Open	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off	297	Bongo Lo Stick	Off
64	E4	285	Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off
65	F4	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off
66	F#4	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off
67	G4	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off
68	G#4	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off
69	A4	346	Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off
70	A#4	188	HH Hip	Off	336	Tambourine Push	Off	309	Maracas Push	Off	309	Maracas Push	Off
71	B4	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2
72	C5	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2

		120-0-28: House Kit 3			120-0-29: House Kit 4			120-0-30: House Kit RX1			120-0-31: House Kit RX2		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
73	C#5	308 Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	
74	D5	307 Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	
75	D#5	326 Claves	Off	326	Claves	Off	326	Claves	Off	326	Claves	Off	
76	E5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	
77	F5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	
78	F#5	342 Cuica Hi	Off	342	Cuica Hi	4	261	Syn. FX4	4	261	Syn. FX4	4	
79	G5	342 Cuica Hi	Off	342	Cuica Hi	4	262	Syn. FX5	4	262	Syn. FX5	4	
80	G#5	360 Flexatone	5	360	Flexatone	5	341	Triangle Mute	5	341	Triangle Mute	5	
81	A5	360 Flexatone	5	360	Flexatone	5	340	Triangle Open	5	340	Triangle Open	5	
82	A#5	185 HH Old Open2	Off	347	Cabasa Down	Off	211	Ride Rivet	Off	349	Caxixi Hard	Off	
83	B5	355 Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	
84	C6	358 Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	
85	C#6	305 Castanet Single	Off	305	Castanet Single	Off	255	Syn. Castanet	Off	255	Syn. Castanet	Off	
86	D6	330 Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	
87	D#6	329 Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	
88	E6	370 Stadium	Off	370	Stadium	Off	370	Stadium	Off	370	Stadium	Off	

		120-0-32 (36-39): Jazz Kit RX1			120-0-33: Jazz Kit			120-0-34: Jazz Kit RX2			120-0-35: Jazz Kit RX3		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
0	C-1	45 SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	
1	C#-1	60 SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off	
2	D-1	79 SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	
3	D#-1	75 SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off	
4	E-1	69 SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	
5	F-1	63 SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	
6	F#-1	57 SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off	
7	G-1	53 SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	
8	G#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
9	A-1	25 BD House 4	Off	25	BD House 4	Off	25	BD House 4	Off	25	BD House 4	Off	
10	A#-1	228 99 SD	Off	228	99 SD	Off	228	99 SD	Off	228	99 SD	Off	
11	B-1	40 BD Deep 88	Off	40	BD Deep 88	Off	40	BD Deep 88	Off	40	BD Deep 88	Off	
12	C0	227 88 SD	Off	227	88 SD	Off	227	88 SD	Off	227	88 SD	Off	
13	C#0	60-62 SD Solid2 p-f (3)	Off	90	SD Jazz Ring	Off	60-62	SD Solid2 p-f (3)	Off	67	SD Maple1 f	Off	
14	D0	57-59 SD Solid1 p-f (3)	Off	91	SD Amb.Piccolo	Off	57-59	SD Solid1 p-f (3)	Off	66	SD Maple1 mf	Off	
15	D#0	10 BD Jazz (2)	Off	38	BD Amb.Rocker	Off	10	BD Jazz (2)	Off	38	BD Amb.Rocker	Off	
16	E0	7 BD Dry 3	Off	11	BD Pillow	Off	7	BD Dry 3	Off	11	BD Pillow	Off	
17	F0	42-44 SD Wood 1 p-f (3)	Off	88	SD Full Room	Off	53-56	SD Piccolo2 pp-f (4)	Off	67	SD Maple1 f	Off	
18	F#0	160-165 HH2 Closed pp-ff (6)	Off	171	HH3 Closed2	1	160-165	HH2 Closed pp-ff (6)	Off	171	HH3 Closed2	1	
19	G0	8 BD Normal	Off	5	BD Dry 1	Off	8	BD Normal	Off	5	BD Dry 1	Off	
20	G#0	129 Rim Shot f	Off	131	Side Stick Amb	Off	129	Rim Shot f	Off	131	Side Stick Amb	Off	
21	A0	69-74 SD Maple2 pp-ff (6)	Off	83	SD Dry 2	Off	69-74	SD Maple2 pp-ff (6)	Off	51	SD Piccolo1 mf	Off	
22	A#0	63-68 SD Maple1 pp-ff (6)	Off	93	SD Brush Hit	Off	63-68	SD Maple1 pp-ff (6)	Off	93	SD Brush Hit	Off	
23	B0	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	
24	C1	78-80 SD Brass2 p-f (3)	Off	220	SD Orchestra	7	78-80-59	SD Brass2 p-f - Solid1 f (4)	Off	76	SD Brass1 mf	7	
25	C#1	81 SD Roll	7	219	SD Orch. Roll	7	81	SD Roll	7	81	SD Roll	7	
26	D1	221 Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	
27	D#1	270 Zap2	Off	270	Zap2	Off	270	Zap2	Off	270	Zap2	Off	
28	E1	410 Noise White	Off	410	Noise White	Off	410	Noise White	Off	410	Noise White	Off	
29	F1	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	
30	F#1	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	
31	G1	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	
32	G#1	269 Zap1	Off	269	Zap1	Off	269	Zap1	Off	269	Zap1	Off	
33	A1	376 Click	Off	376	Click	Off	376	Click	Off	376	Click	Off	
34	A#1	340 Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	
35	B1	3-4 BD Acoust.2 mf-f (3)	Off	10	BD Jazz	Off	3-4	BD Acoust.2 mf-f (3)	Off	10	BD Jazz	Off	
36	C2	0-2 BD Acoust.1 p-f (4)	Off	9	BD SoftRoom	Off	0-2	BD Acoust.1 p-f (4)	Off	3-4	BD Acoust.2 mf-f (3)	Off	
37	C#2	128-129 Rim Shot p-f (2)	Off	131	Side Stick Amb	Off	128-129	Rim Shot p-f (2)	Off	131	Side Stick Amb	Off	
38	D2	53-56 SD Piccolo2 pp-f (4)	Off	82	SD Dry 1	Off	53-56	SD Piccolo2 pp-f (4)	Off	74	SD Maple2 ff	Off	
39	D#2	230 88 Claps	Off	230	88 Claps	Off	230	88 Claps	Off	230	88 Claps	Off	
40	E2	49-52 SD Piccolo1 pp-f (4)	Off	90	SD Jazz Ring	Off	49-52	SD Piccolo1 pp-f (4)	Off	64	SD Maple1 p	Off	
41	F2	139-140 Tom1 Floor p-f (2)	Off	150	Tom Jazz Floor	Off	139-140	Tom1 Floor p-f (2)	Off	150	Tom Jazz Floor	Off	
42	F#2	160-165 HH2 Closed pp-ff (6)	1	176	HH4 Closed1	1	160-165	HH2 Closed pp-ff (6)	1	160-165	HH2 Closed pp-ff (6)	1	
43	G2	137-138 Tom1 Low p-f (2)	Off	150	Tom Jazz Floor	Off	137-138	Tom1 Low p-f (2)	Off	150	Tom Jazz Floor	Off	
44	G#2	166-167 HH2 Foot p-f (2)	1	178	HH4 Foot	1	166-167	HH2 Foot p-f (2)	1	166-167	HH2 Foot p-f (2)	1	
45	A2	135-136 Tom1 Mid p-f (2)	Off	149	Tom Jazz Hi	Off	135-136	Tom1 Mid p-f (2)	Off	149	Tom Jazz Hi	Off	
46	A#2	168-169 HH2 Open p-f (2)	1	175	HH3 Sizzle	1	168-169	HH2 Open p-f (2)	1	168-169	HH2 Open p-f (2)	1	
47	B2	135-136 Tom1 Mid p-f (2)	Off	149	Tom Jazz Hi	Off	135-136	Tom1 Mid p-f (2)	Off	149	Tom Jazz Hi	Off	
48	C3	133-134 Tom1 Hi p-f (2)	Off	149	Tom Jazz Hi	Off	133-134	Tom1 Hi p-f (2)	Off	149	Tom Jazz Hi	Off	
49	C#3	193 Crash 17'edge2 (2)	Off	196	Crash 1	Off	193	Crash 17'edge2 (2)	Off	193	Crash 17'edge2 (2)	Off	
50	D3	133-134 Tom1 Hi p-f (2)	Off	149	Tom Jazz Hi	Off	133-134	Tom1 Hi p-f (2)	Off	149	Tom Jazz Hi	Off	
51	D#3	207 Ride 20' mp2 (2)	Off	213	Ride Edge 2	Off	207-209	Ride 20' mp2-mf2 (2)	Off	207-209	Ride 20' mp2-mf2 (2)	Off	
52	E3	198 China	Off	198	China	Off	198	China	Off	198	China	Off	
53	F3	215 Ride Cup	Off	215	Ride Cup	Off	214-215	Ride Jazz-Cup (2)	Off	215	Ride Cup	Off	
54	F#3	339 Tambourine Acc2	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off	
55	G3	199 Splash 8'edge1	Off	197	Crash 2	Off	199	Splash 8'edge1	Off	197	Crash 2	Off	
56	G#3	352 Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off	
57	A3	191 Crash 15'edge2 (2)	Off	196	Crash 1	Off	191	Crash 15'edge2 (2)	Off	191	Crash 15'edge2 (2)	Off	
58	A#3	325 Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off	
59	B3	206-208 Ride 20' mp1-mf1 (2)	Off	212	Ride Edge 1	Off	206-208	Ride 20' mp1-mf1 (2)	Off	212	Ride Edge 1	Off	
60	C4	298 Bongo Hi Open	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	
61	C#4	295 Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	

		120-0-32 (36~39): Jazz Kit RX1			120-0-33: Jazz Kit			120-0-34: Jazz Kit RX2			120-0-35: Jazz Kit RX3		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
62	D4	292 Conga Hi Slap2	Off	292	Conga Hi Slap2	Off	292	Conga Hi Slap2	Off	292	Conga Hi Slap2	Off	
63	D#4	288 Conga Hi Open	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off	
64	E4	285 Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off	
65	F4	334 Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	
66	F#4	329 Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	
67	G4	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	
68	G#4	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	
69	A4	346 Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	
70	A#4	309 Maracas Push	Off	309	Maracas Push	Off	309	Maracas Push	Off	309	Maracas Push	Off	
71	B4	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	
72	C5	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	
73	C#5	308 Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	
74	D5	307 Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	
75	D#5	326 Claves	Off	326	Claves	Off	326	Claves	Off	326	Claves	Off	
76	E5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	
77	F5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	
78	F#5	342 Cuica Hi	4	342	Cuica Hi	4	342	Cuica Hi	4	342	Cuica Hi	4	
79	G5	343 Cuica Lo	4	343	Cuica Lo	4	343	Cuica Lo	4	343	Cuica Lo	4	
80	G#5	341 Triangle Mute	5	341	Triangle Mute	5	341	Triangle Mute	5	341	Triangle Mute	5	
81	A5	340 Triangle Open	5	340	Triangle Open	5	340	Triangle Open	5	340	Triangle Open	5	
82	A#5	347 Cabasa Down	Off	347	Cabasa Down	Off	347	Cabasa Down	Off	347	Cabasa Down	Off	
83	B5	355 Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	
84	C6	358 Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	
85	C#6	305 Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off	
86	D6	330 Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	
87	D#6	329 Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	
88	E6	370 Stadium	Off	370	Stadium	Off	370	Stadium	Off	370	Stadium	Off	

		120-0-40 (43~47): Brush Kit 1			120-0-41: Brush Kit 2 VS			120-0-42: Brush Kit RX			120-0-48 (49, 52~55): Orchestra Kit		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
0	C-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
1	C#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
2	D-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
3	D#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
4	E-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
5	F-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
6	F#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
7	G-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
8	G#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
9	A-1	145 Tom3 Floor	Off	145	Tom3 Floor	Off	145	Tom3 Floor	Off	5	BD Dry 1	Off	
10	A#-1	145 Tom3 Floor	Off	145	Tom3 Floor	Off	145	Tom3 Floor	Off	5	BD Dry 1	Off	
11	B-1	145 Tom3 Floor	Off	145	Tom3 Floor	Off	145	Tom3 Floor	Off	5	BD Dry 1	Off	
12	C0	144 Tom3 Low	Off	144	Tom3 Low	Off	144	Tom3 Low	Off	5	BD Dry 1	Off	
13	C#0	143 Tom3 Hi	Off	143	Tom3 Hi	Off	143	Tom3 Hi	Off	5	BD Dry 1	Off	
14	D0	83 SD Dry 2	Off	83	SD Dry 2	Off	83	SD Dry 2	Off	5	BD Dry 1	Off	
15	D#0	10 BD Jazz	Off	10	BD Jazz	Off	10	BD Jazz	Off	5	BD Dry 1	Off	
16	E0	11 BD Pillow	Off	11	BD Pillow	Off	11	BD Pillow	Off	5	BD Dry 1	Off	
17	F0	221 Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	5	BD Dry 1	Off	
18	F#0	170 HH3 Closed1	1	170	HH3 Closed1	1	170	HH3 Closed1	Off	5	BD Dry 1	Off	
19	G0	7 BD Dry 3	Off	7	BD Dry 3	Off	7	BD Dry 3	Off	5	BD Dry 1	Off	
20	G#0	130 Side Stick Dry	Off	130	Side Stick Dry	Off	130	Side Stick Dry	Off	5	BD Dry 1	Off	
21	A0	94 SD Brush Tap1	7	94	SD Brush Tap1	7	94	SD Brush Tap1	7	5	BD Dry 1	Off	
22	A#0	94 SD Brush Tap1	7	94	SD Brush Tap1	7	94	SD Brush Tap1	7	5	BD Dry 1	Off	
23	B0	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	5	BD Dry 1	Off	
24	C1	220 SD Orchestra	7	220	SD Orchestra	7	220	SD Orchestra	7	220	SD Orchestra	7	
25	C#1	219 SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7	
26	D1	221 Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	
27	D#1	270 Zap2	Off	270	Zap2	Off	270	Zap2	Off	170	HH3 Closed1	Off	
28	E1	410 Noise White	Off	410	Noise White	Off	410	Noise White	Off	172	HH3 Foot	Off	
29	F1	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	173	HH3 Open 1	7	
30	F#1	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	212	Ride Edge 1	Off	
31	G1	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	
32	G#1	269 Zap1	Off	269	Zap1	Off	269	Zap1	Off	269	Zap1	Off	
33	A1	376 Click	Off	376	Click	Off	376	Click	Off	376	Click	Off	
34	A#1	340 Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	
35	B1	11 BD Pillow	Off	10	BD Jazz	Off	10	BD Jazz	Off	9	BD SoftRoom	Off	
36	C2	10 BD Jazz	Off	9-8	BD SoftRoom-Normal (2)	Off	9-8	BD SoftRoom-Normal (2)	Off	216	BD Orchestra	Off	
37	C#2	131 Side Stick Amb	Off	94	SD Brush Tap1	Off	94	SD Brush Tap1	Off	131	Side Stick Amb	Off	
38	D2	94 SD Brush Tap1	Off	95-94	SD Brush Tap2-1 (2)	Off	94	SD Brush Tap1	Off	220	SD Orchestra	Off	
39	D#2	93 SD Brush Hit	Off	93-90	SD Brush Hit-Jazz Ring (2)	Off	93-59	SD Brush Hit-Solid1 f (2)	Off	305	Castanet Single	Off	
40	E2	96 SD Brush Swirl	Off	96	SD Brush Swirl (2)	Off	96	SD Brush Swirl (2)	Off	220	SD Orchestra	Off	
41	F2	151 Tom Brush Hi	Off	151	Tom Brush Hi	Off	151	Tom Brush Hi	Off	218	Timpani	Off	
42	F#2	174 HH3 Open 2	1	174	HH3 Open 2	1	160~165	HH2 Closed pp~ff (6)	1	218	Timpani	Off	
43	G2	151 Tom Brush Hi	Off	151	Tom Brush Hi	Off	151	Tom Brush Hi	Off	218	Timpani	Off	
44	G#2	178 HH4 Foot	1	178	HH4 Foot	1	166-167	HH2 Foot p-f (2)	1	218	Timpani	Off	
45	A2	151 Tom Brush Hi	Off	151	Tom Brush Hi	Off	151	Tom Brush Hi	Off	218	Timpani	Off	
46	A#2	179 HH4 FootOpen	1	179	HH4 FootOpen	1	168-169	HH2 Open p-f (2)	1	218	Timpani	Off	
47	B2	151 Tom Brush Hi	Off	151	Tom Brush Hi	Off	151	Tom Brush Hi	Off	218	Timpani	Off	
48	C3	151 Tom Brush Hi	Off	151	Tom Brush Hi	Off	151	Tom Brush Hi	Off	218	Timpani	Off	
49	C#3	196 Crash 1	Off	196	Crash 1	Off	193	Crash 17'edge2 (2)	Off	218	Timpani	Off	
50	D3	151 Tom Brush Hi	Off	151	Tom Brush Hi	Off	151	Tom Brush Hi	Off	218	Timpani	Off	



120-0-40 (43~47): Brush Kit 1				120-0-41: Brush Kit 2 VS				120-0-42: Brush Kit RX				120-0-48 (49, 52~55): Orchestra Kit			
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.
51	D#3	212 Ride Edge 1	Off	212	Ride Edge 1	Off	210	Ride Brush (2)	Off	218	Timpani	Off			
52	E3	198 China	Off	198	China	Off	198	China	Off	218	Timpani	Off			
53	F3	214 Ride Jazz	Off	214	Ride Jazz	Off	214	Ride Jazz	Off	218	Timpani	Off			
54	F#3	339 Tambourine Acc2	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off			
55	G3	201 Splash	Off	201	Splash	Off	197	Crash 2	Off	201	Splash	Off			
56	G#3	352 Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off			
57	A3	196 Crash 1	Off	196	Crash 1	Off	191	Crash 15'edge2 (2)	Off	196	Crash 1	Off			
58	A#3	325 Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off			
59	B3	213 Ride Edge 2	Off	213	Ride Edge 2	Off	211	Ride Rivet (2)	Off	217	Orchestra Cymbal	Off			
60	C4	298 Bongo Hi Open	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off			
61	C#4	295 Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off			
62	D4	290 Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off			
63	D#4	288 Conga Hi Open	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off			
64	E4	285 Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off			
65	F4	334 Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off			
66	F#4	329 Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off			
67	G4	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off			
68	G#4	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off			
69	A4	346 Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off			
70	A#4	309 Maracas Push	Off	309	Maracas Push	Off	309	Maracas Push	Off	309	Maracas Push	Off			
71	B4	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2			
72	C5	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2			
73	C#5	308 Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3			
74	D5	307 Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3			
75	D#5	326 Claves	Off	326	Claves	Off	326	Claves	Off	326	Claves	Off			
76	E5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off			
77	F5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off			
78	F#5	342 Cuica Hi	4	342	Cuica Hi	4	342	Cuica Hi	4	342	Cuica Hi	4			
79	G5	343 Cuica Lo	4	343	Cuica Lo	4	343	Cuica Lo	4	343	Cuica Lo	4			
80	G#5	341 Triangle Mute	5	341	Triangle Mute	5	341	Triangle Mute	5	341	Triangle Mute	5			
81	A5	340 Triangle Open	5	340	Triangle Open	5	340	Triangle Open	5	340	Triangle Open	5			
82	A#5	347 Cabasa Down	Off	347	Cabasa Down	Off	347	Cabasa Down	Off	347	Cabasa Down	Off			
83	B5	355 Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off			
84	C6	358 Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off			
85	C#6	305 Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off			
86	D6	330 Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6			
87	D#6	329 Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6			
88	E6	370 Stadium	Off	370	Stadium	Off	370	Stadium	Off	370	Stadium	Off			

120-0-50: Bdrum & Sdrum				120-0-51 (116): Arabian Kit 1				120-0-56 (57~63): SFX Kit				120-0-64 (68~71): Percussion Kit			
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.
0	C-1	386 Tribe	Off	45	SD Wood 2 pp	Off					5	BD Dry 1	Off		
1	C#-1	269 Zap1	Off	60	SD Solid2 p	Off					5	BD Dry 1	Off		
2	D-1	236 88 Tom	Off	79	SD Brass2 mf	Off					5	BD Dry 1	Off		
3	D#-1	226 88 BD	Off	75	SD Brass1 p	Off					5	BD Dry 1	Off		
4	E-1	226 88 BD	Off	69	SD Maple2 pp	Off					5	BD Dry 1	Off		
5	F-1	33 BD Hip 4	Off	63	SD Maple1 pp	Off					5	BD Dry 1	Off		
6	F#-1	34 BD Pop Kick	Off	57	SD Solid1 p	Off					5	BD Dry 1	Off		
7	G-1	30 BD Hip 1	Off	53	SD Piccolo2 pp	Off					5	BD Dry 1	Off		
8	G#-1	26 BD House 5	Off	5	BD Dry 1	Off					5	BD Dry 1	Off		
9	A-1	39 BD Pop 99	Off	25	BD House 4	Off					5	BD Dry 1	Off		
10	A#-1	226 88 BD	Off	228	99 SD	Off					5	BD Dry 1	Off		
11	B-1	265 E.Tom FM	Off	226	88 BD	Off					5	BD Dry 1	Off		
12	C0	39 BD Pop 99	Off	227	88 SD	Off					5	BD Dry 1	Off		
13	C#0	38 BD Amb.Rocker	Off	88	SD Full Room	Off					5	BD Dry 1	Off		
14	D0	36 BD Ambient	Off	99	SD Processed	1					308	Guio Short	Off		
15	D#0	35 BD Dance 99	Off	5	BD Dry 1	Off					336	Tambourine Push	Off		
16	E0	34 BD Pop Kick	Off	17	BD Tight	Off					337	Tambourine Pull	Off		
17	F0	33 BD Hip 4	Off	82	SD Dry 1	Off					338	Tambourine Acc1	Off		
18	F#0	32 BD Hip 3	Off	171	HH3 Closed2	1					338	Tambourine Acc1	Off		
19	G0	30 BD Hip 1	Off	7	BD Dry 3	Off					339	Tambourine Acc2	Off		
20	G#0	26 BD House 5	Off	131	Side Stick Amb	Off					339	Tambourine Acc2 (2)	Off		
21	A0	21 BD Dance 3	Off	132	Drum Stick Hit	Off					336	Tambourine Push	Off		
22	A#0	20 BD Dance 2	Off	412	Tubular	Off					339	Tambourine Acc2 (2)	Off		
23	B0	18 BD Squash	Off	352	Cowbell	Off					446	Rek Jingle	Off		
24	C1	41 BD Klanger	Off	352	Cowbell	Off	5	BD Dry 1	Off	360	Flexatone	Off			
25	C#1	40 BD Deep 88	Off	219	SD Orch. Roll	Off	5	BD Dry 1	Off	357	Finger Cymbal	Off			
26	D1	40 BD Deep 88	Off	221	Finger Snaps	Off	5	BD Dry 1	Off	324	Tsuzumi	Off			
27	D#1	226 88 BD	Off	270	Zap2	Off	425	Amp Noise	Off	299	Bongo Hi Slap	Off			
28	E1	17 BD Tight	Off	171	HH3 Closed2	Off	362	Chinese Gong	Off	300	Bongo Hi Stick1	Off			
29	F1	40 BD Deep 88	Off	272	DJ Scratch2	Off	280	DJ BD Rub	Off	297	Bongo Lo Stick	Off			
30	F#1	25 BD House 4	Off	272	DJ Scratch2	Off	275	DJ Scratch5	Off	338	Tambourine Acc1	Off			
31	G1	19 BD Dance 1	Off	132	Drum Stick Hit	Off	281	DJ SD Rub	Off	351	Agogo Bell	Off			
32	G#1	21 BD Dance 3	Off	292	Conga Hi Slap2	Off	272	DJ Scratch2	Off	402	Wind	Off			
33	A1	31 BD Hip 2	Off	376	Click	Off	415	Gtr Cut Noise1	Off	351	Agogo Bell	Off			
34	A#1	37 BD Amb.Crackle	Off	376	Click	Off	416	Gtr Cut Noise2	Off	301	Bongo Hi Stick2	Off			
35	B1	40 BD Deep 88	Off	7	BD Dry 3	Off	421	E.Gtr Pick1	Off	327	Woodblock1	Off			
36	C2	25 BD House 4	Off	25	BD House 4	Off	423	Gtr Scratch1	Off	326	Claves	Off			
37	C#2	34 BD Pop Kick	Off	130	Side Stick Dry	Off	419	Dist. Slide1	Off	328	Woodblock2	Off			
38	D2	17 BD Tight	Off	84	SD Dry 3	Off	420	Dist. Slide2	Off	352	Cowbell	Off			
39	D#2	6 BD Dry 2	Off	464	Alkis	Off	270	Zap2	Off	327	Woodblock1	Off			

		120-0-50: Bdrum & Sdrum			120-0-51 (116): Arabian Kit 1			120-0-56 (57-63): SFX Kit			120-0-64 (68-71): Percussion Kit		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
40	E2	7 BD Dry 3	Off	124	SD AmbiHop	Off	396	Gun Shot1	Off	306	Castanet Double	Off	
41	F2	12 BD Woofer	Off	145	Tom3 Floor	Off	271	DJ Scratch1	7	311	Baya Open	Off	
42	F#2	8 BD Normal	Off	172	HH3 Foot	1	272	DJ Scratch2	7	344	Shaker1	Off	
43	G2	5 BD Dry 1	Off	145	Tom3 Floor	Off	132	Drum Stick Hit	Off	313	Baya Mute1	Off	
44	G#2	15 BD Tubby	Off	178	HH4 Foot	1	270	Zap2	Off	309	Maracas Push	Off	
45	A2	8 BD Normal	Off	144	Tom3 Low	Off	376	Click	Off	311	Baya Open	Off	
46	A#2	5 BD Dry 1	Off	173	HH3 Open 1	1	351	Agogo Bell	Off	346	Cabasa Up	Off	
47	B2	8 BD Normal	Off	144	Tom3 Low	Off	418	Fret Noise	Off	317	Tabla Open	Off	
48	C3	11 BD Pillow	Off	143	Tom3 Hi	Off	415	Gtr Cut Noise1	Off	319	Tabla Mute1	Off	
49	C#3	216 BD Orchestra	Off	196	Crash 1	Off	416	Gtr Cut Noise2	Off	325	Vibraslap	Off	
50	D3	16 BD Gated	Off	143	Tom3 Hi	Off	415	Gtr Cut Noise1	Off	316	Tabla Na	Off	
51	D#3	15 BD Tubby	Off	213	Ride Edge 2	Off	221	Finger Snaps	Off	341	Triangle Mute	3	
52	E3	13 BD MondoKill	Off	479	Hollo1	Off	373	Laughing	Off	216	BD Orchestra	Off	
53	F3	15 BD Tubby	Off	480	Hollo2	Off	372	Scream	Off	340	Triangle Open	3	
54	F#3	14 BD Terminator	Off	338	Tambourine Acc1	Off	385	Punch	Off	308	Guero Short	Off	
55	G3	20 BD Dance 2	Off	472	Darbuka2	Off	384	Heart Beat	Off	430	Jingle Bell	Off	
56	G#3	265 E.Tom FM	Off	352	Cowbell	Off	375	Footsteps2	Off	307	Guero Long	Off	
57	A3	236 88 Tom	Off	477	Darbuka D3	Off	374	Footsteps1	Off	359	Marc TreeLP	Off	
58	A#3	40 BD Deep 88	Off	346	Cabasa Up	Off	371	Applause	Off	358	Marc Tree	Off	
59	B3	21 BD Dance 3	Off	466	Bandir Closed	Off	388	Door Creak	Off	309	Maracas Push	Off	
60	C4	84 SD Dry 3	Off	480	Hollo2	Off	389	Door Slam	Off	225	Claps 4	Off	
61	C#4	88 SD Full Room	Off	295	Bongo Lo Open	Off	272	DJ Scratch2	Off	230	88 Claps	Off	
62	D4	89 SD Off Center	Off	480	Hollo2	Off	358	Marc Tree	Off	271	DJ Scratch1	Off	
63	D#4	90 SD Jazz Ring	Off	298	Bongo Hi Open	Off	390	Car Engine	Off	272	DJ Scratch2	Off	
64	E4	82 SD Dry 1	Off	437	Douf Rim Ak	Off	391	Car Stop	Off	277	DJ Hit Rub	Off	
65	F4	92 SD Paper	Off	471	Darbuka1 Closed	Off	392	Car Pass	Off	361	Samba Whistle	Off	
66	F#4	121 SD Vintage4	Off	475	Darbuka D1	4	393	Car Crash	Off	361	Samba Whistle	Off	
67	G4	125 SD Brasser	Off	473	Darbuka3	4	381	Crickets	Off	292	Conga Hi Slap2	Off	
68	G#4	98 SD Yowie	Off	476	Darbuka D2	Off	394	Train	Off	293	Conga Heel	Off	
69	A4	100 SD Cracker Room	Off	468	Darbuka1 Tek1	Off	410	Noise White	Off	288	Conga Hi Open	Off	
70	A#4	97 SD Big Rock	Off	468	Darbuka1 Tek1	Off	395	Helicopter	Off	285	Conga Lo Open	Off	
71	B4	115 SD Hip6	Off	470	Darbuka1 DumOp	Off	427	Swish Terra	Off	342	Cuica Hi	Off	
72	C5	99 SD Processed	Off	486	Tef1	Off	396	Gun Shot1	Off	343	Cuica Lo	Off	
73	C#5	101 SD Dance	Off	487	Tef2	Off	398	Machine Gun	Off	335	Timbale Paila	Off	
74	D5	108 SD Noise	Off	447	Rik1	Off	399	Laser Gun	Off	334	Timbale Hi Rim2	Off	
75	D#5	118 SD Vintage1	Off	449	Rik3	Off	400	Explosion	Off	333	Timbale Hi Rim1	Off	
76	E5	98 SD Yowie	Off	487	Tef2	Off	379	Dog	Off	329	Timbale Lo Open	Off	
77	F5	126 SD Chili	Off	486	Tef1	Off	380	Gallop	Off	238	88 Claves	Off	
78	F#5	266 E.Tom Real	Off	487	Tef2	Off	377	Bird1	Off	239	88 Cowbell	Off	
79	G5	228 99 SD	Off	445	Rek Dom Ak	Off	387	Rainstick	Off	221	Finger Snaps	Off	
80	G#5	227 88 SD	Off	486	Tef1	Off	401	Thunder	Off	323	Taiko Rim	Off	
81	A5	227 88 SD	Off	448	Rik2	Off	402	Wind	Off	322	Taiko Open	Off	
82	A#5	228 99 SD	Off	488	Tef3	Off	410	Noise White	Off	270	Zap2	Off	
83	B5	111 SD Hip2	Off	487	Tef2	Off	403	Stream	Off	219	SD Orch. Roll	5	
84	C6	95 SD Brush Tap2	Off	431	Bells Open	2	404	Bubble	Off	220	SD Orchestra	5	
85	C#6	94 SD Brush Tap1	Off	450	Sagat Half Open	2	382	Cat	Off	217	Orchestra Cymbal	6	
86	D6	93 SD Brush Hit	Off	451	Sagat Close	2	378	Bird2	Off	217	Orchestra Cymbal	6	
87	D#6	93 SD Brush Hit	Off	478	Davul	Off	383	Growl	Off	463	Udu f Open	Off	
88	E6	93 SD Brush Hit	Off	484	Ramazan DVL2	3	370	Stadium	Off	282	Orchestra Hit	Off	
89	F6	96 SD Brush Swirl	Off	483	Ramazan DVL1	3	406	Telephone Ring	Off	282	Orchestra Hit	Off	
90	F#6	96 SD Brush Swirl	Off	485	Ramazan DVL3	3	405	Church Bell	Off	282	Orchestra Hit	Off	
91	G6	96 SD Brush Swirl	Off	482	Kup2	5	371	Applause	Off	282	Orchestra Hit	Off	
92	G#6	82 SD Dry 1	Off	149	Tom Jazz Hi	5	371	Applause	Off	282	Orchestra Hit	Off	
93	A6	84 SD Dry 3	Off	482	Kup2	5	370	Stadium	Off	282	Orchestra Hit	Off	
94	A#6	97 SD Big Rock	Off	481	Kup1	Off	410	Noise White	Off	282	Orchestra Hit	Off	
95	B6	124 SD AmbiHop	Off	7	BD Dry 3	Off	396	Gun Shot1	Off	282	Orchestra Hit	Off	
96	C7	110 SD Hip1	Off	481	Kup1	Off	394	Train	Off	282	Orchestra Hit	Off	
97	C#7	118 SD Vintage1	Off							282	Orchestra Hit	Off	
98	D7	112 SD Hip3	Off							282	Orchestra Hit	Off	
99	D#7	123 SD Vintage6	Off							282	Orchestra Hit	Off	
100	E7	270 Zap2	Off							282	Orchestra Hit	Off	
101	F7	114 SD Hip5	Off							282	Orchestra Hit	Off	
102	F#7	127 SD Whopper	Off							282	Orchestra Hit	Off	
103	G7	125 SD Brasser	Off							282	Orchestra Hit	Off	
104	G#7	118 SD Vintage1	Off							282	Orchestra Hit	Off	
105	A7	228 99 SD	Off							282	Orchestra Hit	Off	
106	A#7	127 SD Whopper	Off							282	Orchestra Hit	Off	
107	B7	127 SD Whopper	Off							282	Orchestra Hit	Off	
108	C8	101 SD Dance	Off							282	Orchestra Hit	Off	
109	C#8	101 SD Dance	Off							419	Dist. Slide1	Off	
110	D8	228 99 SD	Off							420	Dist. Slide2	Off	
111	D#8	228 99 SD	Off							415	Gtr Cut Noise1	Off	
112	E8	116 SD Ringy	Off							416	Gtr Cut Noise2	Off	
113	F8									421	E.Gtr Pick1	Off	
114	F#8									422	E.Gtr Pick2	Off	
115	G8									423	Gtr Scratch1	Off	
116	G#8									424	Gtr Scratch2	Off	
117	A8									418	Fret Noise	Off	
118	A#8									417	Power Chord	Off	
119	B8									417	Power Chord	Off	
120	C9									425	Amp Noise	Off	



120-0-65: Latin Perc Kit				120-0-66: Trinity Perc Kit				120-0-67: i30 Perc Kit				120-0-72: HipHop Kit RX			
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.
0	C-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	45	SD Wood 2 pp	Off			
1	C#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	60	SD Solid2 p	Off			
2	D-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	79	SD Brass2 mf	Off			
3	D#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	75	SD Brass1 p	Off			
4	E-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	69	SD Maple2 pp	Off			
5	F-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	63	SD Maple1 pp	Off			
6	F#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	57	SD Solid1 p	Off			
7	G-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	53	SD Piccolo2 pp	Off			
8	G#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off			
9	A-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	18	BD Squash	Off			
10	A#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	115	SD Hip6	Off			
11	B-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	226	88 BD	Off			
12	C0	5 BD Dry 1	Off	449	Rik3	Off	5	BD Dry 1	Off	227	88 SD	Off			
13	C#0	5 BD Dry 1	Off	448	Rik2	Off	5	BD Dry 1	Off	112	SD Hip3	Off			
14	D0	5 BD Dry 1	Off	447	Rik1	Off	5	BD Dry 1	Off	246	Syn. SD1	Off			
15	D#0	5 BD Dry 1	Off	446	Rek Jingle	Off	5	BD Dry 1	Off	36	BD Ambient	Off			
16	E0	5 BD Dry 1	Off	445	Rek Dom Ak	Off	337	Tambourine Pull	Off	245	Syn. BD Buzz	Off			
17	F0	5 BD Dry 1	Off	435	Djembe Bass	Off	338	Tambourine Acc1	Off	246	Syn. SD1	Off			
18	F#0	367 Hit It	Off	322	Taiko Open	Off	338	Tambourine Acc1	Off	174	HH3 Open 2	1			
19	G0	365 Yeah! Solo	Off	444	Pand Pattern4	Off	339	Tambourine Acc2	Off	244	Syn. BD4	Off			
20	G#0	364 Yeah!	Off	443	Pand Pattern3	Off	339-5	Tamb. Acc2-BD Dry 1 (2)	Off	130	Side Stick Dry	Off			
21	A0	368 Uhhhh Solo	Off	442	Pand Pattern2	Off	336	Tambourine Push	Off	248	Syn. SD3	Off			
22	A#0	341 Triangle Mute	7	441	Pand Pattern1	Off	339	Tambourine Acc2	Off	115	SD Hip6	Off			
23	B0	340 Triangle Open	7	440	Pand Open	Off	316	Tabla Na	Off	132	Drum Stick Hit	Off			
24	C1	360 Flexatone	Off	322-323	Taiko Open-Rim (2)	Off	360	Flexatone	Off	220	SD Orchestra	7			
25	C#1	357 Finger Cymbal	Off	324	Tsuzumi (2)	Off	357	Finger Cymbal	Off	219	SD Orch. Roll	7			
26	D1	239 88 Cowbell	Off	302	Djembe Open (2)	Off	324	Tsuzumi	Off	221	Finger Snaps	Off			
27	D#1	306 Castanet Double	Off	303-304	Djembe Mute-Slap (2)	Off	299	Bongo Hi Slap	Off	270	Zap2	Off			
28	E1	305 Castanet Single	Off	311-312	Baya Open-Ghe (2)	Off	300	Bongo Hi Stick1	Off	410	Noise White	Off			
29	F1	221 Finger Snaps	Off	314-313	Baya Mute2-Mute1 (2)	Off	297	Bongo Lo Stick	Off	272	DJ Scratch2	7			
30	F#1	221 Finger Snaps	Off	435-315	Djembe Bass-Baya Mute3 (2)	Off	338	Tambourine Acc1	Off	272	DJ Scratch2	7			
31	G1	183 HH Old TiteClose	Off	317	Tabla Open (2)	Off	351	Agogo Bell	Off	132	Drum Stick Hit	Off			
32	G#1	363 Metal Hit	Off	321-318	Tabla Mute3-Tin (2)	Off	402	Wind	Off	269	Zap1	Off			
33	A1	324 Tsuzumi	Off	320-319	Tabla Mute2-Mute1 (2)	Off	351	Agogo Bell	Off	376	Click	Off			
34	A#1	324 Tsuzumi	Off	320-316	Tabla Mute2-Na (2)	6	301	Bongo Hi Stick2	Off	340	Triangle Open	Off			
35	B1	324 Tsuzumi	Off	319	Tabla Mute1	Off	327	Woodblock1	Off	242	Syn. BD2	Off			
36	C2	216 BD Orchestra	1	216	BD Orchestra	Off	326	Claves	Off	241	Syn. BD1	Off			
37	C#2	216 BD Orchestra	1	386	Tribe	Off	328	Woodblock2	Off	250	Syn. Rim Click	Off			
38	D2	351 Agogo Bell	Off	221	Finger Snaps	Off	352	Cowbell	Off	247	Syn. SD2	Off			
39	D#2	351 Agogo Bell	Off	225	Claps 4	Off	327	Woodblock1	Off	230	88 Claps	Off			
40	E2	285 Conga Lo Open	Off	341	Triangle Mute	1	306	Castanet Double	Off	249	Syn. SD4	Off			
41	F2	286 Conga Lo Mt Slap	Off	340	Triangle Open	1	311	Baya Open	Off	141	Tom2 Hi	Off			
42	F#2	291 Conga Hi Slap1	Off	306	Castanet Double	Off	344	Shaker1	Off	251	Syn. HH Closed	1			
43	G2	292 Conga Hi Slap2	Off	305	Castanet Single	Off	313	Baya Mute1	Off	141	Tom2 Hi	Off			
44	G#2	240 88 Maracas	Off	306	Castanet Double	Off	309	Maracas Push	Off	184	HH Old Close2	Off			
45	A2	288 Conga Hi Open	Off	307	Guiro Long	2	311	Baya Open	Off	141	Tom2 Hi	Off			
46	A#2	341 Triangle Mute	2	308	Guiro Short	2	346	Cabasa Up	Off	252	Syn. HH Open	1			
47	B2	340 Triangle Open	2	307	Guiro Long	2	317	Tabla Open	Off	141	Tom2 Hi	Off			
48	C3	286 Conga Lo Mt Slap	Off	325	Vibraslap	Off	319	Tabla Mute1	Off	141	Tom2 Hi	Off			
49	C#3	289 Conga Hi Mute	Off	326	Claves	Off	325	Vibraslap	Off	196	Crash 1	Off			
50	D3	292 Conga Hi Slap2	Off	238	88 Claves	Off	316	Tabla Na	Off	141	Tom2 Hi	Off			
51	D#3	338 Tambourine Acc1	Off	343	Cuica Lo (2)	3	341	Triangle Mute	3	210	Ride Brush	Off			
52	E3	288 Conga Hi Open	Off	342	Cuica Hi (2)	Off	216	BD Orchestra	Off	202	Crash Reverse	Off			
53	F3	297 Bongo Lo Stick	Off	329	Timbale Lo Open	Off	340	Triangle Open	3	214	Ride Jazz	Off			
54	F#3	297 Bongo Lo Stick	Off	327	Woodblock1	Off	308	Guiro Short	Off	339	Tambourine Acc2	Off			
55	G3	300 Bongo Hi Stick1	Off	331	Timbale Lo Rim	Off	430	Jingle Bell	Off	201	Splash	Off			
56	G#3	329 Timbale Lo Open	Off	327	Woodblock1	Off	307	Guiro Long	Off	259	Syn. FX2	Off			
57	A3	301 Bongo Hi Stick2	Off	330	Timbale Lo Mute	Off	359	Marc TreeLP	Off	196	Crash 1	Off			
58	A#3	329 Timbale Lo Open	Off	327	Woodblock1	Off	358	Marc Tree	Off	325	Vibraslap	Off			
59	B3	338 Tambourine Acc1	Off	332	Timbale Hi Edge	Off	309	Maracas Push	Off	211	Ride Rivet	Off			
60	C4	335 Timbale Paila	Off	334	Timbale Hi Rim2	Off	225	Claps 4	Off	253	Syn. Bongo1	Off			
61	C#4	332 Timbale Hi Edge	Off	353	Chacha Bell	Off	230	88 Claps	Off	254	Syn. Bongo2	Off			
62	D4	335 Timbale Paila	Off	333	Timbale Hi Rim1	Off	271	DJ Scratch1	Off	290	Conga Hi Mt Slap	Off			
63	D#4	332 Timbale Hi Edge	Off	354	Mambo Bell	Off	272	DJ Scratch2	Off	288	Conga Hi Open	Off			
64	E4	334 Timbale Hi Rim2	Off	335	Timbale Paila (2)	Off	277	DJ Hit Rub	Off	285	Conga Lo Open	Off			
65	F4	333 Timbale Hi Rim1	Off	295	Bongo Lo Open	Off	361	Samba Whistle	Off	334	Timbale Hi Rim2	Off			
66	F#4	445 Rek Dom Ak	Off	352	Cowbell	Off	361	Samba Whistle	Off	329	Timbale Lo Open	Off			
67	G4	445 Rek Dom Ak	Off	296	Bongo Lo Slap	Off	292	Conga Hi Slap2	Off	258	Syn. FX1	Off			
68	G#4	445 Rek Dom Ak	Off	352	Cowbell	Off	293	Conga Heel	Off	259	Syn. FX2	Off			
69	A4	446 Rek Jingle	Off	298	Bongo Hi Open	Off	288	Conga Hi Open	Off	346	Cabasa Up	Off			
70	A#4	354 Mambo Bell	Off	301	Bongo Hi Stick2	Off	285	Conga Lo Open	Off	256	Syn. Shaker	Off			
71	B4	327 Woodblock1	Off	299	Bongo Hi Slap (2)	Off	342	Cuica Hi	Off	361	Samba Whistle	2			
72	C5	328 Woodblock2	Off	285	Conga Lo Open (2)	Off	343	Cuica Lo	Off	361	Samba Whistle	2			
73	C#5	352 Cowbell	Off	287	Conga Lo Slap	Off	335	Timbale Paila	Off	308	Guiro Short	3			
74	D5	309 Maracas Push	Off	286	Conga Lo Mt Slap	Off	334	Timbale Hi Rim2	Off	307	Guiro Long	3			
75	D#5	354 Mambo Bell	Off	290	Conga Hi Mt Slap	Off	333	Timbale Hi Rim1	Off	326	Claves	Off			
76	E5	346 Cabasa Up	Off	288	Conga Hi Open (2)	Off	329	Timbale Lo Open	Off	327	Woodblock1	Off			
77	F5	344 Shaker1	Off	289	Conga Hi Mute	Off	238	88 Claves	Off	327	Woodblock1	Off			
78	F#5	352 Cowbell	Off	293	Conga Heel	Off	239	88 Cowbell	Off	261	Syn. FX4	4			
79	G5	347 Cabasa Down	Off	291	Conga Hi Slap1	Off	221	Finger Snaps	Off	262	Syn. FX5	4			
80	G#5	347 Cabasa Down	Off	294	Conga Toe	Off	323	Taiko Rim	Off	341	Triangle Mute	5			
81	A5	347 Cabasa Down	Off	292	Conga Hi Slap2	Off	322	Taiko Open	Off	340	Triangle Open	5			
82	A#5	461 Tambourine Open	Off	351	Agogo Bell	Off	270	Zap2	Off	211	Ride Rivet	Off			
83	B5	460 Tambourine Mute2	5	351	Agogo Bell	Off	219	SD Orch. Roll	5	355	Sleigh Bell	Off			

		120-0-65: Latin Perc Kit			120-0-66: Trinity Perc Kit			120-0-67: i30 Perc Kit			120-0-72: HipHop Kit RX		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
84	C6	459 Tambourin Mute1	5	309-310	Maracas Push-Pull (2)	Off	220	SD Orchestra	5	358	Marc Tree	Off	
85	C#6	459 Tambourin Mute1	6	344	Shaker1 (2)	Off	217	Orchestra Cymbal	6	255	Syn. Castanet	Off	
86	D6	460 Tambourin Mute2	6	345	Shaker2 (2)	Off	217	Orchestra Cymbal	6	330	Timbale Lo Mute	6	
87	D#6	463 Udu f Open	Off	347-348	Cabasa Down-Tap (2)	Off	463	Udu f Open	Off	329	Timbale Lo Open	6	
88	E6	302 Djembe Open	Off	348-346	Cabasa Tap-Up (2)	Off	282	Orchestra Hit	Off	370	Stadium	Off	
89	F6	310 Maracas Pull	Off	350-349	Caxixi Soft-Hard (2)	Off	282	Orchestra Hit	Off				
90	F#6	310 Maracas Pull	Off	336	Tambourine Push	Off	282	Orchestra Hit	Off				
91	G6	342 Cuica Hi	Off	338	Tambourine Acc1 (2)	Off	282	Orchestra Hit	Off				
92	G#6	307 Guiro Long	3	337	Tambourine Pull	Off	282	Orchestra Hit	Off				
93	A6	308 Guiro Short	3	339	Tambourine Acc2	Off	282	Orchestra Hit	Off				
94	A#6	308 Guiro Short	3	355	Sleigh Bell (2)	Off	282	Orchestra Hit	Off				
95	B6	343 Cuica Lo	Off	361	Samba Whistle	4	282	Orchestra Hit	Off				
96	C7	326 Claves	Off	361	Samba Whistle	4	282	Orchestra Hit	Off				
97	C#7	361 Samba Whistle	4	356	Rap Sleigh Bell	Off	282	Orchestra Hit	Off				
98	D7	361 Samba Whistle	4	361	Samba Whistle	4	282	Orchestra Hit	Off				
99	D#7	450 Sagat Half Open	5	358	Marc Tree	5	282	Orchestra Hit	Off				
100	E7	450 Sagat Half Open	5	361	Samba Whistle	4	282	Orchestra Hit	Off				
101	F7	451 Sagat Close	5	431	Bells Open	5	282	Orchestra Hit	Off				
102	F#7	430 Jingle Bell	Off	387	Rainstick	Off	282	Orchestra Hit	Off				
103	G7	358 Marc Tree	Off	362	Chinese Gong	Off	282	Orchestra Hit	Off				
104	G#7	358 Marc Tree	Off	377	Bird1	Off	282	Orchestra Hit	Off				
105	A7	355 Sleigh Bell	2	377	Bird1	Off	282	Orchestra Hit	Off				
106	A#7	467 Bongo Roll	6	378	Bird2	Off	282	Orchestra Hit	Off				
107	B7	267 Rim House1	Off	408	Cricket Spectrum	Off	282	Orchestra Hit	Off				
108	C8	267 Rim House1	Off	358	Marc Tree	Off	282	Orchestra Hit	Off				
109	C#8	25 BD House 4	Off				419	Dist. Slide1	Off				
110	D8	228 99 SD	Off				341	Triangle Mute	3				
111	D#8	40 BD Deep 88	Off				340	Triangle Open	3				
112	E8	227 88 SD	Off				360	Flexatone	Off				
113	F8	90 SD Jazz Ring	Off				431	Bells Open	Off				
114	F#8	99 SD Processed	Off				350	Caxixi Soft	Off				
115	G8	5 BD Dry 1	Off				306	Castanet Double	Off				
116	G#8	38 BD Amb.Rocker	Off				306	Castanet Double	Off				
117	A8	91 SD Amb.Piccolo	Off				221	Finger Snaps	Off				
118	A#8	170 HH3 Closed1	Off				221	Finger Snaps	Off				
119	B8	11 BD Pillow	Off				363	Metal Hit	Off				
120	C9	131 Side Stick Amb	Off				363	Metal Hit	Off				
121	C#9	5 BD Dry 1	Off										
122	D9	5 BD Dry 1	Off										
123	D#9	5 BD Dry 1	Off										
124	E9	5 BD Dry 1	Off										

		120-0-73: Techno Kit RX			120-0-74: Dance Kit RX			120-0-88: Standard Kit 4			120-0-89: Pop Std. Kit 1		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
0	C-1	45 SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	45	SD Wood 2 pp	Off	
1	C#-1	60 SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid2 p	Off	60	SD Solid 2 p	Off	
2	D-1	79 SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass2 mf	Off	79	SD Brass 2 mf	Off	
3	D#-1	75 SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass1 p	Off	75	SD Brass 1 p	Off	
4	E-1	69 SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple2 pp	Off	69	SD Maple 2 pp	Off	
5	F-1	63 SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple1 pp	Off	63	SD Maple 1 pp	Off	
6	F#-1	57 SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid1 p	Off	57	SD Solid 1 p	Off	
7	G-1	53 SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo2 pp	Off	53	SD Piccolo 2 pp	Off	
8	G#-1	5 BD Dry 1	Off	5	BD Dry 1	Off				5	BD Dry 1	Off	
9	A-1	39 BD Pop 99	Off	32	BD Hip 3	Off	25	BD House 4	Off	18	BD Squash	Off	
10	A#-1	228 99 SD	Off	115	SD Hip6	Off	228	99 SD	Off	115	SD Hip 6	Off	
11	B-1	265 E.Tom FM	Off	226	88 BD	Off	226	88 BD	Off	226	88 BD	Off	
12	C0	227 88 SD	Off	227	88 SD	Off	227	88 SD	Off	52	SD Piccolo 1 f	Off	
13	C#0	105 SD House4	Off	112	SD Hip3	Off	89	SD Off Center	Off	59	SD Solid 1 f	Off	
14	D0	104 SD House3	Off	114	SD Hip5	Off	99	SD Processed	1	52	SD Piccolo 1 f	Off	
15	D#0	24 BD House 3	Off	36	BD Ambient	Off	38	BD Amb.Rocker	Off	36	BD Ambient	Off	
16	E0	27 BD Liquid	Off	22	BD House 1	Off	17	BD Tight	Off	16	BD Gated	Off	
17	F0	106 SD Small	Off	91	SD Amb.Piccolo	Off	90	SD Jazz Ring	Off	59	SD Solid 1 f	Off	
18	F#0	181 HH Old Close1	1	174	HH3 Open 2	1	171	HH3 Closed2	1	161-162	HH2 Closed p-mp (2)	1	
19	G0	20 BD Dance 2	Off	23	BD House 2	Off	7	BD Dry 3	Off	38	BD Amb.Rocker	Off	
20	G#0	131 Side Stick Amb	Off	130	Side Stick Dry	Off	130	Side Stick Dry	Off	130	Side Stick Dry	Off	
21	A0	111 SD Hip2	Off	98	SD Yowie	Off	83	SD Dry 2	Off	67	SD Maple 1 f	7	
22	A#0	227 88 SD	Off	115	SD Hip6	Off	82	SD Dry 1	Off	68	SD Maple 1 ff	7	
23	B0	268 Rim House2	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	DrumStick Hit	Off	
24	C1	220 SD Orchestra	7	220	SD Orchestra	7	220	SD Orchestra	7	59	SD Solid 1 f	7	
25	C#1	219 SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7	
26	D1	270 Zap2	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	
27	D#1	270 Zap2	Off	270	Zap2	Off	270	Zap2	Off	270	Zap 2	Off	
28	E1	410 Noise White	Off	410	Noise White	Off	410	Noise White	Off	410	Noise White	Off	
29	F1	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch 2	7	
30	F#1	272 DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch2	7	272	DJ Scratch 2	7	
31	G1	132 Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	Drum Stick Hit	Off	132	DrumStick Hit	Off	
32	G#1	269 Zap1	Off	269	Zap1	Off	269	Zap1	Off	269	Zap 1	Off	
33	A1	376 Click	Off	376	Click	Off	376	Click	Off	376	Click	Off	
34	A#1	340 Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	
35	B1	26 BD House 5	Off	22	BD House 1	Off	7	BD Dry 3	Off	17	BD Tight	Off	
36	C2	28 BD Techno 1	Off	23	BD House 2	Off	17	BD Tight	Off	17	BD Tight	Off	

		120-0-73: Techno Kit RX			120-0-74: Dance Kit RX			120-0-88: Standard Kit 4			120-0-89: Pop Std. Kit 1		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
37	C#2	229 88 Rim Shot	Off	369	Comp Voice Noise	Off	131	Side Stick Amb	Off	129	Rim Shot f	Off	
38	D2	103 SD House2	Off	228	99 SD	Off	91	SD Amb.Piccolo	Off	490	SD Rock	Off	
39	D#2	230 88 Claps	Off	230	88 Claps	Off	230	88 Claps	Off	230	88 Claps	Off	
40	E2	228 99 SD	Off	228	99 SD	Off	88	SD Full Room	Off	490	SD Rock	Off	
41	F2	148 Tom Processed	Off	266	E.Tom Real	Off	145	Tom3 Floor	Off	140	Tom 1 Floor f	Off	
42	F#2	233 99 HH Close	1	183	HH Old TiteClose	1	174	HH3 Open 2	1	163-165	HH2 Closed mf-ff (2)	1	
43	G2	148 Tom Processed	Off	266	E.Tom Real	Off	145	Tom3 Floor	Off	138	Tom 1 Low f	Off	
44	G#2	232 88 HH Open	1	189	HH Alpo Close	Off	178	HH4 Foot	1	157-156	HH1 Foot mf-mp (2)	1	
45	A2	148 Tom Processed	Off	266	E.Tom Real	Off	144	Tom3 Low	Off	138	Tom 1 Low f	Off	
46	A#2	186 HH House Open1	1	185	HH Old Open2	1	173	HH3 Open 1	1	168	HH2 Open p	1	
47	B2	148 Tom Processed	Off	266	E.Tom Real	Off	144	Tom3 Low	Off	136	Tom 1 Mid f	Off	
48	C3	148 Tom Processed	Off	266	E.Tom Real	Off	143	Tom3 Hi	Off	134	Tom 1 Hi f	Off	
49	C#3	196 Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	
50	D3	148 Tom Processed	Off	266	E.Tom Real	Off	143	Tom3 Hi	Off	134	Tom 1 Hi f	Off	
51	D#3	205 Ride Dance 99	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	207-209	Ride 20' mp-mf 2 (2)	Off	
52	E3	202 Crash Reverse	Off	202	Crash Reverse	Off	198	China	Off	198	China	Off	
53	F3	214 Ride Jazz	Off	214	Ride Jazz	Off	214	Ride Jazz	Off	215	Ride Cup	Off	
54	F#3	338 Tambourine Acc1	Off	339	Tambourine Acc2	Off	339	Tambourine Acc2	Off	339	Tambourine Acc 2	Off	
55	G3	201 Splash	Off	198	China	Off	201	Splash	Off	201	Splash	Off	
56	G#3	352 Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off	
57	A3	196 Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	
58	A#3	386 Tribe	Off	325	Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off	
59	B3	263 Perc. Ahh	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	206	Ride 20' mp 1	Off	
60	C4	237 88 Conga	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	
61	C#4	237 88 Conga	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	
62	D4	237 88 Conga	Off	290	Conga Hi Mt Slap	Off	290	Conga Hi Mt Slap	Off	290	Conga Hi MtSlap	Off	
63	D#4	236 88 Tom	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off	
64	E4	236 88 Tom	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off	
65	F4	410 Noise White	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim2	Off	334	Timbale Hi Rim 2	Off	
66	F#4	400 Explosion	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	
67	G4	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	
68	G#4	351 Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	
69	A4	346 Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	
70	A#4	309 Maracas Push	Off	309	Maracas Push	Off	309	Maracas Push	Off	346	Cabasa Up	Off	
71	B4	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	
72	C5	361 Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	
73	C#5	308 Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	
74	D5	307 Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	
75	D#5	326 Claves	Off	326	Claves	Off	326	Claves	Off	326	Claves	Off	
76	E5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock 1	Off	
77	F5	327 Woodblock1	Off	327	Woodblock1	Off	327	Woodblock1	Off	327	Woodblock 1	Off	
78	F#5	261 Syn. FX4	4	342	Cuica Hi	4	342	Cuica Hi	4	342	Cuica Hi	4	
79	G5	262 Syn. FX5	4	343	Cuica Lo	4	343	Cuica Lo	4	343	Cuica Lo	4	
80	G#5	341 Triangle Mute	5	341	Triangle Mute	5	341	Triangle Mute	5	341	Triangle Mute	5	
81	A5	340 Triangle Open	5	340	Triangle Open	5	340	Triangle Open	5	340	Triangle Open	5	
82	A#5	345 Shaker2	Off	347	Cabasa Down	Off	347	Cabasa Down	Off	347	Cabasa Down	Off	
83	B5	338 Tambourine Acc1	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	
84	C6	358 Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	
85	C#6	255 Syn. Castanet	Off	305	Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off	
86	D6	266 E.Tom Real	Off	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	
87	D#6	264 Boom	Off	329	Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	
88	E6	370 Stadium	Off	370	Stadium	Off	370	Stadium	Off	370	Stadium	Off	

		120-0-90: Pop Std. Kit 2			120-0-96: Elektro Kit 1			120-0-97: Elektro Kit 2			120-0-117: Arabian Kit 2		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
0	C-1	45 SD Wood 2 pp	Off	489	Empty	Off	489	Empty	Off	45	SD Wood 2 pp	Off	
1	C#-1	60 SD Solid 2 p	Off	60	SD Solid 2 p	Off	60	SD Solid 2 p	Off	60	SD Solid2 p	Off	
2	D-1	79 SD Brass 2 mf	Off	79	SD Brass 2 mf	Off	79	SD Brass 2 mf	Off	79	SD Brass2 mf	Off	
3	D#-1	75 SD Brass 1 p	Off	75	SD Brass 1 p	Off	75	SD Brass 1 p	Off	75	SD Brass1 p	Off	
4	E-1	69 SD Maple 2 pp	Off	69	SD Maple 2 pp	Off	69	SD Maple 2 pp	Off	69	SD Maple2 pp	Off	
5	F-1	63 SD Maple 1 pp	Off	63	SD Maple 1 pp	Off	63	SD Maple 1 pp	Off	63	SD Maple1 pp	Off	
6	F#-1	57 SD Solid 1 p	Off	57	SD Solid 1 p	Off	57	SD Solid 1 p	Off	57	SD Solid1 p	Off	
7	G-1	53 SD Piccolo 2 pp	Off	53	SD Piccolo 2 pp	Off	53	SD Piccolo 2 pp	Off	53	SD Piccolo2 pp	Off	
8	G#-1	5 BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	5	BD Dry 1	Off	
9	A-1	18 BD Squash	Off	30	BD Hip 1	Off	30	BD Hip 1	Off	25	BD House 4	Off	
10	A#-1	115 SD Hip 6	Off	228	99 SD	Off	228	99 SD	Off	228	99 SD	Off	
11	B-1	226 88 BD	Off	226	88 BD	Off	226	88 BD	Off	226	88 BD	Off	
12	C0	52 SD Piccolo 1 f	Off	227	88 SD	Off	227	88 SD	Off	227	88 SD	Off	
13	C#0	59 SD Solid 1 f	Off	89	SD Off Center	Off	89	SD Off Center	Off	88	SD Full Room	Off	
14	D0	52 SD Piccolo 1 f	Off	120	SD Vintage3	Off	120	SD Vintage3	Off	99	SD Processed	1	
15	D#0	36 BD Ambient	Off	34	BD Pop Kick	Off	34	BD Pop Kick	Off	5	BD Dry 1	Off	
16	E0	16 BD Gated	Off	36	BD Ambient	Off	36	BD Ambient	Off	17	BD Tight	Off	
17	F0	59 SD Solid 1 f	Off	115	SD Hip 6	Off	115	SD Hip 6	Off	82	SD Dry 1	Off	
18	F#0	161-162 HH2 Closed p-mp (2)	1	231	88 HH Close	1	231	88 HH Close	1	171	HH3 Closed2	1	
19	G0	38 BD Amb.Rocker	Off	25	BD House 4	Off	25	BD House 4	Off	7	BD Dry 3	Off	
20	G#0	130 Side Stick Dry	Off	270	Zap 2	Off	270	Zap 2	Off	131	Side Stick Amb	Off	
21	A0	67 SD Maple 1 f	7	99	SD Processed	Off	99	SD Processed	Off	132	Drum Stick Hit	Off	
22	A#0	68 SD Maple 1 ff	7	121	SD Vintage4	Off	121	SD Vintage4	Off	412	Tubular	Off	
23	B0	132 DrumStick Hit	Off	132	DrumStick Hit	Off	132	DrumStick Hit	Off	352	Cowbell	Off	
24	C1	59 SD Solid 1 f	7	220	SD Orchestra	7	220	SD Orchestra	7	352	Cowbell	Off	
25	C#1	219 SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	7	219	SD Orch. Roll	Off	

		120-0-90: Pop Std. Kit 2			120-0-96: Elektro Kit 1			120-0-97: Elektro Kit 2			120-0-117: Arabian Kit 2		
Note		Sample	Excl.		Sample	Excl.		Sample	Excl.		Sample	Excl.	
26	D1	221	Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off	221	Finger Snaps	Off
27	D#1	270	Zap 2	Off	270	Zap 2	Off	270	Zap 2	Off	270	Zap2	Off
28	E1	410	Noise White	Off	410	Noise White	Off	410	Noise White	Off	171	HH3 Closed2	Off
29	F1	272	DJ Scratch 2	7	272	DJ Scratch 2	7	272	DJ Scratch 2	7	272	DJ Scratch2	Off
30	F#1	272	DJ Scratch 2	7	272	DJ Scratch 2	7	272	DJ Scratch 2	7	272	DJ Scratch2	Off
31	G1	132	DrumStick Hit	Off	132	DrumStick Hit	Off	132	DrumStick Hit	Off	132	Drum Stick Hit	Off
32	G#1	269	Zap 1	Off	269	Zap 1	Off	269	Zap 1	Off	292	Conga Hi Slap2	Off
33	A1	376	Click	Off	376	Click	Off	376	Click	Off	376	Click	Off
34	A#1	340	Triangle Open	Off	340	Triangle Open	Off	340	Triangle Open	Off	376	Click	Off
35	B1	17	BD Tight	Off	20	BD Dance 2	Off	20	BD Dance 2	Off	7	BD Dry 3	Off
36	C2	17	BD Tight	Off	265	E.Tom FM	Off	265	E.Tom FM	Off	17	BD Tight	Off
37	C#2	129	Rim Shot f	Off	129	Rim Shot f	Off	129	Rim Shot f	Off	130	Side Stick Dry	Off
38	D2	491	SD Normal	Off	490	SD Rock	Off	491	SD Normal	Off	84	SD Dry 3	Off
39	D#2	230	88 Claps	Off	230	88 Claps	Off	230	88 Claps	Off	225	Claps 4	Off
40	E2	491	SD Normal	Off	490	SD Rock	Off	491	SD Normal	Off	84	SD Dry 3	Off
41	F2	140	Tom 1 Floor f	Off	266	E.Tom Real	Off	266	E.Tom Real	Off	145	Tom3 Floor	Off
42	F#2	163-165	HH2 Closed mf-ff (2)	1	174-171	HH3 Open-Closed 2 (2)	1	174-171	HH3 Open-Closed 2 (2)	1	174	HH3 Open 2	1
43	G2	138	Tom 1 Low f	Off	266	E.Tom Real	Off	266	E.Tom Real	Off	145	Tom3 Floor	Off
44	G#2	157-156	HH1 Foot mf-mp (2)	1	178	HH4 Foot	1	178	HH4 Foot	1	178	HH4 Foot	1
45	A2	138	Tom 1 Low f	Off	266	E.Tom Real	Off	266	E.Tom Real	Off	144	Tom3 Low	Off
46	A#2	168	HH2 Open p	1	173	HH3 Open 1	1	173	HH3 Open 1	1	173	HH3 Open 1	1
47	B2	136	Tom 1 Mid f	Off	266	E.Tom Real	Off	266	E.Tom Real	Off	144	Tom3 Low	Off
48	C3	134	Tom 1 Hi f	Off	266	E.Tom Real	Off	266	E.Tom Real	Off	143	Tom3 Hi	Off
49	C#3	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off
50	D3	134	Tom 1 Hi f	Off	266	E.Tom Real	Off	266	E.Tom Real	Off	143	Tom3 Hi	Off
51	D#3	207-209	Ride 20' mp-mf 2 (2)	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off
52	E3	198	China	Off	202	Crash Reverse	Off	202	Crash Reverse	Off	433	Dbk Tky Open	Off
53	F3	215	Ride Cup	Off	214	Ride Jazz	Off	214	Ride Jazz	Off	432	Dbk Tky Mute	Off
54	F#3	339	Tambourine Acc 2	Off	339	Tambourine Acc 2	Off	339	Tambourine Acc 2	Off	338	Tambourine Acc1	Off
55	G3	201	Splash	Off	201	Splash	Off	201	Splash	Off	434	Dbk Tky Rim	Off
56	G#3	352	Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off	352	Cowbell	Off
57	A3	196	Crash 1	Off	196	Crash 1	Off	196	Crash 1	Off	434	Dbk Tky Rim	Off
58	A#3	325	Vibraslap	Off	325	Vibraslap	Off	325	Vibraslap	Off	346	Cabasa Up	Off
59	B3	206	Ride 20' mp 1	Off	213	Ride Edge 2	Off	213	Ride Edge 2	Off	436	Douf Dom Ak	Off
60	C4	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	298	Bongo Hi Open	Off	439	Douf Tek Ak2	Off
61	C#4	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off	295	Bongo Lo Open	Off
62	D4	290	Conga Hi MtSlap	Off	290	Conga Hi MtSlap	Off	290	Conga Hi MtSlap	Off	438	Douf Tek Ak1	Off
63	D#4	288	Conga Hi Open	Off	288	Conga Hi Open	Off	288	Conga Hi Open	Off	298	Bongo Hi Open	Off
64	E4	285	Conga Lo Open	Off	285	Conga Lo Open	Off	285	Conga Lo Open	Off	437	Douf Rim Ak	Off
65	F4	334	Timbale Hi Rim 2	Off	334	Timbale Hi Rim 2	Off	334	Timbale Hi Rim 2	Off	455	Tabla Dom	Off
66	F#4	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	329	Timbale Lo Open	Off	475	Darbuka D1	4
67	G4	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	458	Tabla Tak	4
68	G#4	351	Agogo Bell	Off	351	Agogo Bell	Off	351	Agogo Bell	Off	456	Tabla Flam	Off
69	A4	346	Cabasa Up	Off	346	Cabasa Up	Off	346	Cabasa Up	Off	457	Tabla Rim	Off
70	A#4	346	Cabasa Up	Off	309	Maracas Push	Off	309	Maracas Push	Off	316	Tabla Na	Off
71	B4	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	318	Tabla Tin	Off
72	C5	361	Samba Whistle	2	361	Samba Whistle	2	361	Samba Whistle	2	445	Rek Dom Ak	Off
73	C#5	308	Guiro Short	3	308	Guiro Short	3	308	Guiro Short	3	448	Rik2	Off
74	D5	307	Guiro Long	3	307	Guiro Long	3	307	Guiro Long	3	447	Rik1	Off
75	D#5	326	Claves	Off	326	Claves	Off	326	Claves	Off	449	Rik3	Off
76	E5	327	Woodblock 1	Off	327	Woodblock 1	Off	327	Woodblock 1	Off	449	Rik3	Off
77	F5	327	Woodblock 1	Off	327	Woodblock 1	Off	327	Woodblock 1	Off	446	Rek Jingle	Off
78	F#5	342	Cuica Hi	4	342	Cuica Hi	4	342	Cuica Hi	4	487	Tef2	Off
79	G5	343	Cuica Lo	4	343	Cuica Lo	4	343	Cuica Lo	4	445	Rek Dom Ak	Off
80	G#5	341	Triangle Mute	5	341	Triangle Mute	5	341	Triangle Mute	5	486	Tef1	Off
81	A5	340	Triangle Open	5	340	Triangle Open	5	340	Triangle Open	5	448	Rik2	Off
82	A#5	347	Cabasa Down	Off	347	Cabasa Down	Off	347	Cabasa Down	Off	449	Rik3	Off
83	B5	355	Sleigh Bell	Off	355	Sleigh Bell	Off	355	Sleigh Bell	Off	446	Rek Jingle	Off
84	C6	358	Marc Tree	Off	358	Marc Tree	Off	358	Marc Tree	Off	431	Bells Open	2
85	C#6	305	Castanet Single	Off	305	Castanet Single	Off	305	Castanet Single	Off	450	Sagat Half Open	2
86	D6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	330	Timbale Lo Mute	6	451	Sagat Close	2
87	D#6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	329	Timbale Lo Open	6	478	Davul	Off
88	E6	370	Stadium	Off	370	Stadium	Off	370	Stadium	Off	302	Djembe Open	3
89	F6										302	Djembe Open	3
90	F#6										433	Dbk Tky Open	3
91	G6										431	Bells Open	5
92	G#6										450	Sagat Half Open	5
93	A6										451	Sagat Close	5
94	A#6										478	Davul	Off
95	B6										10	BD Jazz	Off
96	C7										488	Tef3	Off



## Multisamples

The following table lists all Pa1X Factory Multisamples available in ROM.

0	AcousticPiano_L	41	Pipe Flute_L	82	Bariton Sax mf	123	Flugel Vibrato
1	AcousticPiano_R	42	Pipe Flute_R	83	Bariton Sax f	124	Flugel Horn M1
2	M1 Piano	43	Pipe Positive	84	Bariton Sax T1	125	Tuba
3	El.GrandPiano	44	Pipe Mixture	85	Tenor SaxVibrato	126	Trombone Vibrato
4	E.P. FM 1	45	Pipe Full 1_L	86	Tenor Sax	127	Trombone1 mf
5	E.P. FM 1LP	46	Pipe Full 1_R	87	Tenor Sax M1	128	Trombone1 ff
6	E.P. FM 2	47	Pipe Full 2	88	Tenor Sax Expr.	129	Trombone2 Soft
7	E.P. Dyno Soft	48	Kalimba	89	Alto Sax Vibrato	130	Trombone2 Bright
8	E.P. Dyno SoftLP	49	MusicBox	90	Alto Sax p	131	Trombone SlurUp
9	E.P. StageHard	50	MusicBoxLP	91	Alto Sax mf	132	Trombone Fall
10	E.P. StageHardLP	51	Marimba	92	Alto Sax Growl	133	Trumpet Medium
11	E.P. Wurly Soft	52	MarimbaLP	93	Alto Sax 01W	134	Trump. Overblown
12	E.P. Wurly Hard	53	Xylophone	94	Soprano SaxVibr.	135	Trumpet Expr.
13	E.P. Pad 1LP	54	Vibraphone	95	Soprano Sax	136	Trumpet Muted
14	E.P. Pad 2	55	VibraphoneLP	96	French Musette	137	Trumpet Wah Wah
15	Clav.	56	Celesta	97	Musette 1	138	Trumpet Doit
16	Harpichord	57	CelestaLP	98	Musette 1LP	139	Trumpet Fall
17	GospelOrg.Slow_L	58	Glockenspiel	99	Musette 2	140	Brass Ens. 1
18	GospelOrg.Slow_R	59	GlockenspielLP	100	Accordion 16'	141	Brass Ens. 2
19	GospelOrg.Fast_L	60	Tubular Bell	101	Acc.16' OrigTune	142	Brass Ens. 2LP
20	GospelOrg.Fast_R	61	Log Drum	102	Accordion 8'	143	Voice Choir
21	E.Organ Perc 1	62	SteelDr Hard	103	Acc. 8' OrigTune	144	Voice ChoirREV
22	E.Organ Perc 2	63	SteelDr HardLP	104	Accordion 4'	145	Voice Pop Ooh
23	E.Organ Perc 3	64	Gamelan	105	Acc. 4' OrigTune	146	Voice Pop OohREV
24	E.Organ 2'Perc	65	FM Bell	106	Accordion 1	147	Voice Pop Ah
25	M1 Organ 1	66	Flute	107	Accordion 2	148	Voice Pop AhREV
26	M1 Organ 2	67	Flute Frull	108	Fisa Bassoon	149	Doo Voice
27	Organ 1	68	Voice Flute	109	Fisa Clarinet	150	Doo VoiceLP
28	Organ 2	69	Jazz Flute	110	Bandoneon	151	String Ens.
29	Organ 2LP	70	Piccolo	111	Accordion Bass	152	String Ens.REV
30	E.Organ Jazz	71	Pan Flute	112	Acc.Noise KeyOn	153	Pizzicato Ens.
31	Bx3&Perc 3rd	72	Shakuhachi	113	Acc.Noise KeyOff	154	Violin
32	E.Organ Vox	73	Shakuhachi Atk	114	Acc.Change Voic	155	Viola
33	E.Organ Soft	74	Bottle	115	Harmonica	156	Cello&Contrabass
34	E.Organ Full	75	Recorder	116	Harmonica Wah	157	Violin & Cello
35	E.Organ Dist	76	Ocarina	117	Highland B.Pipes	158	Pizzicato
36	Rotary Org1	77	Clarinet	118	Highland Drones	159	SteelGtr Pick p
37	Rotary Org1LP	78	M1 DoubleReed	119	Uilleann Pipes	160	SteelGtr Pick mf
38	Rotary Org2	79	Oboe	120	Bag Pipes	161	SteelGtr pick f
39	SuperBX3	80	English Horn	121	French Horn T1	162	SteelGtr Mute
40	SuperBX3LP	81	Bassoon	122	French Horn Ens.	163	SteelGtr Slide

164	A.Guitar Finger	209	Funky Gtr 1 Stra	254	Thumb Bass	299	An.Strings 1
165	A.Guitar Pick	210	Funky Gtr 2 Stra	255	SlapBassThumb	300	An.Strings 1 REV
166	A.Guitar Harmo.	211	Jazz Guitar1	256	SlapBassThumbLP	301	An.Strings 2
167	Folk Guitar	212	Jazz Guitar2	257	SlapBass Pull	302	An.Strings 2 REV
168	Folk 12 Strings	213	Jazz Guitar3 p	258	Fretless Bass	303	Analog Vintage
169	Nylon Guitar mp	214	Jazz Guitar3 mf	259	Bass Harmonics	304	White Pad
170	Nylon Guitar mf	215	Jazz Guitar3 f	260	Bass HarmoLP	305	White Pad REV
171	Nylon Guitar ff	216	Pedal Steel Gtr	261	Sitar	306	N1 Air Vox
172	Nylon GuitarAtk	217	Reso Guitar	262	Santur	307	N1 Air Vox REV
173	A.Gtr HiStrings	218	Overdrive Gtr	263	SanturLP	308	Ether Bell
174	A.Gtr 12Strings	219	Dist Guitar	264	Tambura	309	Ether BellLP
175	A.Gtr Harmonics	220	Dist Gtr1 Harmo.	265	TamburaLP	310	Lore
176	A.Gtr Noise	221	Dist Gtr1 Mute	266	Bouzouki	311	Lore NT
177	Clean Gtr1 Stra	222	Dist Gtr2 Harmo.	267	BouzoukiLP	312	Space Lore
178	Clean Gtr1 Mute	223	Dist Gtr2 Mute1	268	Ukulele	313	Space Lore REV
179	Clean Gtr2 Stra	224	Dist Gtr2 Mute2	269	Oud	314	Wave Sweep 1
180	Clean Gtr2 Mute	225	Power Chord	270	ClarinetLP	315	Wave Sweep 2
181	Clean Gtr3 Tele	226	A.Bass1	271	Kanun	316	Wave Sweep 3
182	Clean Gtr4 Str p	227	A.Bass2 mf	272	Kanun Tremolo	317	Syn Ghostly
183	Clean Gtr4 Str f	228	A.Bass2 f	273	Nay	318	Syn Ghostly REV
184	Clean Gtr4 Mute	229	E.Bass1 Finger	274	Mandolin	319	Syn Air Pad
185	Clean Gtr4 Dead	230	E.Bass2 P.B.1	275	MandolinLP	320	Syn Air Pad REV
186	Clean Gtr4 Slap	231	E.Bass2 P.B.2	276	Banjo	321	Dream Str
187	Clean Gtr4 Slide	232	E.Bass2 LH Stop	277	BanjoLP	322	Dream Str REV
188	E.Gtr Sberg p1	233	E.Bass2 RH Stop	278	Shamisen	323	Syn AirVortexREV
189	E.Gtr Sberg f1	234	E.Bass2 Harmo.	279	Koto	324	Syn Clicker
190	E.Gtr Sberg p2	235	E.Bass3 p	280	Harp	325	Syn Clicker REV
191	E.Gtr Sberg f2	236	E.Bass3 mf	281	Mouth Harp 1	326	Cricket Spectrum
192	E.Gtr Le Neck	237	E.Bass3 f Slap	282	Mouth Harp 2	327	Noise 1
193	E.Gtr Le Bridge	238	E.Bass4 Pick	283	Mouth Harp 3	328	Noise 2
194	E.Gtr Le Mute p	239	E.Bass4 Harmo.	284	Mouth Harp 4	329	Swish Terra
195	E.Gtr Le Mute mf	240	E.Bass4 Slap	285	Mouth Harp 5	330	Gamelan XEQ
196	E.Gtr Le Ghost1	241	E.Bass4 SlapHar	286	Syn Bass Reso 1	331	Saw 1
197	E.Gtr Le Ghost2	242	E.Bass4 LH Mute	287	Syn Bass FM 1	332	Saw 2
198	E.Gtr Vintage p	243	E.Bass4 RH Mute	288	Syn Bass FM 1LP	333	Saw 3
199	E.Gtr Vintage mf	244	E.Bass Gliss	289	Syn Bass FM 2	334	Pulse 02%
200	E.Gtr Solid p	245	E.Bass Noise1	290	Syn Bass FM 2LP	335	Pulse 05%
201	E.Gtr Solid mf	246	E.Bass Noise2	291	Syn Bass TB	336	Pulse 08%
202	E.Gtr Solid f	247	Finger Bass 1	292	RB Saw Bass	337	Pulse 16%
203	E.Gtr Harmonics	248	Finger Bass 1LP	293	RB Square Bass	338	Pulse 33%
204	E.Gtr Gliss Down	249	Finger Bass 2	294	Chrom Res	339	Pulse 40%
205	E.Gtr Gliss Up	250	Finger Bass 2LP	295	DetunedSuper	340	Square
206	E.Gtr Noise	251	Finger Bass 3	296	DetunedSuperREV	341	Square MG
207	E.Gtr ShortNoise	252	Pick Bass	297	Detuned PWM	342	Square JP
208	E.Gtr FretNoise	253	Pick Bass LP	298	Detuned PWM REV	343	Triangle MG



344 Ramp	389 Tele Ring REV	434 Cowbell
345 Ramp MG	390 Scream	435 Click
346 Sine	391 Punch	436 Temple Blocks
347 DWGS Syn Sine 1	392 Heart Beat	437 Orchestra BD
348 DWGS Syn Sine 2	393 Footstep 1	438 Castanet
349 DWGS Organ 1	394 Footstep 2	439 Taiko
350 DWGS Organ 2	395 Door Creak	440 Djembe Open
351 DWGS Bell 1	396 Door Slam	441 Djembe Mute
352 DWGS Bell 2	397 Car Engine	442 Chinese Gong
353 DWGS Bell 3	398 Car Engine LP	443 Snare Ghost
354 DWGS Bell 4	399 Car Stop	444 RainStick
355 DWGS Clav.	400 Car Pass	445 Empty
356 DWGS Digi 1	401 Car Crash	
357 DWGS Digi 2	402 Train	
358 DWGS Wire 1	403 Train REV	
359 DWGS Wire 2	404 Helicopter	
360 DWGS Sync 1	405 Helicopter REV	
361 DWGS Sync 2	406 Gun Shot	
362 DWGS Sync 3	407 Machine Gun	
363 Orchestra Hit	408 Machine Gun REV	
364 Band Hit	409 Laser Gun	
365 Impact Hit	410 Explosion	
366 Brass Fall	411 Wind	
367 Vox Wah Gtr	412 Timpani	
368 Vibe Chord	413 Crash	
369 Zap 1	414 Crash Reverse	
370 Zap 2	415 Orchestra Crash	
371 Stadium	416 Ride Jazz	
372 Applause	417 Ride Edge 1	
373 Birds 1	418 Ride Edge 2	
374 Birds 1 REV	419 HiHat Closed	
375 Birds 2	420 88 HiHat Open	
376 Crickets	421 88 Cowbell	
377 Crickets REV	422 88 Tom	
378 Church Bell	423 88 Conga	
379 Church Bell REV	424 88 Crash	
380 Thunder	425 Tom	
381 Stream	426 Tom Brush	
382 Bubble	427 Tom Process	
383 Bubble REV	428 Electric Tom	
384 Dog	429 Flexatone	
385 Gallop	430 Tambourine	
386 Gallop REV	431 Agogo Bell	
387 Laughing	432 Marc Tree	
388 Telephone Ring	433 Marc TreeLP	

## Drum Samples

The following table lists all Pa1X Factory Drum Samples available in ROM.

0	BD Acoustic 1 p	41	BD Klanger	82	SD Dry 1	123	SD Vintage6
1	BD Acoustic 1 mf	42	SD Wood 1 p	83	SD Dry 2	124	SD AmbiHop
2	BD Acoustic 1 f	43	SD Wood 1 mf	84	SD Dry 3	125	SD Brasser
3	BD Acoustic 2 mf	44	SD Wood 1 f	85	SD Ghost Roll	126	SD Chili
4	BD Acoustic 2 f	45	SD Wood 2 pp	86	SD Ghost p	127	SD Whopper
5	BD Dry 1	46	SD Wood 2 p	87	SD Ghost f	128	Rim Shot p
6	BD Dry 2	47	SD Wood 2 mf	88	SD Full Room	129	Rim Shot f
7	BD Dry 3	48	SD Wood 2 f	89	SD Off Center	130	Side Stick Dry
8	BD Normal	49	SD Piccolo 1 pp	90	SD Jazz Ring	131	Side Stick Amb
9	BD SoftRoom	50	SD Piccolo 1 p	91	SD Amb.Piccolo	132	DrumStick Hit
10	BD Jazz	51	SD Piccolo 1 mf	92	SD Paper	133	Tom 1 Hi p
11	BD Pillow	52	SD Piccolo 1 f	93	SD Brush Hit	134	Tom 1 Hi f
12	BD Woofer	53	SD Piccolo 2 pp	94	SD Brush Tap 1	135	Tom 1 Mid p
13	BD MondoKill	54	SD Piccolo 2 p	95	SD Brush Tap 2	136	Tom 1 Mid f
14	BD Terminator	55	SD Piccolo 2 mf	96	SD Brush Swirl	137	Tom 1 Low p
15	BD Tubby	56	SD Piccolo 2 f	97	SD Big Rock	138	Tom 1 Low f
16	BD Gated	57	SD Solid 1 p	98	SD Yowie	139	Tom 1 Floor p
17	BD Tight	58	SD Solid 1 mf	99	SD Processed	140	Tom 1 Floor f
18	BD Squash	59	SD Solid 1 f	100	SD Cracker Room	141	Tom 2 Hi
19	BD Dance 1	60	SD Solid 2 p	101	SD Dance	142	Tom 2 Floor
20	BD Dance 2	61	SD Solid 2 mf	102	SD House 1	143	Tom 3 Hi
21	BD Dance 3	62	SD Solid 2 f	103	SD House 2	144	Tom 3 Lo
22	BD House 1	63	SD Maple 1 pp	104	SD House 3	145	Tom 3 Floor
23	BD House 2	64	SD Maple 1 p	105	SD House 4	146	Tom 4 Hi
24	BD House 3	65	SD Maple 1 mp	106	SD Small	147	Tom 4 Lo
25	BD House 4	66	SD Maple 1 mf	107	SD Rap	148	Tom Processed
26	BD House 5	67	SD Maple 1 f	108	SD Noise	149	Tom Jazz Hi
27	BD Liquid	68	SD Maple 1 ff	109	SD Reverse	150	Tom Jazz Floor
28	BD Techno 1	69	SD Maple 2 pp	110	SD Hip 1	151	Tom Brush Hi
29	BD Techno 2	70	SD Maple 2 p	111	SD Hip 2	152	HH1 Closed pp
30	BD Hip 1	71	SD Maple 2 mp	112	SD Hip 3	153	HH1 Closed p
31	BD Hip 2	72	SD Maple 2 mf	113	SD Hip 4	154	HH1 Closed mf
32	BD Hip 3	73	SD Maple 2 f	114	SD Hip 5	155	HH1 Closed f
33	BD Hip 4	74	SD Maple 2 ff	115	SD Hip 6	156	HH1 Foot mp
34	BD Pop Kick	75	SD Brass 1 p	116	SD Ringy	157	HH1 Foot mf
35	BD Dance 99	76	SD Brass 1 mf	117	SD Tiny	158	HH1 Open mp
36	BD Ambient	77	SD Brass 1 f	118	SD Vintage1	159	HH1 Open mf
37	BD Amb.Crackle	78	SD Brass 2 p	119	SD Vintage2	160	HH2 Closed pp
38	BD Amb.Rocker	79	SD Brass 2 mf	120	SD Vintage3	161	HH2 Closed p
39	BD Pop 99	80	SD Brass 2 f	121	SD Vintage4	162	HH2 Closed mp
40	BD Deep 88	81	SD Roll	122	SD Vintage5	163	HH2 Closed mf

164	HH2 Closed f	209	Ride 20' mf 2	254	Syn. Bongo 2	299	Bongo Hi Slap
165	HH2 Closed ff	210	Ride Brush	255	Syn. Castanet	300	Bongo Hi Stick1
166	HH2 Foot p	211	Ride Rivet	256	Syn. Shaker	301	Bongo Hi Stick2
167	HH2 Foot f	212	Ride Edge 1	257	Syn. Noise	302	Djembe Open
168	HH2 Open p	213	Ride Edge 2	258	Syn. FX 1	303	Djembe Mute
169	HH2 Open f	214	Ride Jazz	259	Syn. FX 2	304	Djembe Slap
170	HH3 Closed 1	215	Ride Cup	260	Syn. FX 3	305	Castanet Single
171	HH3 Closed 2	216	BD Orchestra	261	Syn. FX 4	306	Castanet Double
172	HH3 Foot	217	Orchestra Cymbal	262	Syn. FX 5	307	Guiro Long
173	HH3 Open 1	218	Timpani	263	Perc. Ahh	308	Guiro Short
174	HH3 Open 2	219	SD Orch. Roll	264	Boom	309	Maracas Push
175	HH3 Sizzle	220	SD Orchestra	265	E.Tom FM	310	Maracas Pull
176	HH4 Closed 1	221	Finger Snaps	266	E.Tom Real	311	Baya Open
177	HH4 Closed 2	222	Claps 1	267	Rim House 1	312	Baya Ghe
178	HH4 Foot	223	Claps 2	268	Rim House 2	313	Baya Mute 1
179	HH4 FootOpen	224	Claps 3	269	Zap 1	314	Baya Mute 2
180	HH4 Open	225	Claps 4	270	Zap 2	315	Baya Mute 3
181	HH Old Close 1	226	88 BD	271	DJ Scratch 1	316	Tabla Na
182	HH Old Open 1	227	88 SD	272	DJ Scratch 2	317	Tabla Open
183	HH Old TiteClose	228	99 SD	273	DJ Scratch 3	318	Tabla Tin
184	HH Old Close 2	229	88 Rimshot	274	DJ Scratch 4	319	Tabla Mute 1
185	HH Old Open 2	230	88 Claps	275	DJ Scratch 5	320	Tabla Mute 2
186	HH House Open 1	231	88 HH Close	276	DJ Scratch 6	321	Tabla Mute 3
187	HH House Open 2	232	88 HH Open	277	DJ Hit Rub	322	Taiko Open
188	HH Hip	233	99 HH Close	278	DJ Vocal Rub 1	323	Taiko Rim
189	HH Alpo Close	234	99 HH Open	279	DJ Vocal Rub 2	324	Tsuzumi
190	Crash 15' Edge 1	235	88 Crash	280	DJ BD Rub	325	Vibraslap
191	Crash 15' Edge 2	236	88 Tom	281	DJ SD Rub	326	Claves
192	Crash 17' Edge 1	237	88 Conga	282	Orchestra Hit	327	Woodblock 1
193	Crash 17' Edge 2	238	88 Claves	283	Band Hit	328	Woodblock 2
194	Crash 19' Open 1	239	88 Cowbell	284	Impact Hit	329	Timbale Lo Open
195	Crash 19' Open 2	240	88 Maracas	285	Conga Lo Open	330	Timbale Lo Mute
196	Crash 1	241	Syn. BD 1	286	Conga Lo MtSlap	331	Timbale Lo Rim
197	Crash 2	242	Syn. BD 2	287	Conga Lo Slap	332	Timbale Hi Edge
198	China	243	Syn. BD 3	288	Conga Hi Open	333	Timbale Hi Rim 1
199	Splash 8' Edge 1	244	Syn. BD 4	289	Conga Hi Mute	334	Timbale Hi Rim 2
200	Splash 8' Edge 2	245	Syn. BD Buzz	290	Conga Hi MtSlap	335	Timbale Paila
201	Splash	246	Syn. SD 1	291	Conga Hi Slap 1	336	Tambourine Push
202	Crash Reverse	247	Syn. SD 2	292	Conga Hi Slap 2	337	Tambourine Pull
203	Crash Dance 99	248	Syn. SD 3	293	Conga Heel	338	Tambourine Acc 1
204	Crash DDD-1	249	Syn. SD 4	294	Conga Toe	339	Tambourine Acc 2
205	Ride Dance 99	250	Syn. Rim Click	295	Bongo Lo Open	340	Triangle Open
206	Ride 20' mp 1	251	Syn. HH Closed	296	Bongo Lo Slap	341	Triangle Mute
207	Ride 20' mp 2	252	Syn. HH Open	297	Bongo Lo Stick	342	Cuica Hi
208	Ride 20' mf 1	253	Syn. Bongo 1	298	Bongo Hi Open	343	Cuica Lo

344	Shaker 1	389	Door Slam	434	Dbk Tky Rim	479	Hollo 1
345	Shaker 2	390	Car Engine	435	Djembe Bass	480	Hollo 2
346	Cabasa Up	391	Car Stop	436	Douf Dom Ak	481	Kup 1
347	Cabasa Down	392	Car Pass	437	Douf Rim Ak	482	Kup 2
348	Cabasa Tap	393	Car Crash	438	Douf Tek Ak 1	483	Ramazan DVL 1
349	Caxixi Hard	394	Train	439	Douf Tek Ak 2	484	Ramazan DVL 2
350	Caxixi Soft	395	Helicopter	440	Pand Open	485	Ramazan DVL 3
351	Agogo Bell	396	Gun Shot 1	441	Pand Pattern 1	486	Tef 1
352	Cowbell	397	Gun Shot 2	442	Pand Pattern 2	487	Tef 2
353	Chacha Bell	398	Machine Gun	443	Pand Pattern 3	488	Tef 3
354	Mambo Bell	399	Laser Gun	444	Pand Pattern 4	489	Empty
355	Sleigh Bell	400	Explosion	445	Rek Dom Ak	490	SD Rock
356	Rap Sleigh Bell	401	Thunder	446	Rek Jingle	491	SD Normal
357	Finger Cymbal	402	Wind	447	Rik 1		
358	Marc Tree	403	Stream	448	Rik 2		
359	Marc Tree LP	404	Bubble	449	Rik 3		
360	Flexatone	405	Church Bell	450	Sagat Half Open		
361	Samba Whistle	406	Telephone Ring	451	Sagat Close		
362	Chinese Gong	407	Xylophone Spectr	452	Surdo L Mute		
363	Metal Hit	408	Cricket Spectrum	453	Surdo L Open		
364	Yeah!	409	Air Vortex	454	Tabla Medium		
365	Yeah! Solo	410	Noise White	455	Tabla Dom		
366	Uhh	411	Noise FM Mod	456	Tabla Flam		
367	Hit It	412	Tubular	457	Tabla Rim		
368	Uhhhh Solo	413	Gamelan	458	Tabla Tak		
369	Comp Voice Noise	414	Tambura	459	Tambourine Mute 1		
370	Stadium	415	Gtr CutNois 1	460	Tambourine Mute 2		
371	Applause	416	Gtr CutNois 2	461	Tambourine Open		
372	Scream	417	Power Chord	462	Timbales		
373	Laughing	418	Fret Noise	463	Udu f open		
374	Footsteps 1	419	Dist. Slide 1	464	Alkis		
375	Footsteps 2	420	Dist. Slide 2	465	Bandir		
376	Click	421	E.Gtr Pick 1	466	Bandir Closed		
377	Bird 1	422	E.Gtr Pick 2	467	Bongo Roll		
378	Bird 2	423	Gtr Scratch 1	468	Darbuka 1 Tek 1		
379	Dog	424	Gtr Scratch 2	469	Darbuka 1 Tek 2		
380	Gallop	425	Amp Noise	470	Darbuka 1 DumOp		
381	Crickets	426	Space Lore	471	Darbuka 1 Closed		
382	Cat	427	Swish Terra	472	Darbuka 2		
383	Growl	428	Hand Drill	473	Darbuka 3		
384	Heart Beat	429	Mouth Harp	474	Darbuka 4		
385	Punch	430	Jingle Bell	475	Darbuka D 1		
386	Tribe	431	Bells Open	476	Darbuka D 2		
387	Rainstick	432	Dbk Tky Mute	477	Darbuka D 3		
388	Door Creak	433	Dbk Tky Open	478	Davul		

## Performances

All Performances are user-editable. Use the following table as a model for your own Performance lists.

**Note:** You can remotely select Performances on the Pa1X, by sending it Bank Select MSB (CC#0), Bank Select LSB (CC#32) and Program Change messages on the Control channel (see “MIDI: MIDI In Channels” on page 232).

#	CC#0	CC#32	PC	Bank: 1	CC#0	CC#32	PC	Bank: 2	CC#0	CC#32	PC	Bank: 3	CC#0	CC#32	PC	Bank: 4
1	1	0	0		1	1	0		1	2	0		1	3	0	
2			1				1				1				1	
3			2				2				2				2	
4			3				3				3				3	
5			4				4				4				4	
6			5				5				5				5	
7			6				6				6				6	
8			7				7				7				7	
9			8				8				8				8	
10			9				9				9				9	
11			10				10				10				10	
12			11				11				11				11	
13			12				12				12				12	
14			13				13				13				13	
15			14				14				14				14	
16			15				15				15				15	
	CC#0	CC#32	PC	Bank: 5	CC#0	CC#32	PC	Bank: 6	CC#0	CC#32	PC	Bank: 7	CC#0	CC#32	PC	Bank: 8
1	1	4	0		1	5	0		1	6	0		1	7	0	
2			1				1				1				1	
3			2				2				2				2	
4			3				3				3				3	
5			4				4				4				4	
6			5				5				5				5	
7			6				6				6				6	
8			7				7				7				7	
9			8				8				8				8	
10			9				9				9				9	
11			10				10				10				10	
12			11				11				11				11	
13			12				12				12				12	
14			13				13				13				13	
15			14				14				14				14	
16			15				15				15				15	

	CC#0	CC#32	PC	Bank: 9	CC#0	CC#32	PC	Bank: 10	CC#0	CC#32	PC	Bank: 11	CC#0	CC#32	PC	Bank: 12
1	1	8	0		1	9	0		1	10	0		1	11	0	
2			1				1				1				1	
3			2				2				2				2	
4			3				3				3				3	
5			4				4				4				4	
6			5				5				5				5	
7			6				6				6				6	
8			7				7				7				7	
9			8				8				8				8	
10			9				9				9				9	
11			10				10				10				10	
12			11				11				11				11	
13			12				12				12				12	
14			13				13				13				13	
15			14				14				14				14	
16			15				15				15				15	
	CC#0	CC#32	PC	Bank: 13	CC#0	CC#32	PC	Bank: 14	CC#0	CC#32	PC	Bank: 15	CC#0	CC#32	PC	Bank: 16
1	1	12	0		1	13	0		1	14	0		1	15	0	
2			1				1				1				1	
3			2				2				2				2	
4			3				3				3				3	
5			4				4				4				4	
6			5				5				5				5	
7			6				6				6				6	
8			7				7				7				7	
9			8				8				8				8	
10			9				9				9				9	
11			10				10				10				10	
12			11				11				11				11	
13			12				12				12				12	
14			13				13				13				13	
15			14				14				14				14	
16			15				15				15				15	
	CC#0	CC#32	PC	Bank: 17	CC#0	CC#32	PC	Bank: 18	CC#0	CC#32	PC	Bank: 19	CC#0	CC#32	PC	Bank: 20
1	1	16	0		1	17	0		1	18	0		1	19	0	
2			1				1				1				1	
3			2				2				2				2	
4			3				3				3				3	
5			4				4				4				4	
6			5				5				5				5	
7			6				6				6				6	
8			7				7				7				7	
9			8				8				8				8	
10			9				9				9				9	
11			10				10				10				10	
12			11				11				11				11	
13			12				12				12				12	
14			13				13				13				13	
15			14				14				14				14	
16			15				15				15				15	



## Pads

You can assign the following Hits or Sequences to the four Pads. Older sounds might be still assigned to the Pads when loading musical resources generated with an older operating system (see the following section).

#	HIT - Drum	#	HIT - Percussion	#	HIT - World 1	#	Hit - World 2	#	HIT - Orchestral	#	HIT - Synth&Pad
1	88 Cowbell	1	Agogo 1	1	Baja 1	1	Kup 1	1	Brass Fall	1	Cosmic
2	88 Crash	2	Agogo 2	2	Baja 2	2	Kup 2	2	Orch.Cymbal 1	2	VCF Modulation
3	China	3	Castanet 1	3	China Gong	3	Kup 3	3	Orch.Cymbal 2	3	Planet Lead
4	Crash 1	4	Castanet 2	4	Darbuka 1	4	Kup 4	4	Orch. Hit	4	Brightness
5	Crash 2	5	Conga Hi	5	Darbuka 2	5	Ramazan 1	5	Orch. Snare	5	Crystal
6	Rev. Cymbal	6	Conga Low	6	Darbuka 3	6	Ramazan 2	6	Orch. Sn. Roll	6	New Age Pad
7	Ride 1	7	Conga Mute	7	Darbuka 4	7	Ramazan 3	7	Timpani 1	7	Fifths Lead
8	Ride 2	8	Conga Slap	8	Darbuka 5	8	Rek Dom Ak	8	Timpani 2	8	Calliope
9	Ride Bell	9	Cowbell	9	Darbuka 6	9	Rik 1	9	Timpani 3	9	Caribbean
10	Splash	10	Cuica 1	10	Darbuka 7	10	Rik 2	10	Timpani 4	10	Rezbo
11	Sticks	11	Cuica 2	11	Darbuka 8	11	Rik 3	11	Orchestra Tutti	11	Digital Polixix
12	Rim-Shot	12	Jingle Bell	12	Davul	12	Sagat 1	12		12	Motion Raver
13	Hi Tom Flam	13	Long Guiro	13	Douf Rim Ak	13	Sagat 2	13		13	Moving Bell
14	Mid Tom Flam	14	Short Guiro	14	Dragon Gong	14	Tef 1	14		14	Elastick Pad
15	Low Tom Flam	15	Open Bells	15	Hollo 1	15	Tef 2	15		15	Rave
16	Tom Flam End	16	Rain Stick	16	Hollo 2	16	Tef 3	16		16	Dance Remix
17	Drum Single A	17	Tamb. Acc. 1	17		17	Tef 4	17		17	Vintage Sweep
18	Drum Single B	18	Tamb. Acc. 2	18		18	Tef 5	18		18	You Decide
19	Drum Single C	19	Tamb. Open	19		19	Tef 6	19		19	
20	Drum Single D	20	Tamb. Push	20		20		20		20	
21	Drum Sing.HouseA	21	Timbale Hi	21		21		21		21	
22	Drum Sing.HouseB	22	Timbale Low	22		22		22		22	
23	Drum Sing.HouseC	23	Timbale Rim 1	23		23		23		23	
24	Drum Sing.HouseD	24	Timbale Rim 2	24		24		24		24	
25	Drum Kit A	25	Triangle 1	25		25		25		25	
26	Drum Kit B	26	Triangle 2	26		26		26		26	
27	Drum Kit C	27	Vibra Slap	27		27		27		27	
28	Drum Kit D	28	Whistle 1	28		28		28		28	
29	Drum Kit E	29	Whistle 2	29		29		29		29	
30	Drum Kit F	30	Windchimes 1	30		30		30		30	
31		31	Windchimes 2	31		31		31		31	
32		32	Windchimes 3	32		32		32		32	

#	HIT - Voice	#	HIT - Blocks	#	HIT - Misc&SFX 1	#	HIT - Misc&SFX 2	#	SEQ - Drum	#	SEQ - Percussion
1	Aah !	1	Blk Funk 1 A	1	Applause	1	Bubble	1	Drum DrumBasSolo	1	Perc FingerSnap
2	Hit it !	2	Blk Funk 1 B	2	Bird 1	2	Car Crash	2	Drum Snare Solo	2	Perc Triang.+HH
3	Laughing	3	Blk Funk 1 C	3	Bird 2	3	Car Engine	3	Drum 8 Bt Easy	3	Perc Latin 1
4	Scream	4	Blk Funk 1 D	4	Cat	4	Car Pass	4	Drum 8 Bt Medium	4	Perc Latin 2
5	Uuh !	5	Blk Funk 2 A	5	Church Bell	5	Car Stop	5	Drum Rock 1	5	Perc Latin 3
6	Yeah ! 1	6	Blk Funk 2 B	6	Crickets	6	Explosion	6	Drum Rock 2	6	Perc Mix
7	Yeah ! 2	7	Blk Funk 2 C	7	Dist. Slide 1	7	Gun Shot	7	Drum Brush 1 æ	7	Perc Soft
8		8	Blk Funk 2 D	8	Dist. Slide 2	8	Helicopter	8	Drum Brush 2 æ	8	Perc Conga
9		9	Blk Organ A	9	Dog	9	Jet Plane	9	Drum Disco 1	9	Perc Conga+Ride
10		10	Blk Organ B	10	Door Creak	10	Laser Gun	10	Drum Disco 2	10	Perc Conga+Mix
11		11	Blk Organ C	11	Door Slam	11	Machine Gun	11	Drum Disco 3	11	Perc Conga+Bongo
12		12	Blk Organ D	12	Footsteps 1	12	Phone Ring	12	Drum Disco 4	12	Perc Conga+Tamb.
13		13	Blk Choir A	13	Footsteps 2	13	Punch	13	Drum Funk 1	13	Perc Shaker
14		14	Blk Choir B	14	Heart Beat	14	River	14	Drum Funk 2	14	Perc Shak+Tamb 1
15		15	Blk Choir C	15	Horse Gallop	15	Seashore	15	Drum Brush Shuff	15	Perc Shak+Tamb 2
16		16	Blk Choir D	16	Lion	16	Siren	16	Drum Latin	16	Perc Shak+Cong 1
17		17		17	Scratch 1	17	Starship	17	Drum Progressiv1	17	Perc Shak+Cong 2
18		18		18	Scratch 2	18	Thunder	18	Drum Progressiv2	18	Perc Tambourine1
19		19		19	Scratch 3	19	Train	19	Drum Fill 1	19	Perc Tambourine2

20		20		20	Scratch 4	20	Wind	20	Drum Fill 2	20	Perc Tamb+Conga1
21		21		21	Scratch 5	21		21	Drum Break	21	Perc Tamb+Conga2
22		22		22	Scratch 6	22		22	Drum End	22	Perc Guiro+Bongo
23		23		23	Stadium	23		23		23	Perc Cowbel+Tamb
24		24		24		24		24		24	Perc æ
25		25		25		25		25		25	Perc 6/8
26		26		26		26		26		26	
27		27		27		27		27		27	
28		28		28		28		28		28	
29		29		29		29		29		29	
30		30		30		30		30		30	
31		31		31		31		31		31	
32		32		32		32		32		32	

#	SEQ - Groove	#	SEQ - Bass	#	SEQ - Piano	#	SEQ - Guitar	#	SEQ - Orchestral	#	SEQ - Solo
1	Grv Drum 1	1	Bass Pick Easy	1	Piano Accomp 1	1	Gtr Steel Strum1	1	Timpani Roll 1	1	Solo Marimba
2	Grv Drum 2	2	Bass Pick Med.	2	Piano Accomp 2	2	Gtr Steel Strum2	2	Timpani Roll 2	2	Solo Kalimba 1
3	Grv Brush	3	Bass Pick Busy	3	Piano Accomp 3	3	Gtr Steel Strum3	3	Orch. Tutti 1	3	Solo Kalimba 2
4	Grv Jazzy	4	Bass Finger Easy	4	Piano Accomp 4	4	Gtr Steel Strum4	4	Orch. Tutti 2	4	Solo Steel Drums
5	Grv Latin	5	Bass Finger Med.	5	Piano Accomp 5	5	Gtr Steel Strum5	5	Orch. Tutti 3	5	Solo Vibes
6	Grv HipHop 1	6	Bass Finger Walk	6	Piano Accomp 6	6	Gtr Steel Strum6	6	Orch. Tutti 4	6	Solo Gtr Dist.
7	Grv HipHop 2	7	Bass Latin	7	Piano Accomp 7	7	Gtr Steel Strum æ	7	Orch. Harp 1	7	Solo Slide Steel
8	Grv HipHop 3	8	Bass Slap	8	Piano Accomp 8	8	Gtr Steel Arp 1	8	Orch. Harp 2	8	Solo Banjo
9	Grv HipHop 4	9	Bass Digital	9	Piano Accomp 9	9	Gtr Steel Arp 2	9	Orch. Harp 3	9	Solo Violin
10	Grv HipHop 5	10	Bass Synth	10	Piano Arpeg. 1	10	Gtr Steel Arp 3	10	Orch. Harp 4	10	Solo Harpsi æ
11	Grv HipHop 6	11	Bass DigiFilter1	11	Piano Arpeg. 2	11	Gtr Steel Arp 6/8	11	Orch. Harp 5	11	Solo Harpsi 4/4
12	Grv Funk 1	12	Bass DigiFilter2	12	Piano Arp 1 æ	12	Gtr Steel Mute 1	12	French Horns 1	12	Solo Gtr Funk
13	Grv Funk 2	13	Bass DigiFilter3	13	Piano Arp 2 æ	13	Gtr Steel Mute 2	13	French Horns 2	13	Solo Piano 1
14	Grv Funk 3	14		14	Piano Arp Down	14	Guitar Country	14	Strings 1	14	Solo Piano 2
15	Grv House 1	15		15	Piano Arp Up	15	Gtr Nylon Strum1	15	Strings 2	15	Solo Piano 3
16	Grv House 2	16		16	Piano Rhythm 1/8	16	Gtr Nylon Strum2	16	Strings 3	16	Solo Piano 4
17	Grv Analog	17		17	Piano Rhythm1/8T	17	Gtr Nylon Strum3	17	Strings 4	17	Solo Synth 1
18	Grv Garage 1	18		18	Piano Latin Rock	18	Gtr Nylon Strum4	18	Strings 5	18	Solo Synth 2
19	Grv Garage 2	19		19	Piano Salsa 1	19	Gtr Nylon Strum5	19	Strings 6	19	Solo Synth 3
20	Grv Dance 1	20		20	Piano Salsa 2	20	Gtr Nylon Strum6	20	Strings 7	20	Solo Synth 4
21	Grv Dance 2	21		21	Pno GlissDwnWhit	21	Gtr Nylon Arp 1	21		21	Solo Synth 5
22	Grv Techno 1	22		22	Pno GlissUpWhite	22	Gtr Nylon Arp 2	22		22	Solo Synth 6
23	Grv Techno 2	23		23	Pno GlissDwnBlak	23	Gtr Nylon Arp 3	23		23	Solo Guitar 1
24		24		24	Pno GlissUpBlack	24	GtrNylon Arp æ	24		24	Solo Guitar 2
25		25		25	Honky End	25		25		25	Solo Guitar 3
26		26		26		26		26		26	
27		27		27		27		27		27	
28		28		28		28		28		28	
29		29		29		29		29		29	
30		30		30		30		30		30	
31		31		31		31		31		31	
32		32		32		32		32		32	

#	SEQ - Synth&Pad	#	SEQ - Misc&SFX	#		#		#		#	
1	Synth Seq 1	1	Military 1	1		1		1		1	
2	Synth Seq 2	2	Military 2	2		2		2		2	
3	Synth Seq 3	3	Military 3	3		3		3		3	
4	Synth Seq 4	4	Military 4	4		4		4		4	
5	Synth Seq 5	5	Horror 1	5		5		5		5	
6	Synth Seq 6	6	Horror 2	6		6		6		6	
7	Synth Seq 7	7	Horror 3	7		7		7		7	
8	Synth Seq 8	8	Horror 4	8		8		8		8	
9	Synth Seq 9	9	Lullaby 1	9		9		9		9	
10	Synth Seq 10	10	Lullaby 2	10		10		10		10	

11	Synth Seq 11	11	Nature - River	11		11		11	
12	Synth Portam. 1	12	Nature - Storm	12		12		12	
13	Synth Portam. 2	13	Metronome æ	13		13		13	
14	Synth Portam. 3	14	PreCount æ	14		14		14	
15	Synth Portam. 4	15	Metronome 4/4	15		15		15	
16	Synth Filter 1	16	PreCount 4/4	16		16		16	
17	Synth Filter 2	17	PreCount 4/4 Dbl	17		17		17	
18	Synth Pad Panned	18	Toccata	18		18		18	
19	Synth Master Pad	19	5th Intro	19		19		19	
20	Synth Dark Pad	20	Primavera	20		20		20	
21		21	Circus 1	21		21		21	
22		22	Circus 2	22		22		22	
23		23		23		23		23	
24		24		24		24		24	
25		25		25		25		25	
26		26		26		26		26	
27		27		27		27		27	
28		28		28		28		28	
29		29		29		29		29	
30		30		30		30		30	
31		31		31		31		31	
32		32		32		32		32	

## List of sounds assignable to the Pads in OS versions previous to 2.0

With OS versions prior to 2.0, you could assign the following sounds to the Pads. When loading older data, these sounds could still be assigned to the Pads. You can replace them with any of the Hit or Sequence resources listed in the previous section.

	SOUND NAME		SOUND NAME		SOUND NAME		SOUND NAME
1	ChinaGong	36	DistSlid2	71	Darbuka1	106	HeartBeat
2	Crash 1	37	Sticks	72	Darbuka2	107	Footstep1
3	Crash 2	38	Cowbell	73	Darbuka3	108	Footstep2
4	88 Crash	39	Agogo 1	74	Darbuka4	109	Stadium
5	Ride 1	40	Agogo 2	75	Darbuka5	110	DoorCreak
6	Ride 2	41	Whistle 1	76	Darbuka6	111	DoorSlam
7	China	42	Whistle 2	77	Darbuka7	112	CarEngine
8	Ride Bell	43	Sh. Guiro	78	Darbuka8	113	Car Stop
9	Splash	44	LongGuiro	79	DoufRimAk	114	Car Pass
10	RevCymbal	45	Cuica 1	80	Tef 1	115	Car Crash
11	DragonGng	46	Cuica 2	81	Tef 2	116	Crickets
12	OrchCymb1	47	Triangle1	82	Tef 3	117	Train
13	OrchCymb2	48	Triangle2	83	Tef 4	118	Helicopt
14	OrcSdRoll	49	88Cowbell	84	Tef 5	119	Gun Shot
15	OrchSnare	50	TimbLow	85	Tef 6	120	MachinGun
16	Timpani 1	51	TimbHi	86	Rik 1	121	Laser Gun
17	Timpani 2	52	TimbRim1	87	Rik 2	122	Explosion
18	Timpani 3	53	TimbRim2	88	Rik 3	123	Dog
19	Timpani 4	54	CongaLow	89	RekDomAk	124	H. Gallop
20	Orch. Hit	55	CongaHi	90	OpenBells	125	Birds 1
21	BrassFall	56	CongaSlap	91	Sagat 1	126	Birds 2
22	Ch. Bell	57	CongaMute	92	Sagat 2	127	Thunder
23	JingleBel	58	Tamb.Acc1	93	Davul	128	Sea Shore
24	WindChim1	59	Tamb.Acc2	94	Ramazan 1	129	River
25	WindChim2	60	Tamb.Push	95	Ramazan 2	130	Bubble
26	WindChim3	61	TambOpen	96	Ramazan 3	131	Cat
27	VibraSlap	62	Castanet1	97	Kup 1	132	Lion
28	RainStick	63	Castanet2	98	Kup 2	133	PhoneRing
29	Scratch 1	64	Aah !	99	Kup 3	134	Applause
30	Scratch 2	65	Uuh !	100	Kup 4	135	Wind
31	Scratch 3	66	Yeah ! 1	101	Baya 1	136	Starship
32	Scratch 4	67	Yeah ! 2	102	Baya 2	137	Jetplane
33	Scratch 5	68	Hit It !	103	Laughing	138	Siren
34	Scratch 6	69	Hollo 1	104	Scream	139	Cosmic
35	DistSlid1	70	Hollo 2	105	Punch		

## MIDI Setup

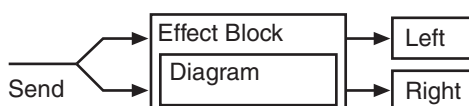
		Default	Master Kbd	Sequencer1	Sequencer 2	Accordion 1	Accordion 2	Accordion 3	Ext. Seq
MIDI IN Channel	1	S1_Tr 1	Global	S1_Tr 1	S2_Tr 1	Global	Upp1	Upp1	S1_Tr 1
	2	S1_Tr 2	Control	S1_Tr 2	S2_Tr 2	Lower	Lower	Lower	S1_Tr 2
	3	S1_Tr 3	-	S1_Tr 3	S2_Tr 3	Bass	-	Bass	S1_Tr 3
	4	S1_Tr 4	-	S1_Tr 4	S2_Tr 4	-	Upp2	Upp2	S1_Tr 4
	5	S1_Tr 5	-	S1_Tr 5	S2_Tr 5	-	Upp3	Upp3	S1_Tr 5
	6	S1_Tr 6	-	S1_Tr 6	S2_Tr 6	-	-	-	S1_Tr 6
	7	S1_Tr 7	-	S1_Tr 7	S2_Tr 7	-	-	-	S1_Tr 7
	8	S1_Tr 8	-	S1_Tr 8	S2_Tr 8	-	-	-	S1_Tr 8
	9	S1_Tr 9	-	S1_Tr 9	S2_Tr 9	-	Bass	-	S1_Tr 9
	10	S1_Tr 10	-	S1_Tr 10	S2_Tr 10	Drum	Drum	Drum	S1_Tr 10
	11	S1_Tr 11	-	S1_Tr 11	S2_Tr 11	Perc	Perc	Perc	S1_Tr 11
	12	S1_Tr 12	-	S1_Tr 12	S2_Tr 12	Acc1	Acc1	Acc1	S1_Tr 12
	13	S1_Tr 13	-	S1_Tr 13	S2_Tr 13	Acc2	Acc2	Acc2	S1_Tr 13
	14	S1_Tr 14	-	S1_Tr 14	S2_Tr 14	Acc3	Acc3	Acc3	S1_Tr 14
	15	S1_Tr 15	-	S1_Tr 15	S2_Tr 15	Acc4	Acc4	Acc4	S1_Tr 15
	16	S1_Tr 16	-	S1_Tr 16	S2_Tr 16	Acc5	Acc5	Acc5	S1_Tr 16
MIDI OUT Channel	1	1 Upp1	Upp1	S1_Tr 1	S2_Tr 1	Upp1	S1_Tr 1	S2_Tr 1	Upp. 1
	2	Upp2	Upp2	S1_Tr 2	S2_Tr 2	Upp2	S1_Tr 2	S2_Tr 2	-
	3	Upp3	Upp3	S1_Tr 3	S2_Tr 3	Upp3	S1_Tr 3	S2_Tr 3	-
	4	Lower	Lower	S1_Tr 4	S2_Tr 4	Lower	S1_Tr 4	S2_Tr 4	-
	5	-	-	S1_Tr 5	S2_Tr 5	-	S1_Tr 5	S2_Tr 5	-
	6	-	-	S1_Tr 6	S2_Tr 6	-	S1_Tr 6	S2_Tr 6	-
	7	-	-	S1_Tr 7	S2_Tr 7	-	S1_Tr 7	S2_Tr 7	-
	8	-	-	S1_Tr 8	S2_Tr 8	-	S1_Tr 8	S2_Tr 8	-
	9	Bass	Bass	S1_Tr 9	S2_Tr 9	Bass	S1_Tr 9	S2_Tr 9	-
	10	Drum	Drum	S1_Tr 10	S2_Tr 10	Drum	S1_Tr 10	S2_Tr 10	-
	11	Perc	Perc	S1_Tr 11	S2_Tr 11	Perc	S1_Tr 11	S2_Tr 11	-
	12	Acc1	Acc1	S1_Tr 12	S2_Tr 12	Acc1	S1_Tr 12	S2_Tr 12	-
	13	Acc2	Acc2	S1_Tr 13	S2_Tr 13	Acc2	S1_Tr 13	S2_Tr 13	-
	14	Acc3	Acc3	S1_Tr 14	S2_Tr 14	Acc3	S1_Tr 14	S2_Tr 14	-
	15	Acc4	Acc4	S1_Tr 15	S2_Tr 15	Acc4	S1_Tr 15	S2_Tr 15	-
	16	Acc5	Acc5	S1_Tr 16	S2_Tr 16	Acc5	S1_Tr 16	S2_Tr 16	-
Chord 1 Chann.		Off	1	Off	Off	2	2	2	Off
Chord 2 Chann.		Off	Off	Off	Off	3	3	Off	Off
Harm. Chann.		1	1	1	1	2	2	2	Off
Harm. Octave		1	1	1	1	-1	-1	-1	1
Harm. Range HI		G9	G9	G9	G9	G9	G9	G9	G9
Harm. Range LO		C -1	C -1	C -1	C -1	C -1	C -1	C -1	C -1
MIDI IN Velocity		Normal	Normal	Normal	Normal	110	110	Normal	Normal
MIDI IN Oct. Trp.		√	√	√	√	√	√	√	√
MIDI IN Mute/Un.		√	√	-	-	√	√	√	√
Upper Oct. Trp.		0	0	0	0	0	0	0	0
Lower Oct. Trp.		0	0	0	0	0	0	0	0

# Effects

Pa1X is equipped with four powerful Effect Processors. You can send them the internal tracks, or any signal entering the Audio Inputs.

## Diagrams

The following instructions show the signal path diagram for each of the effect types. The signal coming from the tracks (**Send**) is mono. Before entering an effect processor, it is split in two “wires” (**Left** and **Right**), and processed in stereo. The signal is then output in stereo from the effect processor, and sent to the Mix output (Left&Right, the headphones or the internal speakers).



## Dynamic Modulation sources

When the **D<sub>mod</sub>** symbol is encountered, a Dynamic Modulation can be applied to the corresponding parameter. The following table shows the available modulation sources.

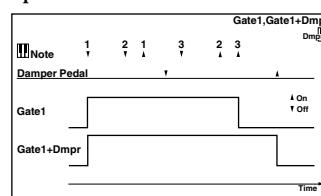
Modulation source	Note
Off	No modulation
Gate1	
Gate1+Dmpr	
Gate2	
Gate2+Dmpr	
Note Nr	Note Number
Velocity	Note Velocity
AfterTouch	After Touch
JS X	Joystick Left/Right
JS+Y: CC#01	Joystick Forward
JS-Y: CC#02	Joystick Backward
MIDI(CC#04)	
MIDI(CC#12)	
MIDI(CC#13)	
MIDI(CC#16)	
MIDI(CC#18)	
MIDI(CC#17)	
MIDI(CC#19)	
MIDI(CC#20)	
MIDI(CC#21)	
Damper: #64	
Prta.SW: #65	Portamento Switch

Modulation source	Note
Sostenu: #66	Sostenuto Pedal
MIDI(CC#80)	
MIDI(CC#81)	
MIDI(CC#82)	
MIDI(CC#83)	
Tempo	

Some notes on the Gate parameters follow.

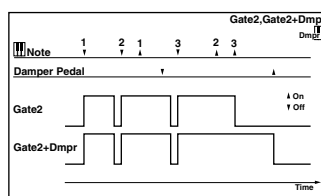
### Gate1, Gate1+Dmpr (Gate1+Damper)

The effect is at maximum during note-on, and will stop when all keys are released. With **Gate1 + Dmpr**, the effect will remain at maximum even after the keys are released, as long as the damper (sustain) pedal is pressed.



### Gate2, Gate2+Dmpr (Gate2+Damper)

This is essentially the same as for Gate 1 or Gate 1 + Dmpr. However when **Gate 2** or **Gate 2 + Dmpr** are used as a dynamic modulation source for the EG of 022: St. Envelope Flanger etc. or the AUTOFADE of 027: Stereo Vibrato, a trigger will occur at each note-on. (In the case of Gate 1 and Gate 1 + Dmpr, the trigger occurs only for the first note-on.)





## Filter/Dynamic

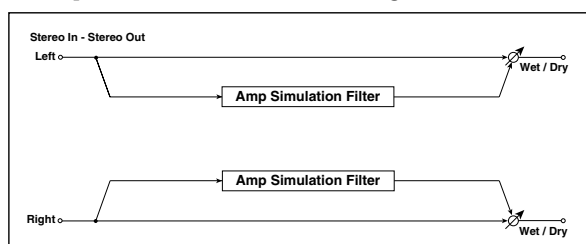
### Filter and dynamics control effects

#### 000: No Effect

Select this option when you do not use any effects. When this option is selected, the effect is muted.

#### 001: Amp. Simulation

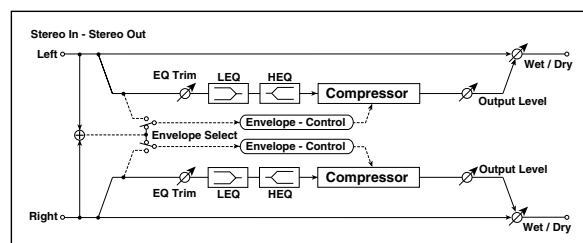
This effect simulates the frequency response characteristics of guitar amplifiers. It is also effective for organ and drum sounds.



a	Amplifier Type Selects the type of guitar amplifier	Solid State, British (EL84), American (6L6)
b	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet 
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

#### 002: Compressor

This effect compresses the input signal to regulate the level and give a “punchy” effect. It is useful for guitar, piano, and drum sounds. This is a stereo compressor. You can link left and right channels, or use each channel separately.



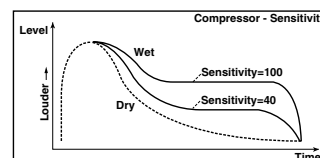
a	Envelope Select Determines whether the left and right channels are linked or used separately	L/R Mix, L/R Individually 
b	Sensitivity Sets the sensitivity	1...100 
c	Attack Sets the attack level	1...100 
d	EQ Trim Sets the EQ input level	0...100
e	Pre LEQ Gain [dB] Sets the gain of Low EQ	-15.0...+15.0dB
	Pre HEQ Gain [dB] Sets the gain of High EQ	-15.0...+15.0dB
f	Output Level Sets the output level of the compressor	0...100 
	Src Selects the modulation source for the compressor output level	Off...Tempo
	Amt Sets the modulation amount of the compressor output level	-100...+100
g	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet Table , “Sets the balance between the effect and dry sounds,” on page 323 
	Src Selects the modulation source of the effect balance	Off...Tempo Table , “Selects the modulation source of the effect balance,” on page 323
	Amt Sets the modulation amount of the effect balance	-100...+100 Table , “Sets the modulation amount of the effect balance,” on page 323

##### a: Envelope Select

This parameter selects whether the left and right channels are linked to control both signals simultaneously, or whether each channel is controlled independently.

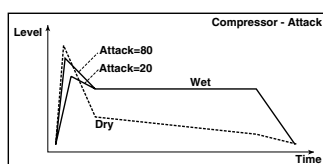
##### b: Sensitivity, f: Output Level

The “Sensitivity” parameter sets the sensitivity of the compressor. If this parameter is set to a higher value, lower level sounds will be boosted. With a higher Sensitivity, the overall volume level is higher. To adjust the final volume level, use the “Output Level” parameter.



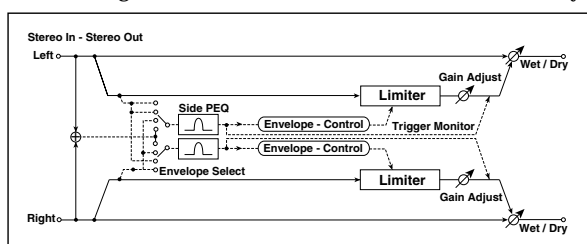
## c: Attack

This parameter controls the attack level.



## 003: Limiter

The Limiter regulates the input signal level. It is similar to the Compressor, except that the Limiter compresses only signals that exceed the specified level to lower unnecessary peak signals. The Limiter applies a peaking-type EQ to the trigger signal (which controls the degree of the Limiter effect), allowing you to set any band width to be covered. This effect is a stereo limiter. You can link left and right channels, or use each channel individually.



a	Envelope Select Selects from linking both channels, controlling only from left channel, only from the right channel, or controlling each channel individually	L/R Mix, L Only, R Only, L/R Individually
b	Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1
c	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB
d	Attack Sets the attack time	1...100
	Release Sets the release time	1...100
e	Gain Adjust [dB] Sets the output gain	-Inf, -38...+24dB
	Src Selects the modulation source for the output gain	Off...Tempo
	Amt Sets the modulation amount of the output gain	-63...+63
f	Side PEQ Insert Toggles between on/off of the trigger signal's EQ	Off, On
	Trigger Monitor Switches between effect output monitor and trigger signal monitor	Off, On
g	Side PEQ Cutoff [Hz] Sets the EQ center frequency for the trigger signal	20...12.00kHz
	Q Sets the EQ bandwidth for the trigger signal	0.5...10.0
	Gain [dB] Sets the EQ gain for the trigger signal	-18.0...+18.0dB
h	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## a: Envelope Select

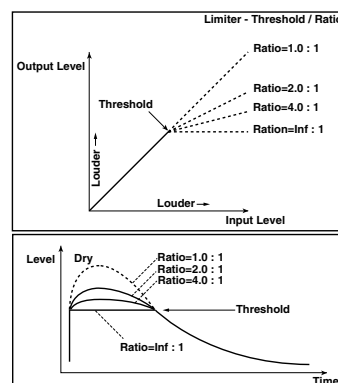
When L/R Mix is selected for this parameter, the left and right channels are linked to control the Limiter using the mixed signal. If L Only (or R Only) is selected, the left and right channels are linked, and the Limiter is controlled via only the left (or right) channel.

With L/R individually, the left and right channels control the Limiter individually.

## b: Ratio, c: Threshold [dB], e: Gain Adjust [dB]

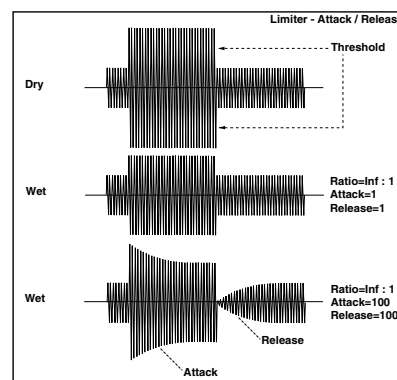
This parameter sets the signal compression "Ratio". Compression is applied only when the signal level exceeds the "Threshold" value.

Adjust the output level using the "Gain Adjust" parameter, since compression causes the entire level to be reduced.



## d: Attack, d: Release

These parameters set the attack time and release time. A higher attack time will cause the compression to be applied more slowly.



## f: Side PEQ Insert, g: Side PEQ Cutoff [Hz], g: Q, g: Gain [dB]

These parameters are used to set the EQ applied to the trigger signal.

The Limiter determines whether the compression is applied or not, based on the post-EQ trigger signal. Setting the equalizer allows you to set the Limiter to respond to any frequency band.

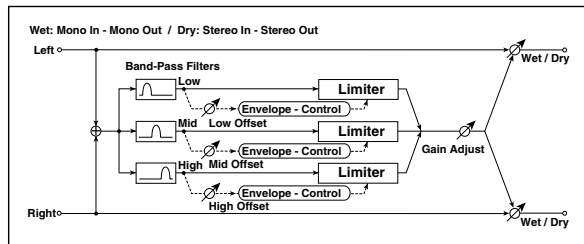
## f: Trigger Monitor

Setting this parameter On will cause the trigger signal to be output, instead of the effect sound. Use this parameter to check the trigger signal with EQ applied.

Usually, set this to Off.

## 004: Multiband Limiter

This effect applies the Limiter to the low range, mid range, and high range of the input signal. You can control dynamics for each range to adjust the sound pressure of the low range, mid range, and high range in a different way from the EQ.



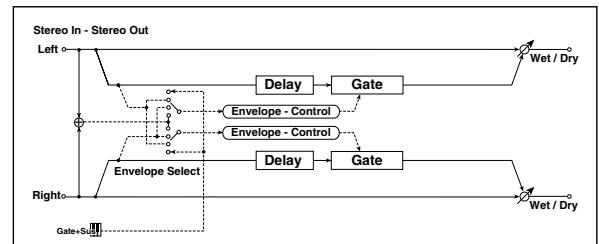
a	Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
b	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB Fx:003
c	Attack Sets the attack time	1...100 Fx:003
d	Release Sets the release time	1...100 Fx:003
e	Low Offset [dB] Gain of the low-range trigger signal	-40...0dB
f	Mid Offset [dB] Gain of the mid-range trigger signal	-40...0dB
g	High Offset [dB] Gain of the high-range trigger signal	-40...0dB
h	Gain Adjust [dB] Sets the output gain	-Inf, -38...+24dB Fx:003, D <sup>mod</sup>
	Src Selects the modulation source for the output gain	Off...Tempo
	Amt Sets the modulation amount of the output gain	-63...+63
i	Wet/Dry Dry, 1:99...99:1, Wet Table, "Sets the balance between the effect and dry sounds," on page 323 D <sup>mod</sup>	
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

**e: Low Offset [dB], f: Mid Offset [dB], g: High Offset [dB]**

These parameters set the gain of the trigger signal. For example, if you do not want to apply compression to the high range, reduce the "High Offset" value down below the "Threshold" level. In this way, the high range limiter will not respond, and compression will not be applied.

## 005: Gate

This effect mutes the input signal if its level is lower than the specified level. It also reverses the on and off operation of the gate, and uses Note On and Off messages to turn the gate on and off.



a	Envelope Select Selects from Control via the modulation source, mixing the left and right signals, Only left, and Only right D-mod, L/R Mix, L Only, R Only Fx:003, D <sup>mod</sup>	
	Src Selects the modulation source that controls the gate when Envelope Select = D-mod	Off...Gate2+Dmpr
b	Polarity Switches between non-reversed and reversed Gate on/off	+, - Fx:003
c	Threshold Sets the level to which the Gate is applied	0...100 Fx:003
d	Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
e	Delay Time [msec] Sets the delay time of the gate input	0...100msec Fx:003
f	Wet/Dry Dry, 1:99...99:1, Wet Table, "Sets the balance between the effect and dry sounds," on page 323 D <sup>mod</sup>	
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## a: Envelope Select, a: Src

The "Envelope Select" parameter selects whether the gate on/off is triggered by the level of the input signal, or controlled directly by the modulation source. The Src parameter specifies the modulation source, selected from **Off** to **Gate2+Dmpr**.

With "Envelope Select" = **L/R Mix**, the left and right channel signal mixture will trigger the gate on/off. When **L Only** or **R Only** is selected, the gate is controlled by either of the channel signals.

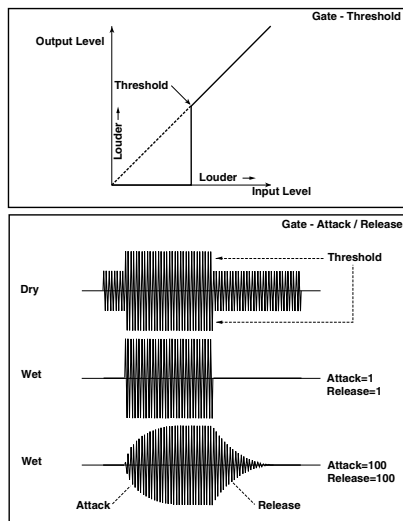
## b: Polarity

This parameter reverses the Gate on/off operation. With a **negative** value, the gate is closed when the input signal level exceeds the Threshold. The gate operation controlled by the modulation source is also reversed.

## c: Threshold, d: Attack, d: Release

This parameter sets the signal level below which Gate is applied when "Envelope Select" is set to **L/R Mix**, **L Only**, or **R Only**.

The Attack and Release parameters set the Gate attack time and release time.

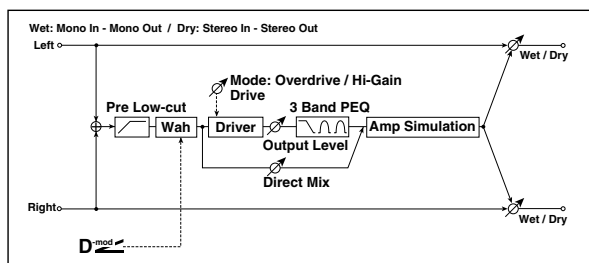


### e: Delay Time

This parameter sets the delay time of the Gate input. If the sound has a very fast attack, increase the delay time so that the signal will be input after the Gate is opened. This will preserve the attack part of the sound.

## 006: OD - Hi Gain Wah (Overdrive/Hi-Gain Wah)

This distortion effect utilizes an Overdrive mode and a Hi-Gain mode. Controlling the wah effect, the 3-band EQ, and the amp simulation will allow you to create versatile distortion sounds. This effect is suitable for guitar and organ sounds.



a	Wah Switches Wah on/off	Off, On D <sup>mod</sup>
	Src Selects the modulation source that switches the Wah on and off	Off...Tempo
	Sw Selects the switching mode for the modulation source that switches the Wah on and off	Toggle, Moment
b	Wah Sweep Range Sets the range of Wah	-10...+10 D <sup>mod</sup>
	Wah Sweep Src Selects the modulation source that controls the Wah	Off...Tempo
c	Drive Mode Switches between overdrive and hi-gain distortion	Overdrive, Hi-Gain
d	Drive Sets the degree of distortion	1...100 D <sup>mod</sup>
	Pre Low-cut Sets the low range cut amount of the distortion input	0...10 D <sup>mod</sup>
e	Output Level Sets the output level	0...50 D <sup>mod</sup> , D <sup>mod</sup>
	Src Selects the modulation source for the output level	Off...Tempo
	Amt Sets the modulation amount of the output level	-50...+50

f	Low Cutoff [Hz] Sets the center frequency for Low EQ (shelving type)	20...1.0kHz
	Gain [dB] Table, "Sets the gain of Low EQ," on page 323	-18...+18dB
g	Mid1 Cutoff [Hz] Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 D <sup>mod</sup>
	Gain [dB] Sets the gain of Mid/High EQ 1	-18...+18dB
h	Mid2 Cutoff [Hz] Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 D <sup>mod</sup>
	Gain [dB] Sets the gain of Mid/High EQ 2	-18...+18dB
i	Direct Mix Sets the amount of the dry sound mixed to the distortion	0...50
	Speaker Simulation Switches the speaker simulation on/off	Off, On
j	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323 D <sup>mod</sup>	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

### a: Wah

The Wah parameter switches the wah effect on/off.

### a: Sw

This parameter sets how the wah effect is switched on and off via the modulation source.

When "Sw" = **Moment**, the wah effect is usually turned off. It is turned on only when you press the pedal or operate the joystick.



When a value for the modulation source is less than 64, "off" speed is selected, and when the value is 64 or higher, "on" is selected.

When "Sw" = **Toggle**, the wah effect is switched between on and off each time you press the pedal or operate the joystick.



The switch will be turned on/off each time the value of the modulation source exceeds 64.

### b: Wah Sweep Range, b: Wah Sweep Src

This parameter sets the sweep range of the wah center frequency. A negative value will reverse the direction of sweep. The wah center frequency can be controlled by the modulation source specified in the "Wah Sweep Src" parameter.

### d: Drive, e: Output Level

The degree of distortion is determined by the level of input signal and the setting of "Drive". Raising the "Drive" setting will cause the entire volume level to increase. Use the "Output Level" parameter to adjust the volume level. The "Output Level" parameter uses the signal level input to the 3-Band EQ. If clipping occurs at the 3-Band EQ, adjust the "Output Level" parameter.

### d: Pre Low-cut

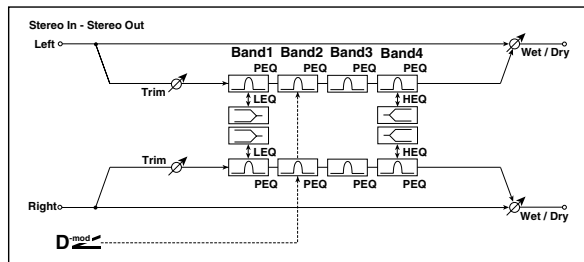
Cutting the signal in the low range before it is input to the Distortion will create a sharp distortion.

### g: Q, h: Q

These parameters set the bandwidth of each equalizer. The higher the value, the narrower the band becomes.

## 007: Parametric 4EQ (Parametric 4-Band EQ)

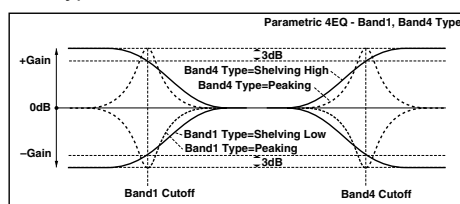
This is a stereo 4-band parametric equalizer. You can select peaking type or shelving type for Band 1 and 4. The gain of Band 2 can be controlled by dynamic modulation.



a	Trim Sets the input level	0...100
b	Band1 Type Selects the type of Band 1	Peaking, Shelving-Low
c	Band4 Type Selects the type of Band 4	Peaking, Shelving-High
d	Band2 Dynamic Gain Src Selects the modulation source of the Band 2 gain	Off...Tempo
	Amt [dB] Sets the modulation amount of Band 2 gain	-18...+18dB
e	Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18.0...+18.0dB
f	Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...10.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18.0...+18.0dB D-mod
g	Band3 Cutoff [Hz] Sets the center frequency of Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18.0...+18.0dB
h	Band4 Cutoff [Hz] Sets the center frequency of Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18.0...+18.0dB
i	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323 D-mod	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

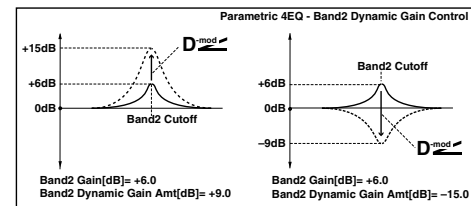
### b: Band1 Type, c: Band4 Type

Selects a filter type for Band 1 and 4.



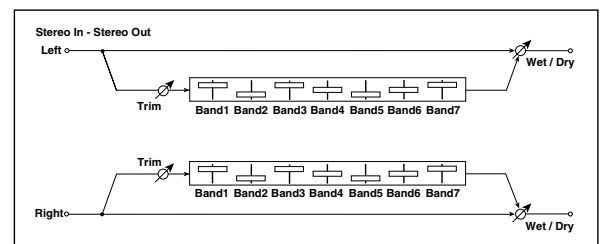
### d: Band2 Dynamic Gain Src, d: Amt [dB], f: Gain [dB]

You can control the gain of Band 2 using the modulation source.



## 008: Graphic 7EQ (Graphic 7 Band EQ)

This is a stereo 7-band graphic equalizer. The bar graph of the gain setting for each band gives you a clear, visual idea of frequency responses. You can select a center frequency setting for each band from twelve types, according to the sound.



a	Type1:Wide 1, 2:Wide 2, 3:Wide 3, 4:Half Wide 1, 5:Half Wide 2, 6:Half Wide 3, 7:Low, 8:Wide Low, 9:Mid, 10:Wide Mid, 11:High, 12:Wide High Selects a combination of center frequencies for each band	
b	Trim Sets the input level	0...100
c	Band1 [dB] Sets the gain of Band 1	-18.0...+18.0dB
d	Band2 [dB] Sets the gain of Band 2	-18.0...+18.0dB
e	Band3 [dB] Sets the gain of Band 3	-18.0...+18.0dB
f	Band4 [dB] Sets the gain of Band 4	-18.0...+18.0dB
g	Band5 [dB] Sets the gain of Band 5	-18.0...+18.0dB
h	Band6 [dB] Sets the gain of Band 6	-18.0...+18.0dB
i	Band7 [dB] Sets the gain of Band 7	-18.0...+18.0dB
j	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323 D-mod	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

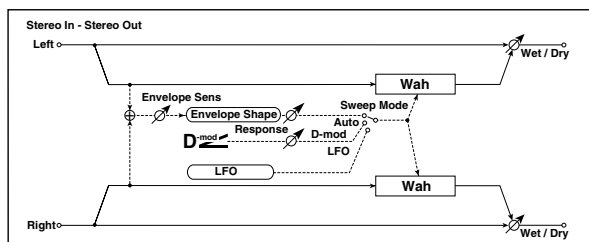
### a: Type

This parameter selects a combination of center frequencies for each band. Each center frequency is shown on the right edge of the LCD.

You can configure a 21-Band Graphic EQ ranging from 80Hz to 18kHz if you route three Graphic 7Band EQ effects in series, with a setting of **7:Low**, **9:Mid**, and **11:High** for each EQ.

## 009: Wah/AutoWah

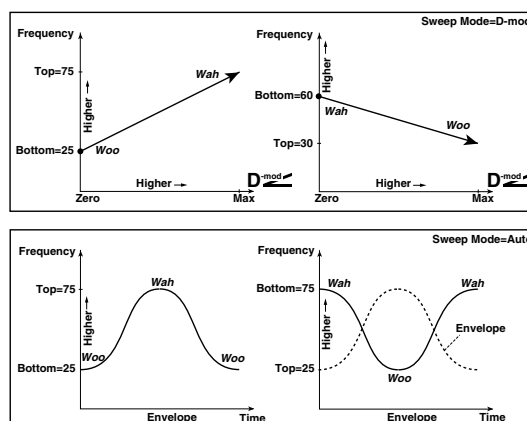
This stereo wah effect allows you to create sounds from vintage wah pedal simulation to auto-wah simulation, and much broader range settings.



a	Frequency Bottom Sets the lower limit of the wah center frequency	0...100 
	Frequency Top Sets the upper limit of the wah center frequency	0...100 
b	Sweep Mode Selects the control from auto-wah, modulation source, and LFO ,  ,	Auto, D-mod, LFO
	Src Selects the modulation source for the wah when Sweep Mode=D-mod	Off...Tempo
	Response Sets the response speed when Sweep Mode = Auto or D-mod	0...100 
c	Envelope Sens (Envelope Sensitivity) Sets the sensitivity of auto-wah	0...100 
	Envelope Shape Sets the sweep curve of auto-wah	-100...+100 
d	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz ,
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
e	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes 	Off, On
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 
	Base Note Selects the type of notes that specify the LFO speed 	
	Times Sets the number of notes that specify the LFO speed	x1...x16 
f	Resonance Sets the resonance amount	0...100
	Low Pass Filter Switches the Wah Low Pass Filter on and off	Off, On
g	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

**a: Frequency Bottom, a: Frequency Top**

The sweep width and direction of the wah filter are determined by the "Frequency Top" and "Frequency Bottom" settings.



**b: Sweep Mode**

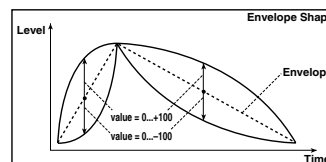
This parameter changes the wah control mode. Setting “Sweep Mode” to **Auto** will select an auto-wah that sweeps according to envelope changes in the input signal level. Auto-wah is frequently used for funk guitar parts and clav sounds. When “Sweep Mode” is set to **D-mod**, you can control the filter directly via the modulation source in the same way as a wah pedal. When “Sweep Mode” is set to **LFO**, the effect uses LFO to sweep in cycle.

**c: Envelope Sens (Envelope Sensitivity)**

This parameter sets the sensitivity of auto-wah. Increase the value if the input signal is too low to sweep. Reduce the value if the input signal is so high that the filter is stopped temporarily.

### c: Envelope Shape

This parameter determines the sweep curve for auto-wah.



**d: LFO Frequency [Hz], e: BPM/MIDI Sync**

When “BPM/MIDI Sync”=Off, the LFO speed uses the LFO Frequency parameter setting. When “BPM/MIDI Sync”=On, the LFO speed follows the “BPM”, “Base Note”, and “Times” settings.

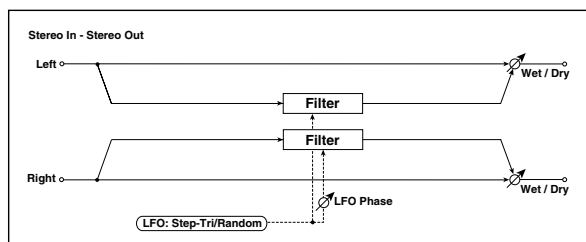
**e: BPM, e: Base Note, e: Times**

One cycle of LFO sweep is obtained by multiplying the length of a note (A...) (selected for "Base Note", in relation to the tempo specified in ("BPM", or the MIDI Clock tempo if "BPM" is set to **MIDI**) by the number specified in the Times parameter.



## 010: Random Filter

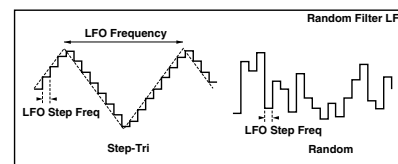
This stereo band pass filter uses a step-shape waveform and random LFO for modulation. You can create a special effect from filter oscillation.



a	LFO Waveform Selects LFO Waveform	Step-Tri, Random
b	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	Src Selects the modulation source used for both LFO speed and step speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	LFO Step Freq (Frequency) [Hz] Sets the LFO step speed (speed that changes in steps)	0.05...50.00Hz
	Amt Sets the modulation amount of LFO step speed	-50.00...+50.00Hz
e	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16
f	Step Base Note Selects the type of notes to specify the LFO step speed	Fx:009
	Times Sets the number of notes to specify the LFO step speed	x1...x32
g	Manual Sets the filter center frequency	0...100
h	Depth Sets the modulation depth of filter center frequency	0...100
	Src Selects the modulation source of filter modulation	Off...Tempo
	Amt Sets the modulation amount of filter modulation	-100...+100
i	Resonance Sets the resonance amount	0...100
j	Wet/Dry -Wet...-1:99, Dry, 1:99...Wet Table, "Sets the balance between the effect and dry sounds," on page 323	
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

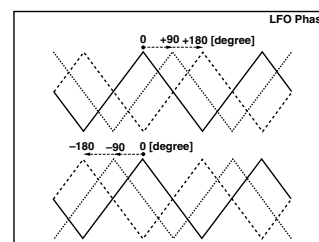
a: LFO Waveform, c: LFO Frequency [Hz],  
d: LFO Step Freq (Frequency) [Hz]

When "LFO Waveform" is set to **Step-Tri**, LFO is a step-shape, triangle waveform. The "LFO Frequency" parameter sets the original triangle waveform speed. Changing the "LFO Step Freq" parameter enables you to adjust the width of the steps. When "LFO Waveform" is set to **Random**, the "LFO Step Freq" parameter uses a random LFO cycle.



b: LFO Phase [degree]

Offsetting the left and right phases alters how modulation is applied to the left and right channels, creating a swelling affect.



e: BPM, f: Step Base Note, f: Times

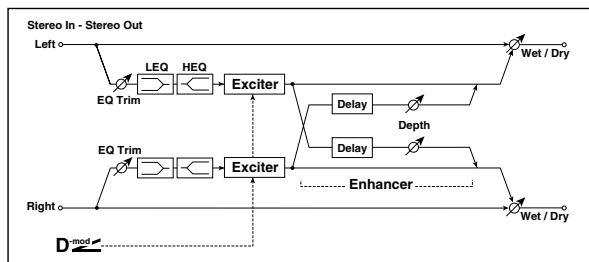
The width of an LFO step, or a cycle of random LFO, is obtained by multiplying the length of a note (♪...♪) (selected for "Step Base Note", in relation to the tempo specified in "BPM," or the **MIDI** Clock tempo if "BPM" is set to MIDI) by the number specified in the "Times" parameter.

j: Wet/Dry

The effect sound's phase will be reversed when you set this parameter in the range of values from **-Wet** to **-1:99**.

## 011: Exciter/Enhancer

This effect is a combination of the Exciter, which adds a punch to the sound and the Enhancer, which adds spread and presence.



a	Exciter Blend Sets the intensity (depth) of the Exciter effect	-100...+100 E3, D-mod
	Src Selects the modulation source of the Exciter intensity	Off...Tempo
	Amt Sets the modulation amount of the Exciter intensity	-100...+100
b	Emphatic Point Sets the frequency to be emphasized	0...70 E3, D-mod
	Src Selects the modulation source of the frequency to be emphasized	Off...Tempo
	Amt Sets the amount of modulation of the frequency to be emphasized	-70...+70
c	Enhancer Dly L (Enhancer Delay L) [msec] Sets the delay time for the Enhancer left channel	0.0...50.0msec E3
d	Enhancer Dly R (Enhancer Delay R) [msec] Sets the delay time for the Enhancer right channel	0.0...50.0msec E3
e	Enhancer Depth Sets the determines to what degree the Enhancer effect is applied	0...100 D-mod
	Src Selects the modulation source of the Enhancer width	Off...Tempo
	Amt Sets the modulation amount of the Enhancer width	-100...+100
f	EQ Trim Sets the 2-band EQ input level	0...100
g	Pre LEQ Gain [dB] Table, "Sets the gain of Low EQ," on page 323	-15.0...+15.0dB
	Pre HEQ Gain [dB] Table, "Sets the gain of High EQ," on page 323	-15.0...+15.0dB
h	Wet/Dry Dry, 1:99...99:1, Wet Table, "Sets the balance between the effect and dry sounds," on page 323 D-mod	
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

### a: Exciter Blend

This parameter sets the depth (intensity) of the Exciter effect. Positive values give a frequency pattern (to be emphasized) different from negative values.

### b: Emphatic Point

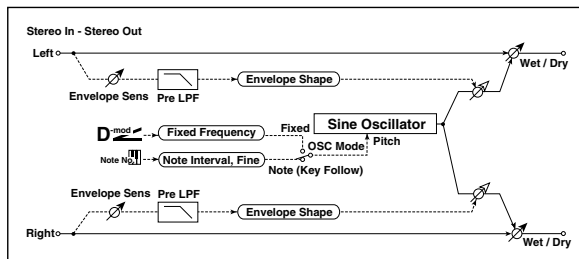
This parameter sets the frequency to be emphasized. Higher values will emphasize lower frequencies.

### c: Enhancer Dly L [msec], d: Enhancer Dly R [msec]

These parameters set the delay time for the Enhancer left and right channel. Specifying a slightly different delay time for the left and right channel will add a stereo image, depth, and width to the sound.

## 012: Sub Oscillator

This effect adds very low frequencies to the input signal. It is very useful when simulating a roaring drum sound or emphasizing powerful low range. This effect is different from the equalizer in that you can add very low range harmonics. You can also adjust the oscillator frequency to match a particular note number, for use as an octaver.



a	OSC Mode Determines whether the oscillator frequency follows the note number or whether it is fixed	Note (Key Follow), Fixed E3
b	Note Interval Sets the pitch difference from the note number when OSC Mode=Note (Key Follow)	-48...0 E3
	Note Fine Fine adjustment of the oscillator frequency	-100...+100 E3
c	Fixed Frequency [Hz] Sets the oscillator frequency when OSC Mode=Fixed	10.0...80.0Hz D-mod
	Src Selects the modulation source for the oscillator frequency when OSC Mode=Fixed	Off...Tempo
	Amt Sets the oscillator frequency modulation amount when OSC Mode=Fixed	-80...+80Hz
d	Envelope Pre LPF Sets the upper limit of the frequency range for which very low harmonics are added	1...100 E3
e	Envelope Sens (Envelope Sensitivity) Sets the sensitivity with which very low harmonics are added	0...100
	Envelope Shape Sets the oscillator's volume envelope curve	-100...+100
f	Wet/Dry Dry, 1:99...99:1, Wet Table, "Sets the balance between the effect and dry sounds," on page 323 D-mod	
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

### a: OSC Mode, b: Note Interval, b: Note Fine

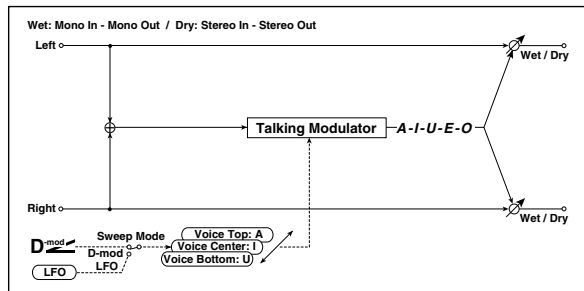
The "OSC Mode" parameter selects the oscillator operation mode. When **Note (Key Follow)** is selected, the oscillator's frequency is determined based on the note number, allowing you to use it as an octaver. The "Note Interval" parameter sets the pitch offset from the original note number by semitone steps. The "Note Fine" parameter allows you to fine-tune in steps of cents.

### d: Envelope Pre LPF

This parameter sets the upper limit of the frequency range to which very low harmonics are added. Adjust this parameter if you do not want to add lower harmonics to the higher range.

## 013: Talking Modulator

This effect adds an unusual character, like a human voice, to the input signal. Modulating the tone via dynamic modulation, you can create an interesting effect that sounds as if the guitar or synthesizer is talking.



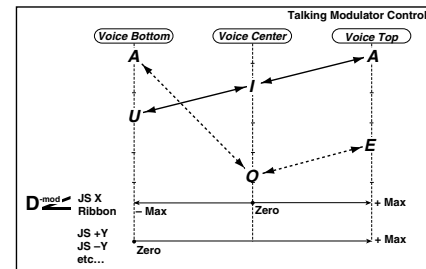
a	Sweep Mode	D-mod, LFO
	Switches between modulation source control and LFO control	
b	Manual Voice Control	Bottom, 1...49, Center, 51...99, Top
	Voice pattern control	
c	Src	Off...Tempo
	Selects the modulation source that controls the voice pattern	
c	Voice Top	A, I, U, E, O
d	Voice Center	A, I, U, E, O
e	Voice Bottom	A, I, U, E, O
f	LFO Frequency [Hz]	0.02...20.00Hz
	Sets the LFO speed	Fx:009,
	Amt	-20.00...+20.00Hz
g	BPM/MIDI Sync	Off, On
	Switches between using the frequency of the LFO speed and using the tempo and notes	Fx:009,
	BPM	MIDI, 40...240
	Selects MIDI Clock and assigns tempo	Fx:009
h	Base Note	Fx:009
	Selects the type of notes that specify the LFO speed	Fx:009
	Times	x1...x16
h	Formant Shift	-100...+100
	Sets the frequency to which the effect is applied	
i	Resonance	0...100
	Sets the Level of resonance of the voice pattern	
	Wet/Dry	Dry, 1:99...99:1, Wet
i	Src	Off...Tempo
	Table , "Sets the modulation source of the effect balance," on page 323	
	Amt	-100...+100
	Table , "Sets the modulation amount of the effect balance," on page 323	

### c: Voice Top, d: Voice Center, e: Voice Bottom

These parameters assign vowels to the top, center, and bottom position of the controller.

E.g.: When "Voice Top"=A, "Voice Center"=I, and "Voice Bottom"=U:

If Sweep Mode is set to LFO, the sound will change cyclically from "a" to "i," "u," "i," then "a."



### h: Formant Shift

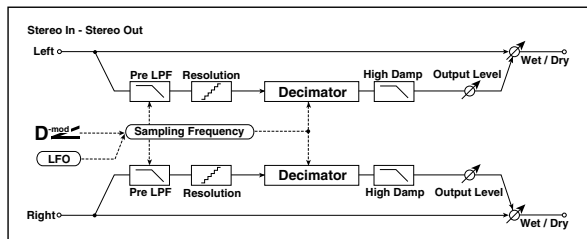
This parameter adjusts the frequency level to which the effect is applied. If you wish to apply the effect to a higher-range sound, set this parameter to a higher value; to apply the effect to a lower-range sound, set this to a lower value.

### h: Resonance

This parameter sets the intensity of resonance for the voice pattern. A larger value will add more character to the sound.

## 014: Decimator

This effect creates a rough sound like a cheap sampler by lowering the sampling frequency and data bit length. You can also simulate noise unique to a sampler (aliasing).



a	Pre LPF Selects whether the harmonic noise caused by a decrease in sampling frequency is generated or not	Off, On [Icon]
	High Damp [%] Sets the ratio of cut of the high range	0...100% [Icon]
b	Sampling Freq (Sampling Frequency) [Hz] Sets the sampling frequency	1.00k...48.00kHz D <sub>mod</sub> [Icon]
	Src Selects the modulation source of the sampling frequency	Off...Tempo
	Amt Sets the modulation amount of the sampling frequency	-48.00k...+48.00kHz
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz D <sub>mod</sub> [Icon]
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	Depth Sets the depth of the sampling frequency LFO modulation	0...100 D <sub>mod</sub> [Icon]
	Src Selects the LFO modulation source of the sampling frequency	Off...Tempo
	Amt Sets the LFO modulation amount of the sampling frequency	-100...+100
e	Resolution Sets the data bit length	4...24 [Icon]
f	Output Level Sets the output level	0...100 [Icon], D <sub>mod</sub> [Icon]
	Src Selects the modulation source for the output level	Off...Tempo
	Amt Sets the modulation amount of the output level	-100...+100
g	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323 D <sub>mod</sub> [Icon]	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

### a: Pre LPF

If a sampler with a very low sampling frequency receives very high-pitched sound that could not be heard during playback, it could generate pitch noise that is unrelated to the original sound. Set "Pre LPF" to ON to prevent this noise from being generated.

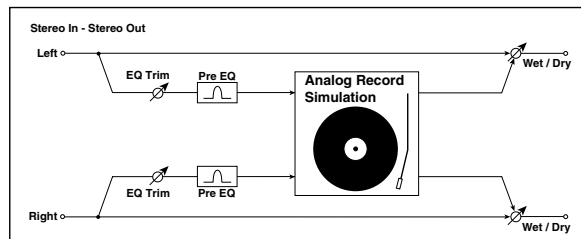
If you set the "Sampling Freq" to about 3kHz and set "Pre LPF" to OFF, you can create a sound like a ring modulator.

### e: Resolution, f: Output Level

If you set a smaller value for the "Resolution" parameter, the sound may be distorted. The volume level may also be changed. Use "Output Level" to adjust the level.

## 015: Analog Record

This effect simulates the noise caused by scratches and dust on analog records. It also reproduces some of the modulation caused by a warped turntable.



a	Speed [RPM] Sets the r.p.m. of a record	33 1/3, 45, 78
b	Flutter Sets the modulation depth	0...100 [Icon]
c	Noise Density Sets the noise density	0...100
	Noise Tone Sets the noise tone	0...100
d	Noise Level Sets the noise level	0...100 D <sub>mod</sub> [Icon]
	Src Selects the modulation source for the noise level	Off...Tempo
	Amt Sets the modulation amount of the noise level	-100...+100
e	Click Level Sets the click noise level	0...100 [Icon], D <sub>mod</sub> [Icon]
	Src Selects the modulation source for the click noise level	Off...Tempo
	Amt Sets the modulation amount of the click noise level	-100...+100
f	EQ Trim Table, "Sets the EQ input level," on page 323	0...100
g	Pre EQ Cutoff [Hz] Sets the EQ center frequency	300...10.00kHz
	Q Sets the EQ band width	0.5...10.0
	Gain [dB] Sets the EQ gain	-18.0...+18.0dB
h	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323 D <sub>mod</sub> [Icon]	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

### b: Flutter

This parameter enables you to set the depth of the modulation caused by a warped turntable.

### e: Click Level

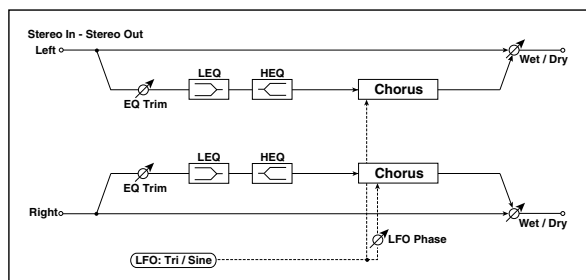
This parameter enables you to set the level of the click noise that occurs once every rotation of the turntable. This simulation reproduces record noise, and the noise generated after the music on a vinyl record finishes.

## Pitch/Phase Mod.

### Pitch/phase modulation effects

#### 016: Chorus

This effect adds thickness and warmth to the sound by modulating the delay time of the input signal. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



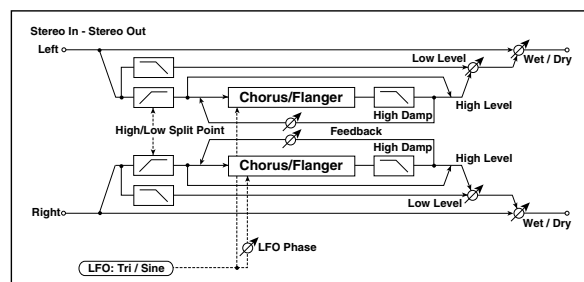
a	LFO Waveform Selects LFO Waveform	Triangle, Sine
b	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:010
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009, D <sup>mod</sup>
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, S <sup>sync</sup>
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
e	L Pre Delay [msec] Sets the delay time for the left channel	0.0...50.0msec Fx:
f	R Pre Delay [msec] Sets the delay time for the right channel	0.0...50.0msec Fx:
g	Depth Sets the depth of LFO modulation	0...100 D <sup>mod</sup>
	Src Selects the modulation source of the LFO modulation depth	Off...Tempo
	Amt Sets the modulation amount of the LFO modulation depth	-100...+100
h	EQ Trim Table, "Sets the EQ input level," on page 323	0...100
i	Pre LEQ Gain [dB] Table, "Sets the gain of Low EQ," on page 323	-15.0...+15.0dB
	Pre HEQ Gain [dB] Table, "Sets the gain of High EQ," on page 323	-15.0...+15.0dB
j	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	-Wet...-1:99, Dry, 1:99...Wet Fx:010, D <sup>mod</sup>
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

#### e: L Pre Delay [msec], f: R Pre Delay [msec]

Setting the left and right delay time individually allows you to control the stereo image.

#### 017: Harmonic Chorus

This effect applies chorus only to higher frequencies. This can be used to apply a chorus effect to a bass sound without making the sound thinner. You can also use this chorus block with feedback as a flanger.



a	LFO Waveform Selects LFO Waveform	Triangle, Sine
b	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:010
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009, D <sup>mod</sup>
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, S <sup>sync</sup>
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
e	Pre Delay [msec] Sets the delay time from the original sound	0.0...50.0msec
f	Depth Sets the depth of LFO modulation	0...100 D <sup>mod</sup>
	Src Selects the modulation source of the LFO modulation depth	Off...Tempo
	Amt Sets the modulation amount of the LFO modulation depth	-100...+100
g	High/Low Split Point Sets the frequency split point between the low and high range	1...100 Fx:
h	Feedback Sets the feed back amount of the chorus block	-100...+100 Fx:
	High Damp [%] Sets the high range damping amount of the chorus block	0...100%
i	Low Level Sets the low range output level	0...100
	High Level Sets the high range (chorus) output level	0...100
j	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet Fx:010, D <sup>mod</sup>
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

#### g: High/Low Split Point

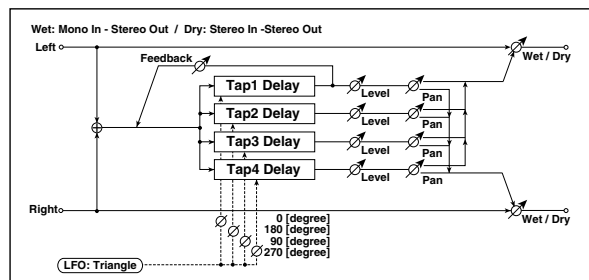
This parameter sets the frequency that splits the high and low range. Only the high range will be sent to the chorus block.

#### h: Feedback

Sets the feedback amount of the chorus block. Increasing the feedback will allow you to use the effect as a flanger.

## 018: Multitap Cho/Delay

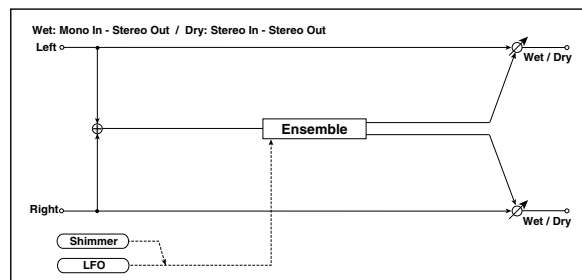
This effect has four chorus blocks with a different LFO phase. You can create a complex stereo image by setting each block's delay time, depth, output level, and pan individually. You can also fix some of the chorus blocks to combine the chorus and delay effects.



a	LFO Frequency [Hz] Sets the LFO speed	0.02...13.00Hz
	Tap1(000) [msec] Sets the Tap1 (LFO phase=0 degrees) delay time	0...570msec
b	Depth Sets the Tap1 chorus depth	0...30
	Level Sets the Tap1 output level	0...30
	Pan Sets the Tap1 stereo image	L6...L1, C, R1...R6
c	Tap2(180) [msec] Sets the Tap2 (LFO phase=180 degrees) delay time	0...570msec
	Depth Sets the Tap2 chorus depth	0...30
	Level Sets the Tap2 output level	0...30
	Pan Sets the Tap2 stereo image	L6...L1, C, R1...R6
d	Tap3(090) [msec] Sets the Tap3 (LFO phase=90 degrees) delay time	0...570msec
	Depth Sets the Tap3 chorus depth	0...30
	Level Sets the Tap3 output level	0...30
	Pan Sets the Tap3 stereo image	L6...L1, C, R1...R6
e	Tap4(270) [msec] Sets the Tap4 (LFO phase=270 degrees) delay time	0...570msec
	Depth Sets the Tap4 chorus depth	0...30
	Level Sets the Tap4 output level	0...30
	Pan Sets the Tap4 stereo image	L6...L1, C, R1...R6
f	Tap1 Feedback Sets the Tap1 feedback amount	-100...+100 
	Src Selects the modulation source of Tap1 feedback amount and effect balance	Off...Tempo
	Amt Sets the Tap1 feedback amount and modulation amount	-100...+100
g	Wet/Dry Dry, 1:99...99:1, Wet Table, "Sets the balance between the effect and dry sounds," on page 323 	
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 019: Ensemble

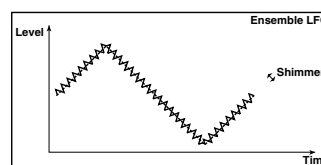
This Ensemble effect has three chorus blocks that use LFO to create subtle shimmering, and gives three dimensional depth and spread to the sound, because the signal is output from the left, right, and center.



a	Speed Sets the LFO speed	1...100 
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-100...+100
b	Depth Sets the depth of LFO modulation	0...100 
	Src Selects the modulation source of the LFO modulation depth	Off...Tempo
	Amt Sets the modulation amount of the LFO modulation depth	-100...+100
c	Shimmer Sets the amount of shimmering of the LFO waveform	0...100 
d	Wet/Dry Dry, 1:99...99:1, Wet Table, "Sets the balance between the effect and dry sounds," on page 323 	
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

### c: Shimmer

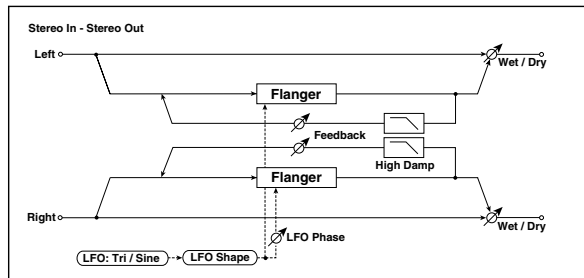
This parameter sets the amount of shimmering of the LFO waveform. Increasing this value adds more shimmering, making the chorus effect more complex and richer.





## 020: Flanger

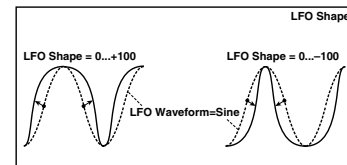
This effect gives a significant swell and movement of pitch to the sound. It is more effective when applied to a sound with a lot of harmonics. This is a stereo flanger. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



a	Delay Time [msec] Sets the delay time from the original sound	0.0...50.0msec
b	LFO Waveform Selects LFO Waveform	Triangle, Sine
	LFO Shape Determines how much the LFO waveform is changed	-100...+100 Fx:010
c	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:010
d	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009, D <sup>mod</sup>
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
e	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009,
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base Note Selects the type of notes that specify the LFO speed	 Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
f	Depth Sets the depth of LFO modulation	0...100
g	Feedback Sets the feedback amount	-100...+100 Fx:
	High Damp [%] Sets the feedback damping amount in the high range	0...100% Fx:
h	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	-Wet...-1:99, Dry, 1:99...Wet Fx:010, D <sup>mod</sup>
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

### b: LFO Shape

Changing the LFO waveform shape controls the peak sweep of flanging effects.



### g: Feedback, h: Wet/Dry

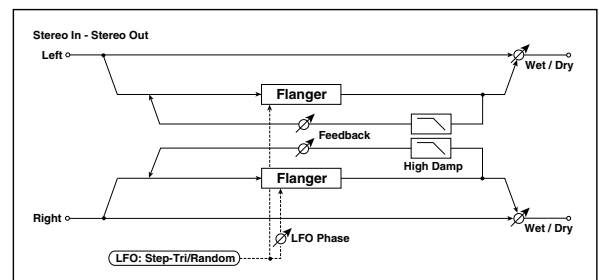
The peak shape of the positive and negative "Feedback" value is different. The harmonics will be emphasized when the effect sound is mixed with the dry sound if you set a positive value for both "Feedback" and "Wet/Dry", and if you set a negative value for both "Feedback" and "Wet/Dry".

### g: High Damp [%]

This parameter sets the amount of damping of the feedback in the high range. Increasing the value will cut high-range harmonics.

## 021: Random Flanger

The stereo effect uses a step-shape waveform and random LFO for modulation, creating a unique flanging effect.

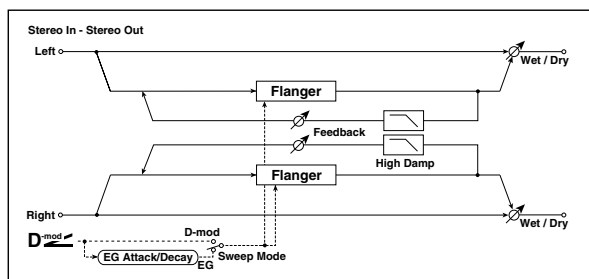


a	Delay Time [msec] Sets the delay time from the original sound	0.0...50.0msec
b	LFO Waveform Selects LFO Waveform	Step-Tri, Random Fx:010
c	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:010
d	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:010, D <sup>mod</sup>
	Src Selects the modulation source used for both LFO speed and step speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
e	LFO Step Freq (Frequency) [Hz] Sets the LFO step speed (speed that changes in steps)	0.05...50.00Hz Fx:010, D <sup>mod</sup>
	Amt Sets the modulation amount of LFO step speed	-50.00...+50.00Hz
f	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009,
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009, 010
	Base Note Selects the type of notes that specify the LFO speed	 Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
g	Step Base Note Selects the type of notes to specify the LFO step speed	 Fx:010,
	Times Sets the number of notes to specify the LFO step speed	x1...x32 Fx:010
h	Depth Sets the depth of LFO modulation	0...100

i	Feedback Sets the feedback amount	–100...+100 Fx:020
	High Damp [%] Sets the feedback damping amount in the high range	0...100% Fx:020
j	Wet/Dry –Wet...–1:99, Dry, 1:99...Wet Table, “Sets the balance between the effect and dry sounds,” on page 323 Fx:010, 020,	
	Src Table, “Selects the modulation source of the effect balance,” on page 323	Off...Tempo
	Amt Table, “Sets the modulation amount of the effect balance,” on page 323	–100...+100

## 022: Envelope Flanger

This Flanger uses an envelope generator for modulation. You will obtain the same pattern of flanging each time you play. You can also control the Flanger directly using the modulation source.



a	L Dly Bottom [msec] (L Delay Bottom)0.0...50.0msec Sets the lower limit of the delay time on the left channelFx:009	
	L Dly Top [msec] (L Delay Top)0.0...50.0msec Sets the upper limit of the delay time on the left channelFx:009	
b	R Dly Bottom [msec] (R Delay Bottom)0.0...50.0msec Sets the lower limit of the delay time on the right channelFx:009	
	R Dly Top [msec] (R Delay Top)0.0...50.0msec Sets the upper limit of the delay time on the right channelFx:009	
c	Sweep ModeEG, D-mod Determines whether the flanger is controlled by the envelope generator or by the modulation source	
	SrcOff...Tempo Selects the modulation source that triggers the EG (when EG is selected for Sweep Mode), or modulation source that causes the flanger to sweep (when D-mod is selected for Sweep Mode)Fx:	
d	EG Attack Sets the EG attack speed	1...100 Fx:
	EG Decay Sets the EG decay speed	1...100 Fx:
e	Feedback Sets the feedback amount	–100...+100 Fx:020
f	High Damp [%]0...100% Sets the feedback damping amount in the high rangeFx:020	
g	Wet/Dry–Wet...–1:99, Dry, 1:99...Wet Table, “Sets the balance between the effect and dry sounds,” on page 323 Fx:010, 020,	
	SrcOff...Tempo Table, “Selects the modulation source of the effect balance,” on page 323	
	Amt Table, “Sets the modulation amount of the effect balance,” on page 323	–100...+100

### c: Sweep Mode, c: Src

This parameter switches the flanger control mode. With “Sweep Mode” = EG, the flanger will sweep using the envelope generator. This envelope generator is included in the envelope flanger, and not related to the Pitch EG, Filter EG, or Amp EG. The “Src” parameter selects the source that starts the envelope generator. If you select, for example, **Gate**, the envelope generator will start when the note-on message is received.

When “Sweep Mode” = **D-mod**, the modulation source can control the flanger directly. Select the modulation source using the “Src” parameter.

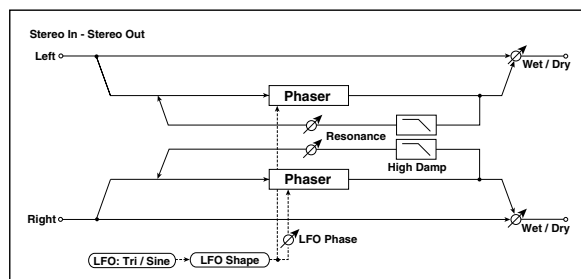
The effect is off when a value for the modulation source specified for the “Src” parameter is smaller than 64, and the effect is on when the value is 64 or higher. The Envelope Generator is triggered when the value changes from 63 or smaller to 64 or higher.

### d: EG Attack, d: EG Decay

Attack and Decay speed are the only adjustable parameters on this EG.

## 023: Phaser

This effect creates a swell by shifting the phase. It is very effective on electric piano sounds. You can add spread to the sound by offsetting the phase of the left and right LFOs from each other.



a	LFO Waveform Selects LFO Waveform	Triangle, Sine
	LFO Shape Determines how much the LFO waveform is changed	–100...+100 Fx:020
b	LFO Phase [degree] Sets the LFO phase difference between the left and right	–180...+180 Fx:010
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009,
	Src Selects the modulation source of LFO speed	Off...Tempo
d	Amt Sets the modulation amount of LFO speed	–20.00...+20.00Hz
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009,
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
e	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
	Manual Sets the frequency to which the effect is applied	0...100
f	Depth Sets the depth of LFO modulation	0...100 
	Src Selects the modulation source for the LFO modulation depth	Off...Tempo
	Amt Sets the modulation amount of the LFO modulation depth	–100...+100
g	Resonance Sets the resonance amount	–100...+100 Fx:
	High Damp [%] Sets the resonance damping amount in the high range	0...100% Fx:
h	Wet/Dry–Wet...–1:99, Dry, 1:99...Wet Table, “Sets the balance between the effect and dry sounds,” on page 323 Fx:010,	
	Src Table, “Selects the modulation source of the effect balance,” on page 323	Off...Tempo
	Amt Table, “Sets the modulation amount of the effect balance,” on page 323	–100...+100

**g: Resonance, h: Wet/Dry**

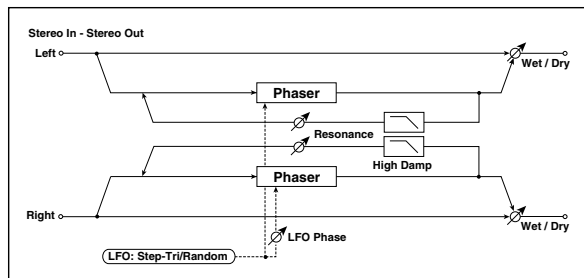
The peak shape of the positive and negative Feedback value is different. The harmonics will be emphasized when the effect sound is mixed with the dry sound, if you set a positive value for both "Resonance" and "Wet/Dry", and if you set a negative value for both "Resonance" and "Wet/Dry".

**g: High Damp [%]**

This parameter sets the amount of damping of the resonance in the high range. Increasing the value will cut high-range harmonics.

**024: Random Phaser**

This is a stereo phaser. The effect uses a step-shape waveform and random LFO for modulation, creating a unique phasing effect.

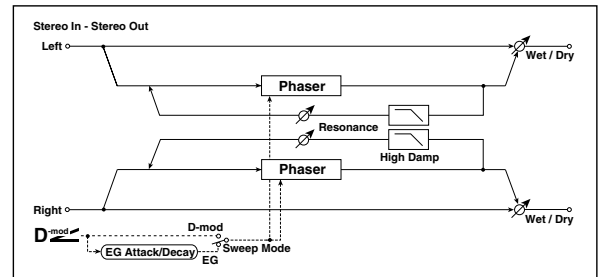


a	LFO Waveform Selects LFO Waveform	Step-Tri, Step-Sin, Random Fx:010
	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:010
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:010, D-mod
	Src Selects the modulation source commonly used for LFO speed and step speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	LFO Step Freq (Frequency) [Hz] Sets the LFO step speed	0.05...50.00Hz Fx:010, D-mod
	Amt Sets the modulation amount of LFO step speed	-50.00...+50.00Hz
e	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, ASync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009, 010
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
f	Step Base Note Selects the type of notes to specify the LFO step speed	Fx:010, ASync
	Times Sets the number of notes to specify the LFO step speed	x1...x32 Fx:010
g	Manual Sets the frequency to which the effect is applied	0...100
h	Depth Sets the depth of LFO modulation	0...100
i	Resonance Sets the resonance amount	-100...+100 Fx:023
	High Damp [%] Sets the resonance damping amount in the high range	0...100% Fx:023

j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 Fx:010, 023, D-mod	-Wet...-1:99, Dry, 1:99...Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

**025: Envelope Phaser**

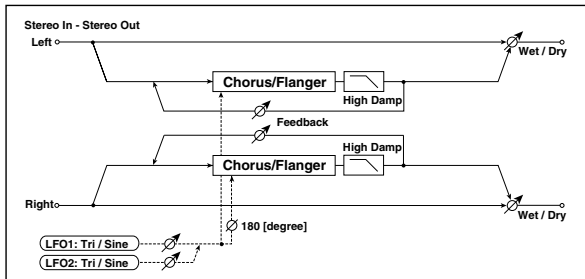
This stereo phaser uses an envelope generator for modulation. You will obtain the same pattern of phasing each time you play. You can also control the Phaser directly using the modulation source.



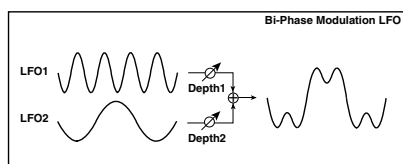
a	L Manu Bottom (L Manual Bottom) Sets the lower limit of the frequency range for the effect on the left channel Fx:009	0...100
	L Manu Top (L Manual Top) Sets the upper limit of the frequency range for the effect on the left channel Fx:009	0...100
b	R Manu Bottom (R Manual Bottom) Sets the lower limit of the frequency range for the effect on the right channel Fx:009	0...100
	R Manu Top (R Manual Top) Sets the upper limit of the frequency range for the effect on the right channel Fx:009	0...100
c	Sweep Mode Determines whether the flanger is controlled by the envelope generator or by the modulation source Fx:022, D-mod	EG, D-mod
	Src Selects the modulation source that triggers the EG (when EG is selected for Sweep Mode), or modulation source that causes the flanger to sweep (when D-mod is selected for Sweep Mode)	Off...Tempo
d	EG Attack Sets the EG attack speed	1...100 Fx:022
	EG Decay Sets the EG decay speed	1...100 Fx:022
e	Resonance Sets the resonance amount	-100...+100 Fx:023
f	High Damp [%] Sets the resonance damping amount in the high range	0...100% Fx:023
g	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 Fx:010, 023, D-mod	-Wet...-1:99, Dry, 1:99...Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 026: Biphase Mod. (Biphase Modulation)

This stereo chorus effect adds two different LFOs together. You can set the Frequency and Depth parameters for each LFO individually. Depending on the setting of these LFOs, very complex waveforms will create an analog-type, unstable modulated sound.

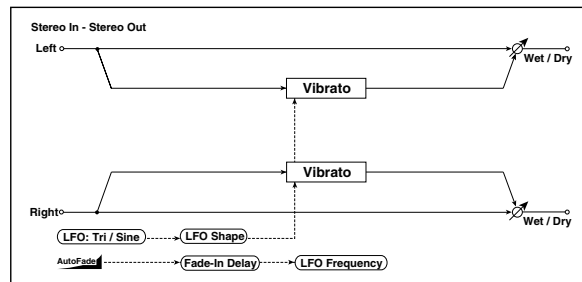


a	LFO1 Waveform Selects LFO1 waveform	Triangle, Sine
	LFO2 Waveform Selects LFO2 waveform	Triangle, Sine
b	LFO Phase Sw Switches the LFO phase difference between left and right	0 degree, 180 degree
c	LFO1 Frequency [Hz] Sets the LFO1 speed	0.02...30.00Hz D-mod
	Src Selects the modulation source of LFO1&2 speed	Off...Tempo
	Amt Sets the modulation amount of LFO1 speed	-30.00...+30.00
d	LFO2 Frequency [Hz] Sets the LFO2 speed	0.02...30.00Hz D-mod
	Src Selects the modulation source of LFO2 speed	Off...Tempo
	Amt Sets the modulation amount of LFO2 speed	-30.00...+30.00
e	Depth1 Sets the depth of LFO1 modulation	0...100 D-mod
	Src Selects the modulation source of LFO1&2 modulation depth	Off...Tempo
	Amt Sets the modulation amount of LFO1 modulation depth	-100...+100
f	Depth2 Sets the depth of LFO2 modulation	0...100 D-mod
	Src Selects the modulation source of LFO2 modulation depth	Off...Tempo
	Amt Sets the modulation amount of LFO2 modulation depth	-100...+100
g	L Pre Delay [msec] Sets the delay time for the left channel	0.0...50.0msec Fx:016
h	R Pre Delay [msec] Sets the delay time for the right channel	0.0...50.0msec Fx:016
i	Feedback Sets the feedback amount	-100...+100 Fx:017
	High Damp [%] Sets the damping amount in the high range	0...100%
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 D-mod	-Wet...-1:99, Dry, 1:99...Wet Fx:010, D-mod
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100



## 027: Vibrato

This effect causes the pitch of the input signal to shimmer. Using the AutoFade allows you to increase or decrease the shimmering speed.



a	AUTOFADE Src Selects the modulation source that starts AutoFade	Off...Tempo D-mod
	Fade-In Rate Sets the rate of fade-in	1...100 D-mod
b	Fade-In Delay [msec] Sets the fade-in delay time	00...2000msec D-mod
c	LFO Waveform Selects LFO Waveform	Triangle, Sine
	LFO Shape Determines how much the LFO waveform is changed	-100...+100 Fx:020
d	LFO Frequency Mod Switches between D-mod and AUTOFADE for the LFO frequency modulation	D-mod, AUTOFADE D-mod
	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009, D-mod
e	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
f	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, BPM/MIDI Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
g	Depth Sets the depth of LFO modulation	0...100 D-mod
	Src Selects the modulation source of the LFO modulation depth	Off...Tempo
	Amt Sets the modulation amount of the LFO modulation depth	-100...+100
h	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 D-mod	Dry, 1:99...99:1, Wet Fx:010, D-mod
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

**d: LFO Frequency Mod, a: AUTOFADE Src, a: Fade-In Rate  
b: Fade-In Delay [msec]**

When "LFO Frequency Mod" is set to **AUTOFADE**, you can use the modulation source selected in "AUTO FADE Src" as a trigger to automatically fade in the modulation amount. When "BPM/MIDI Sync" is set to **On**, you cannot use this.

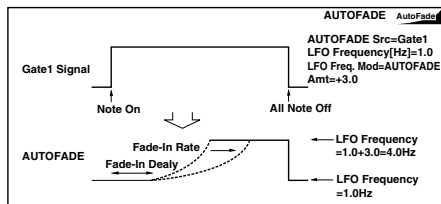
The "Fade-in Rate" parameter specifies the rate of fade-in. The "Fade-in Delay" parameter determines the time from AutoFade modulation source ON until the fade-in starts.

The following is an example of fade-in where the LFO speed is increased from "1.0Hz" to "4.0Hz" when a note-on message is received.

"AUTOFADE Src"=Gate1, "LFO Frequency [Hz]"=1.0

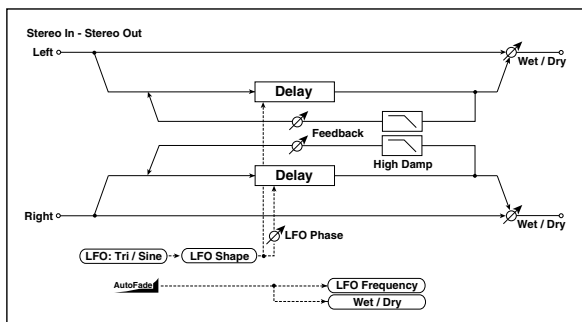
"LFO Frequency Mod"=AUTOFADE, "Amt"=3.0

**MIDI** The effect is off when a value for the dynamic modulation source specified for the "AUTOFADE Src" parameter is smaller than 64, and the effect is on when the value is 64 or higher. The AutoFade function is triggered when the value changes from 63 or smaller to 64 or higher.



## 028: Auto Fade Mod. (Auto Fade Modulation)

This stereo chorus/flanger effect enables you to control the LFO speed and effect balance using auto fade, and you can spread the sound by offsetting the phase of the left and right LFOs from each other.

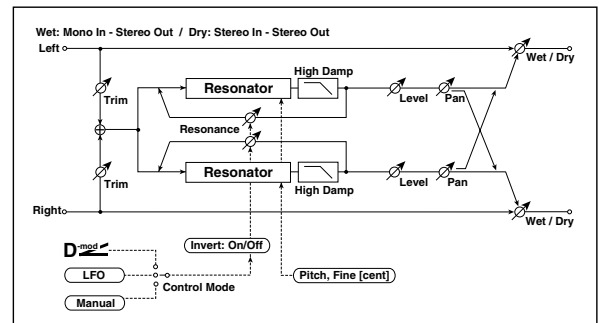


a	AUTOFADE Src Selects the modulation source that starts AutoFade	Off...Tempo Fx:027, D-mod
	Rate Sets the rate of fade-in	1...100 Fx:027
	Fade-In Dly (Fade-In Delay) [msec] Sets the fade-in delay time	00...2000msec Fx:027
b	LFO Waveform Selects LFO Waveform	Triangle, Sine
	LFO Shape Determines how much the LFO waveform is changed	-100...+100 Fx:020
c	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:010
d	LFO Frequency Mod Switches between D-mod and AUTOFADE for the LFO frequency modulation	D-mod, AUTOFADE Fx:027
e	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz D-mod
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
f	L Delay Time [msec] Sets the left channel delay time	0.0...500.0msec
	R Delay Time [msec] Sets the right channel delay time	0.0...500.0msec
g	Depth Sets the depth of LFO modulation	0...200
h	Feedback Sets the feedback amount	-100...+100 Fx:020
	High Damp [%] Sets the feedback damping amount in the high range	0...100% Fx:020
i	Wet/Dry Mod Switches between D-mod and AUTOFADE for the effect balance modulation	D-mod, AUTOFADE Fx:027

j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 Fx:010, 020, D-mod	-Wet...-1:99, Dry, 1:99...Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 029: 2-Voice Resonator

This effect resonates the input signal at a specified pitch. You can set the pitch, output level, and pan settings for two resonators individually. You can control the resonance intensity via an LFO.



a	Control Mode Switches the controls of resonance intensity	Manual, LFO, D-mod Fx:027, D-mod
	LFO/D-mod Invert Reverses the Voice 1 and 2 control when LFO/D-mod is selected	Off, On Fx:027
b	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	D-mod Src Selects the modulation source that controls resonance intensity	Off...Tempo
c	Mod. Depth Sets the amount of resonance intensity control via LFO/D-mod	-100...+100
	Trim Sets the input level at the resonator	0...100
d	Voice1: Pitch Sets the voice1 Pitch for resonance	C0...B8
	Fine [cent] Fine-adjusts the voice 1 pitch for resonance	-50...+50
e	Voice1: Resonance Sets the intensity of resonance when Control Mode = Manual	-100...+100 Fx:027
	High Damp [%] Sets the damping amount of resonant sound in the high range	0...100% Fx:027
f	Voice1: Level Sets the Voice1 output level	0...100
	Pan Sets the Voice1 stereo image	L6...R6
g	Voice2: Pitch Sets the Voice2 Pitch for resonance	C0...B8
	Fine [cent] Fine-adjusts the voice 2 pitch for resonance	-50...+50
h	Voice2: Resonance Sets the intensity of resonance when Control Mode = Manual	-100...+100 Fx:027
	High Damp [%] Sets the damping amount of resonant sound in the high range	0...100% Fx:027
i	Voice2: Level Sets the Voice2 output level	0...100
	Pan Sets the Voice2 stereo image	L6...R6
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 D-mod	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

**a: Control Mode, e: Voice1: Resonance, h: Voice2: Resonance**

This parameter determines the resonance intensity.

When "Control Mode" = **Manual**, the "Resonance" parameter sets the intensity of resonance. If the "Resonance" parameter has a negative value, harmonics will be changed, and resonance will occur at a pitch one octave lower.

When "Control Mode" = **LFO**, the intensity of resonance varies according to the LFO. The LFO sways between positive and negative values, causing resonance to occur between specified pitches an octave apart in turn.

When "Control Mode" = **D-mod**, the resonance is controlled by the dynamic modulation source. If **JS X** is assigned as the modulation source, the pitch an octave higher and lower can be controlled, similar to when LFO is selected for Control Mode.

**a: LFO/D-mod Invert**

When "Control Mode" = **LFO** or **D-mod**, the controlled phase of either Voice 1 or 2 will be reversed. When the resonance pitch is set for Voice 1 (Resonance has a positive value), Voice 2 will resonate at a pitch an octave below (Resonance has a negative value).

**d: Voice1: Pitch, d: Fine [cent], g: Voice2: Pitch, g: Fine [cent]**

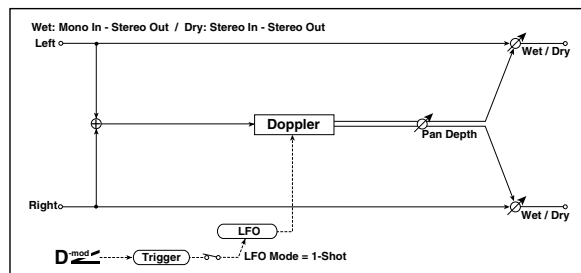
The Pitch parameter specifies the pitch of resonance by note name. The "Fine" parameter allows for fine adjustment in steps of cents.

**e: High Damp [%], h: High Damp [%]**

This parameter sets the damping amount of resonant sound in the high range. Lower values will make a metallic sound with a higher range of harmonics.

**030: Doppler**

This effect simulates the "Doppler effect" of a moving sound with a changing pitch, similar to the siren of an passing ambulance. Mixing the effect sound with the dry sound will create a unique chorus effect.



a	LFO Mode Switches LFO operation mode	Loop, 1-Shot LFO, D-mod
	Src When LFO Mode is set to 1-Shot, this modulation source triggers the LFO	Off...Tempo
b	LFO Sync Switches between LFO reset on and off when LFO Mode is set to Loop	Off, On LFO Sync
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009, D-mod
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009, BPM Sync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009
e	Pitch Depth Sets the pitch variation of the moving sound	0...100 LFO, D-mod
	Src Selects the modulation source of pitch variation	Off...Tempo
	Amt Sets the modulation amount of pitch variation	-100...+100
f	Pan Depth Sets the panning of the moving sound	-100...+100 LFO, D-mod
	Src Selects the modulation source of panning	Off...Tempo
	Amt Sets the modulation amount of panning	-100...+100
g	Wet/Dry Dry, 1:99...99:1, Wet Table, "Sets the balance between the effect and dry sounds," on page 323 D-mod	
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

**a: LFO Mode, a: Src, b: LFO Sync**

The "LFO Mode" parameter switches LFO operation mode. When **Loop** is selected, the Doppler effect will be created repeatedly. If "LFO Sync" is set to **On**, the LFO will be reset when the modulation source specified with the "Src" parameter is turned on. When "LFO Mode" is set to **1-Shot**, the Doppler effect is created only once when the modulation source specified in the "Src" field is turned on. At this time if you do not set the "Src" parameter, the Doppler effect will not be created, and no effect sound will be output.



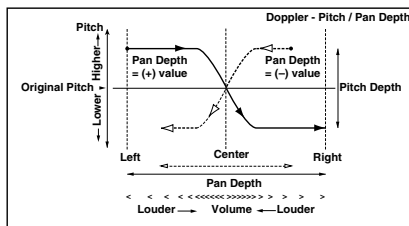
**MIDI** The effect is off when a value for the modulation source specified for the “Src” parameter is smaller than 64, and the effect is on when the value is 64 or higher. The Doppler effect is triggered when the value changes from 63 or smaller to 64 or higher.

### e: Pitch Depth

With the Doppler effect, the pitch is raised when the sound approaches, and the pitch is lowered when the sound goes away. This parameter sets this pitch variation.

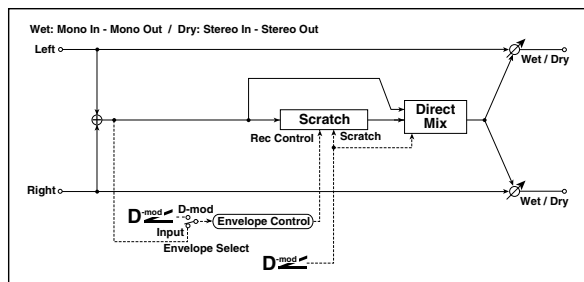
### f: Pan Depth

This parameter sets the width of the stereo image of the effect sound. With larger values, the sound seems to come and go from much further away. With positive values, the sound moves from left to right; with negative values, the sound moves from right to left.



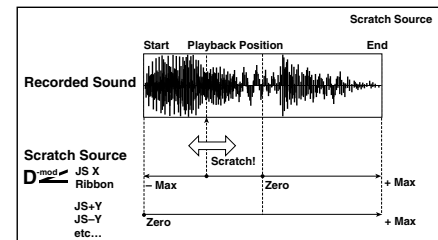
## 031: Scratch

This effect is applied by recording the input signal and moving the modulation source. It simulates the sound of scratches you can make using a turntable.



### a: Scratch Source, b: Response

The Scratch Source parameter enables you to select the modulation source that controls simulation. The value of the modulation source corresponds to the playback position. The Response parameter enables you to set the speed of the response to the modulation source.



### c: Envelope Select, c: Src, d: Threshold

When “Envelope Select” is set to **D-mod**, the input signal will be recorded only when the modulation source value is 64 or higher. When “Envelope Select” is set to **Input**, the input signal will be recorded only when its level is over the Threshold value. The maximum recording time is 1365msec. If this is exceeded, the recorded data will start being erased from the top.

### e: Response

This parameter enables you to set the speed of the response to the end of recording. Set a smaller value when you are recording a phrase or rhythm pattern, and set a higher value if you are recording only one note.

### f: Direct Mix

With **Always On**, a dry sound is usually output. With **Always Off**, dry sounds are not output. With **Cross Fade**, a dry sound is usually output, and it is muted only when scratching. Set Wet/Dry to **Wet** to use this parameter effectively.

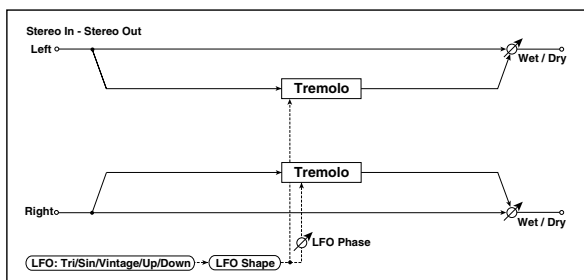
a	Scratch Source Selects the modulation source for simulation control	Off...Tempo E <sup>3</sup> , D <sup>mod</sup>
b	Response Sets the speed of the response to the Scratch Source	0...100 E <sup>3</sup>
c	Envelope Select Selects whether the start and end of recording is controlled via the modulation source or the input signal level	D-mod, Input E <sup>3</sup> , D <sup>mod</sup>
	Src Selects the modulation source that controls recording when Envelope Select is set to D-mod	Off...Tempo E <sup>3</sup>
d	Threshold Sets the recording start level when Envelope Select is set to Input	0...100 E <sup>3</sup>
e	Response Sets the speed of the response to the end of recording	0...100 E <sup>3</sup>
f	Direct Mix Selects how a dry sound is mixed	Always On, Always Off, Cross Fade E <sup>3</sup>
g	Wet/Dry Table, “Sets the balance between the effect and dry sounds,” on page 323	Dry, 1:99...99:1, Wet D <sup>mod</sup>
	Src Table, “Selects the modulation source of the effect balance,” on page 323	Off...Tempo
	Amt Table, “Sets the modulation amount of the effect balance,” on page 323	-100...+100

## Mod./P.Shift

## Other modulation and pitch shift effects

## 032: Tremolo

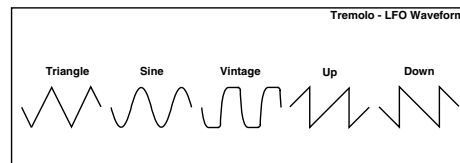
This effect modulates the volume level of the input signal. The effect is stereo, and offsetting the LFO of the left and right phases from each other produces a tremolo effect between left and right.



a	LFO Waveform Selects LFO Waveform	Triangle, Sine, Vintage, Up, Down	
	LFO Shape Determines how much the LFO waveform is changed	-100...+100 Fx:020	
b	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:009	
	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009,	
c	Src Selects the modulation source of LFO speed	Off...Tempo	
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz	
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On Fx:009,	
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 Fx:009	
	Base Note Selects the type of notes that specify the LFO speed	Fx:009	
	Times Sets the number of notes that specify the LFO speed	x1...x16 Fx:009	
e	Depth Sets the depth of LFO modulation	0...100 	
	Src Selects the modulation source of the depth of modulation	Off...Tempo	
	Amt Sets the modulation amount of the depth of modulation	-100...+100	
f	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet 	
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo	
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100	

## a:LFO Waveform

This parameter selects the LFO waveform. **Vintage** wave simulates the characteristics of the tremolo created on a guitar amplifier. Combining this effect with the Amp Simulation will make a realistic, vintage tremolo amplifier sound.

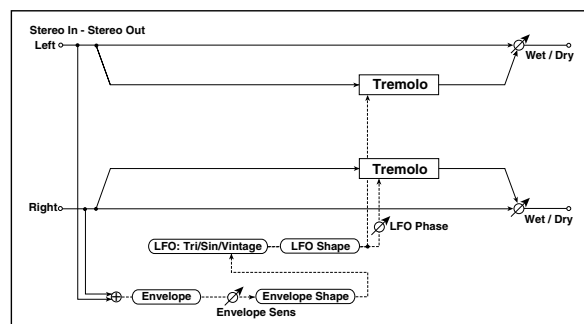


## b: LFO Phase [degree]

This parameter determines the difference between the left and right LFO phases. A higher value will simulate the auto-pan effect in which the sound is panned between left and right.

## 033: Envelope Tremolo

This effect uses the input signal level to modulate a stereo tremolo. You can simulate a tremolo effect that becomes deeper as it fades out while the level gets lower.



a	Envelope Sens (Envelope Sensitivity) Sets the envelope sensitivity of the input signal	0...100	
	Envelope Shape Sets the envelope curve shape of the input signal	-100...+100	
b	LFO Waveform Selects LFO Waveform	Triangle, Sine, Vintage	
	LFO Shape Determines how much the LFO waveform is changed	-100...+100 Fx:020	
c	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:032	
	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz Fx:009	
d	Envelope Amount [Hz] Sets the changes of the LFO speed according to the input signal level	-20.00...+20.00Hz Fx:009	
	Depth Sets the depth of LFO modulation	0...100 Fx:009	
e	Envelope Amount Sets the changes of the modulation depth according to the input signal level	-100...+100 Fx:009	
	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet 	
f	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo	
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100	

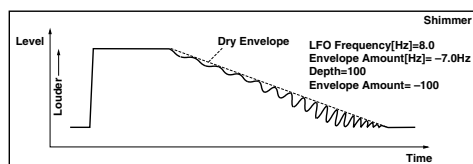
**d: LFO Frequency [Hz], d: Envelope Amount [Hz],  
e: Depth, e: Envelope Amount**

These parameters set the modulation via an envelope (input signal level).

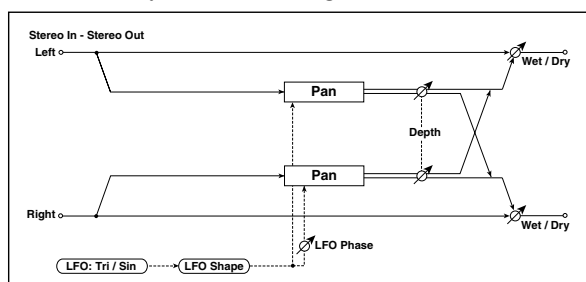
The "LFO speed" is obtained by adding the "LFO Frequency" value to the "Envelope Amount" value multiplied by the input signal. The LFO modulation depth is obtained by adding the Depth value to the "Envelope Amount" value multiplied by the input signal level.

- The following example indicates that the "Depth" is 0 with an LFO Frequency of 1.0Hz and the maximum input, and that the "Depth" is 100 with a Frequency of 8.0Hz with zero input.

"LFO Frequency [Hz]"=8.0, "Envelope Amount [Hz]"=-7.0  
"Depth"=100, "Envelope Amount"=-100

**034: Auto Pan**

This Auto Pan effect pans sound between left and right. It is stereo, and shifting the left and right LFO phases from each other will simulate the sound of the left and right channels crossing over each other by turns, or chasing each other.



f	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

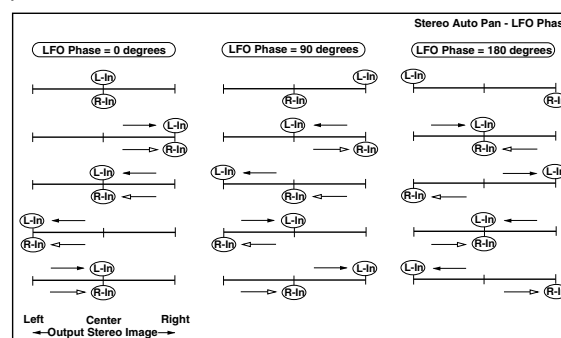
**a: LFO Shape**

You can change the panning curve by modifying the LFO waveform.

**b: LFO Phase**

This parameter determines the difference in the left and right LFO phases. When you change the value gradually from 0, the sound from the left and right channels will chase each other around. If you set the parameter to +180 or -180, the sound from each channel will cross over each other.

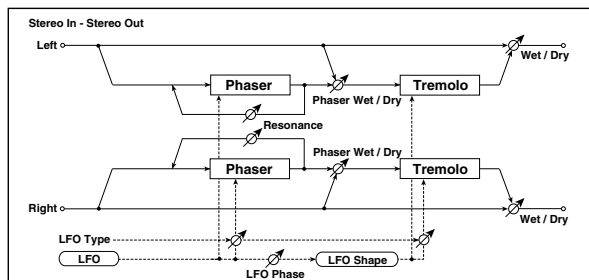
You need to input different sounds to each channel in order for this parameter to be effective.



a	LFO Waveform Selects LFO Waveform	Triangle, Sine
	LFO Shape Determines how much the LFO waveform is changed	-100...+100 E3 Fx:009, D-mod
b	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 E3
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz E3 Fx:009, D-mod
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
d	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On E3 Fx:009, Sine
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 E3 Fx:009
	Base Note Selects the type of notes that specify the LFO speed	E3 Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16 E3 Fx:009
e	Depth Sets the depth of LFO modulation	0...100 D-mod
	Src Selects the modulation source of the depth of modulation	Off...Tempo
	Amt Sets the modulation amount of the depth of modulation	-100...+100

## 035: Phaser - Tremolo

This effect has a stereo phaser and tremolo LFOs linked together. Swelling phaser modulation and tremolo effects synchronize with each other, creating a soothing modulation effect. It is suitable for electric piano type sounds.



a	Type: Selects the type of the tremolo and phaser LFOs	Phs - Trml...Phs LR - Trml LR
	LFO Phase [degree] Sets the phase difference between the tremolo and phaser LFOs	-180...+180
b	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
c	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16
d	Phaser Manual Sets the phaser frequency range	0...100
	Resonance Sets the phaser resonance amount	-100...+100
e	Phaser Depth Sets the phaser modulation depth	0...100
	Src Selects the modulation source for the phaser modulation depth	Off...Tempo
	Amt Sets the modulation amount for the phaser modulation depth	-100...+100
f	Phaser Wet/Dry Sets the balance between the phaser effect and dry sounds	-Wet...-2:99, Dry, 2:99...Wet
g	Tremolo Shape Sets the degree of the tremolo LFO shaping	-100...+100
h	Tremolo Depth Sets the tremolo modulation depth	0...100
	Src Selects the modulation source for the tremolo modulation depth	Off...Tempo
	Amt Sets the modulation amount of the tremolo modulation depth	-100...+100
i	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## a: Type, a: LFO Phase [degree]

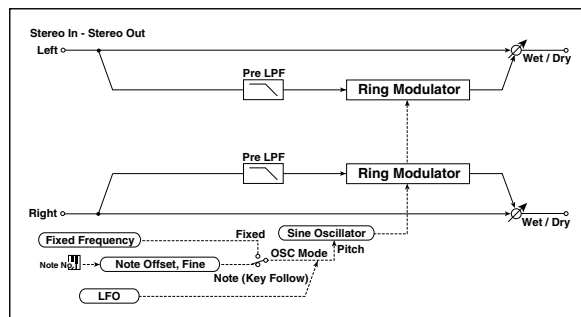
Select the type of phaser LFO and tremolo LFO for the "Type" parameter. How the effect sound moves or rotates depends on the type of LFO. Selecting "LFO Phase" enables you to offset the timing of the phaser peak and control a subtle movement and rotation of the sound.

## f: Phaser WetDry, i: Wet/Dry


The "Phaser Wet/Dry" parameter sets the balance between the phaser output and the dry sound. The "Wet/Dry" parameter sets the balance between the final phaser and tremolo output level and the dry sound.

## 036: Ring Modulator

This effect creates a metallic sound by applying the oscillators to the input signal. Use the LFO or Dynamic Modulation to modulate the oscillator to create a radical modulation. Matching the oscillator frequency with a note number will produce a ring modulation effect in specific key ranges.



a	Pre LPF Sets the damping amount of the high range input to the ring modulator	0...100
b	OSC Mode Switching between specifying the oscillator frequency and using a note number	Fixed, Note (Key Follow)
c	Fixed Frequency [Hz] Sets the oscillator frequency when OSC Mode is set to Fixed	0...12.00kHz
	Src Selects the modulation source for the oscillator frequency when OSC Mode is set to Fixed	Off...Tempo
	Amt Sets the modulation amount of the oscillator frequency when OSC Mode is set to Fixed	-12.00...+12.00kHz
d	Note Offset Sets the pitch difference from the original note when OSC Mode is set to Note (Key Follow)	-48...+48
	Note Fine Fine-adjusts the oscillator frequency	-100...+100
e	LFO Frequency [Hz] Sets the LFO speed of the oscillator frequency modulation	0.02...20.00Hz
	Src Selects the modulation source of LFO speed	Off...Tempo
	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
f	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240
	Base Note Selects the type of notes that specify the LFO speed	Fx:009
	Times Sets the number of notes that specify the LFO speed	x1...x16
g	LFO Depth Sets the depth of LFO modulation for the oscillator frequency	0...100
	Src Selects the modulation source of the depth of modulation	Off...Tempo
	Amt Sets the modulation amount of the depth of modulation	-100...+100

h	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

**a: Pre LPF**

This parameter enables you to set the damping amount of the high range sound input to the ring modulator. If the input sound contains lots of harmonics, the effect may sound dirty. In this case, cut a certain amount of high range.

**b: OSC Mode**

This parameter determines whether or not the oscillator frequency follows the note number.

**c: Fixed Frequency [Hz]**

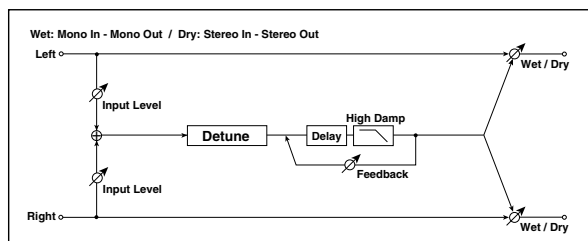
This parameter sets the oscillator frequency when "OSC Mode" is set to **Fixed**.




**d: Note Offset, d: Note Fine**

These parameters for the oscillator are used when "OSC Mode" is set to **Note (Key Follow)**. The "Note Offset" sets the pitch difference from the original note in semitone steps. The "Note Fine" parameter fine-adjusts the pitch in cent steps. Matching the oscillator frequency with the note number produces a ring modulation effect in the correct key.

**037: Detune**

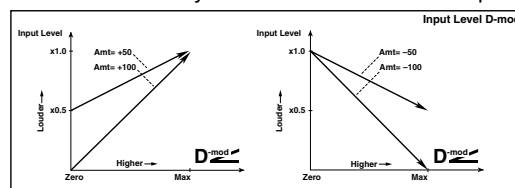
Using this effect, you can obtain a detune effect that offsets the pitch of the effect sound slightly from the pitch of the input signal. Compared to the chorus effect, a more natural sound thickness will be created.



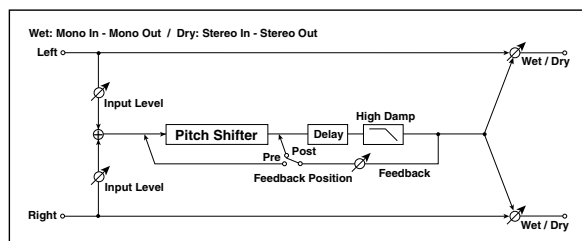
a	Pitch Shift [cent] Sets the pitch difference from the input signal 	-100...+100cent
	Src Selects the modulation source of the pitch shift	Off...Tempo
	Amt Sets the modulation amount of the pitch shift	-100...+100cent
b	Delay Time [msec] Sets the delay time	0...1000msec
c	Feedback Sets the feedback amount	-100...+100
	High Damp [%] Sets the damping amount in the high range	0...100%
d	Input Level Dmod [%] Sets the modulation amount of the input level 	-100...+100
	Src Selects the modulation source for the input level	Off...Tempo
e	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100







**d: Input Level Dmod [%], d: Src**

This parameter sets the dynamic modulation of the input level.

**038: Pitch Shifter**

This effect changes the pitch of the input signal. You can select from three types: Fast (quick response), Medium, and Slow (preserves tonal quality). You can also create an effect in which the pitch is gradually raised (or dropped) using the delay with feedback.



a	Mode Switches Pitch Shifter mode	Slow, Medium, Fast 
b	Pitch Shift [1/2tone] Sets the pitch shift amount by steps of a semitone 	-24...+24
	Src Selects the modulation source of pitch shift amount	Off...Tempo
	Amt Sets the modulation amount of pitch shift amount	-24...+24
c	Fine [cent] Sets the pitch shift amount by steps of a cent 	-100...+100cent
	Amt Sets the modulation amount of pitch shift amount	-100...+100cent
d	Delay Time [msec] Sets the delay time	0...1000msec
e	Feedback Position Switches the feedback connection.	Pre, Post 
f	Feedback Sets the feedback amount	-100...+100
	High Damp [%] Sets the damping amount in the high range	0...100%
g	Input Level Dmod [%] Sets the modulation amount of the input level 	-100...+100
	Src Selects the modulation source for the input level	Off...Tempo
h	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

**a: Mode**

This parameter switches the pitch shifter operating mode. With **Slow**, tonal quality will not be changed too much. With **Fast**, the effect becomes a Pitch Shifter that has a quick response, but may change the tone. **Medium** is in between these two. If you do not need to set too much pitch shift amount, set this parameter to **Slow**. If you wish to change the pitch significantly, use **Fast**.

## b: Pitch Shift [1/2tone], b: Src, b: Amt, c: Fine [cent], c: Amt

The amount of pitch shift will use the value of the "Pitch Shift" plus the "Fine" value. The amount of modulation will use the c: Amt value plus d: "Amt."

Modulation Source is used both for "Pitch Shift" and "Fine."

## e: Feedback Position, f: Feedback

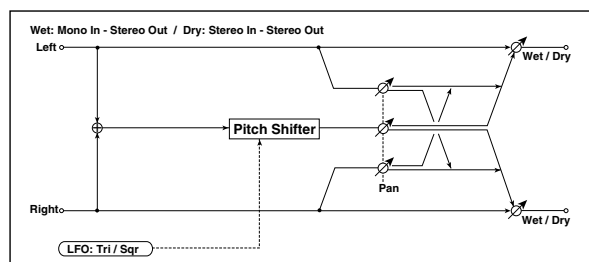
When "Feedback Position" is set to **Pre**, the pitch shifter output is again input to the pitch shifter. Therefore, if you specify a higher value for the Feedback parameter, the pitch will be raised (or lowered) more and more each time feedback is repeated.

If "Feedback Position" is set to **Post**, the feedback signal will not pass through the pitch shifter again. Even if you specify a higher value for the Feedback parameter, the pitch-shifted sound will be repeated at the same pitch.

## 039: Pitch Shift Mod.

### (Pitch Shift Modulation)

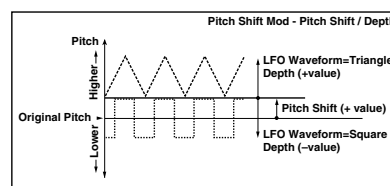
This effect modulates the detuned pitch shift amount using an LFO, adding a clear spread and width to the sound by panning the effect sound and dry sound to the left and right. This is especially effective when the effect sound and dry sound output from stereo speakers are mixed.



a	Pitch Shift [cent] Sets the pitch difference from the input signal	-100...+100cent E3
b	LFO Waveform Selects LFO Waveform	Triangle, Square
c	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz E3 Fx:009, Dmod
	Src Selects the modulation source of LFO speed	Off...Tempo
d	Amt Sets the modulation amount of LFO speed	-20.00...+20.00Hz
	BPM/MIDI Sync Switches between using the frequency of the LFO speed and using the tempo and notes	Off, On E3 Fx:009, ASync
	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 E3 Fx:009
	Base Note Selects the type of notes that specify the LFO speed	x1...x16 E3 Fx:009
e	Times Sets the number of notes that specify the LFO speed	x1...x16 E3 Fx:009
	Depth Sets the LFO modulation depth for pitch shift amount	-100...+100 E3, Dmod
	Src Selects the modulation source of the depth of modulation	Off...Tempo
f	Amt Sets the modulation amount of the depth of modulation	-100...+100
	Pan L, 1:99...99:1, R Sets the panning effect sound and dry sound separately	E3
g	Wet/Dry Dry, 1:99...99:1, Wet Table, "Sets the balance between the effect and dry sounds," on page 323	E3, Dmod
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## a: Pitch Shift [cent], e: Depth

These parameters set the amount of pitch shift and amount of modulation by means of the LFO.

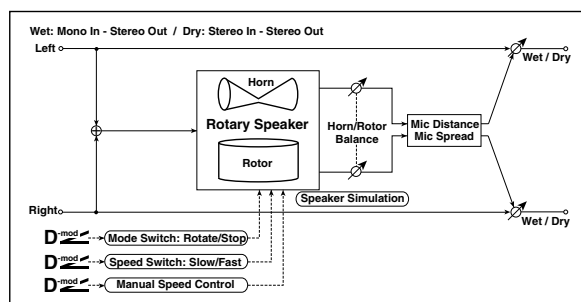


## f: Pan, g: Wet/Dry

The Pan parameter pans the effect sound and dry sound to the left and right. With L, the effect sound is panned left, and the dry sound is panned right. With a Wet/Dry = **Wet** setting, the effect and dry sound will be output in a proportion of 1:1.


## 040: Rotary Speaker

This effect simulates a rotary speaker, and obtains a more realistic sound by simulating the rotor in the low range and the horn in the high range separately. The effect also simulates the stereo microphone settings.



	Mode Switch Switches between speaker rotation and stop	Rotate, Stop Dmod
a	Src Selects the modulation source that toggles between rotation and stop	Off...Tempo
	Sw Toggle, Moment Selects switching mode of the modulation source that toggles between rotation and stop	E3
b	Speed Switch Switches the speaker rotation speed between slow and fast	Slow, Fast Dmod
	Src Selects the modulation source that toggles between slow and fast	Off...Tempo
	Sw Toggle, Moment Selects switching mode of the modulation source that toggles between slow and fast	E3
c	Manual Speed Ctrl (Manual Speed Control) Selects the modulation source in case the rotation speed is changed directly	Off...Tempo E3, Dmod
d	Horn Acceleration How quickly the horn rotation speed in the high range is switched	0...100 E3
	Horn Ratio Adjusts the (high-range side) horn rotation speed. Standard value is 1.00. Selecting "Stop" will stop the rotation	Stop, 0.50...2.00
e	Rotor Acceleration Determines how quickly the rotor rotation speed in the low range is switched	0...100 E3
	Rotor Ratio Adjusts the (low-range side) rotor rotation speed. Standard value is 1.00. Selecting "Stop" will stop the rotation	Stop, 0.50...2.00
f	Horn/Rotor Balance Sets the level balance between the high-range horn and low-range rotor	Rotor, 1...99, Horn
g	Mic Distance Sets the distance between the microphone and rotary speaker	0...100 E3
	Mic Spread Sets the angle of left and right microphones	0...100 E3




h	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100


**a: Sw**

This parameter sets how the modulation source switches between rotation and stop.

When "Sw" = **Toggle**, the speaker rotates or stops alternately each time you press the pedal or operate the joystick.

 Each time the value for the modulation source exceeds 64, the speaker rotates or stops alternately.


When "Sw" = **Moment**, the speaker is rotating. It stops only when you press the pedal or operate the joystick.

 Rotation will occur when the value of the modulation source is less than 64, and will stop when the value is 64 or greater.


**b: Sw**

This parameter sets how the rotation speed (slow and fast) is switched via the modulation source.

When "Sw" = **Toggle**, the speed is switched between slow and fast each time you press the pedal or operate the joystick.

 Slow/fast will alternate each time the value of the modulation source exceeds 64.

When "Sw" = **Moment**, the speed is usually slow. It becomes fast only when you press the pedal or operate the joystick.

 When a value for the modulation source is less than 64, "slow" speed is selected, and when the value is 64 or higher, "fast" is selected.

**c: Manual Speed Ctrl**

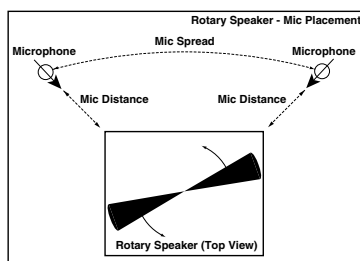
If you wish to control the speaker rotation speed manually, not switching between Slow and Fast, select the modulation source in the "Manual Speed Ctrl" field. If manual control is not necessary, set this field to **Off**.

**d: Horn Acceleration, e: Rotor Acceleration**

On a real rotary speaker, the rotation speed is accelerated or decelerated gradually after you switch the speed. The "Horn Acceleration" parameter sets the speed at which the rotation is accelerated or decelerated.

**g: Mic Distance, g: Mic Spread**

This is a simulation of stereo microphone settings.

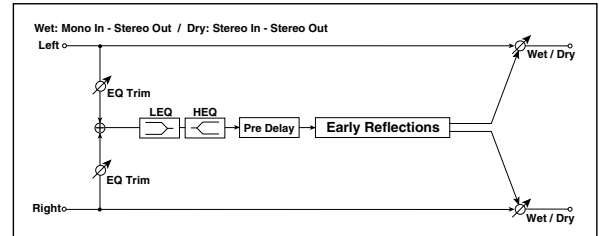




## ER/Delay

### Early reflection and delay effects

#### 041: Early Reflections

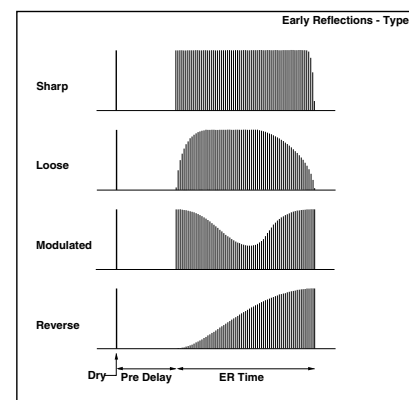
This effect is only the early reflection part of a reverberation sound, and adds presence to the sound. You can select one of the four decay curves.



a	Type Selects the decay curve for the early reflection	Sharp, Loose, Modulated, Reverse 
b	ER Time [msec] Sets the time length of early reflection	10...800msec
c	Pre Delay [msec] Sets the time taken from the original sound to the first early reflection	0...200msec
d	EQ Trim Sets the input level of EQ applied to the effect sound	0...100
e	Pre LEQ Gain [dB] Table , "Sets the gain of Low EQ," on page 323	-15.0...+15.0dB
	Pre HEQ Gain [dB] Table , "Sets the gain of High EQ," on page 323	-15.0...+15.0dB
f	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

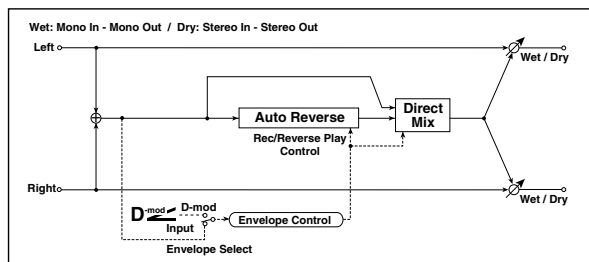
**a: Type**

This parameter selects the decay curve for the early reflection.



## 042: Auto Reverse

This effect records the input signal and automatically plays it in reverse (the effect is similar to a tape reverse sound).



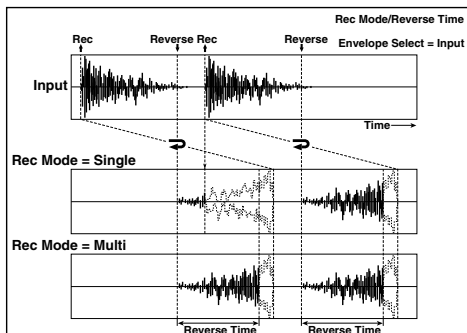
a	Rec Mode Sets the recording mode	Single, Multi
b	Reverse Time [msec] Sets the maximum duration of the reverse playback	20...1320msec
c	Envelope Select Selects whether the start and end of recording is controlled via the modulation source or the input signal level	D-mod, Input
	Src Selects the modulation source that controls recording when Envelope Select is set to D-mod	Off...Tempo
d	Threshold Sets the recording start level when Envelope Select is set to Input	0...100
e	Response Sets the speed of the response to the end of recording	0...100 Fx:031
f	Direct Mix Selects how a dry sound is mixed	Always On, Always Off, Cross Fade Fx:031
g	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## a: Rec Mode, b: Reverse Time

When "Rec Mode" is set to **Single**, you can set up to 1320msec for "Reverse Time." If recording starts during the reverse playback, the playback will be interrupted.

When "Rec Mode" is set to **Multi**, you can make another recording during the reverse playback. However, the maximum Reverse Time is limited to 660msec.

If you wish to record a phrase or rhythm pattern, set "Rec Mode" to **Single**. If you record only one note, set "Rec Mode" to **Multi**. The "Reverse Time" parameter specifies the maximum duration of the reverse playback. The part in excess of this limit will not be played in reverse. If you wish to add short pieces of the reverse playback of single notes, make the "Reverse Time" shorter.



## c: Envelope Select, c: Src, d: Threshold

These parameters select the source to control the start and end of recording.

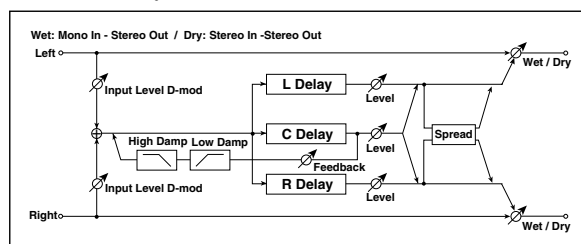
When "Envelope Select" is set to **D-mod**, the input signal will be recorded only when the value of the modulation source selected by the Src parameter is 64 or higher.

When "Envelope Select" is set to **Input**, the input signal will be recorded only when its level exceeds the Threshold level.

When recording is completed, reverse playback starts immediately.

## 043: L/C/R Delay

This multitap delay outputs three Tap signals to the left, right, and center respectively. You can also adjust the left and right spread of the delay sound.



a	L Delay Time [msec] Sets the delay time of TapL	0...1360msec
	Level Sets the output level of TapL	0...50
b	C Delay Time [msec] Sets the delay time of TapC	0...1360msec
	Level Sets the output level of TapC	0...50
c	R Delay Time [msec] Sets the delay time of TapR	0...1360msec
	Level Sets the output level of TapR	0...50
d	Feedback (C Delay) Sets the feedback amount of TapC	-100...+100
	Src Selects the modulation source of the TapC feedback amount	Off...Tempo
	Amt Sets the modulation amount of the TapC feedback amount	-100...+100
e	High Damp [%] Sets the damping amount in the high range	0...100%
	Low Damp [%] Sets the damping amount in the low range	0...100%
f	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100 Fx:037, D-mod
	Src Selects the modulation source for the input level	Off...Tempo Fx:037
g	Spread Sets the width of the stereo image of the effect sound	0...50
h	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## e: High Damp [%], e: Low Damp [%]

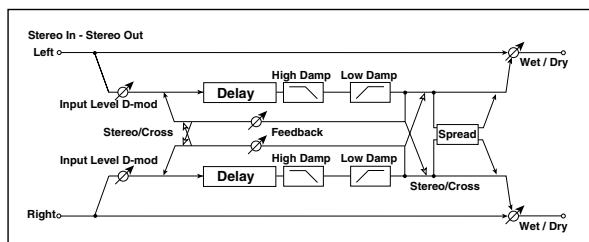
These parameters set the damping amount of high range and low range. The tone of the delayed sound becomes darker and lighter as it feeds back.

## g: Spread

This parameter sets the pan width of the effect sound. The stereo image is widest with a value of 50, and the effect sound of both channels is output from the center with a value of 0.

## 044: Cross Delay

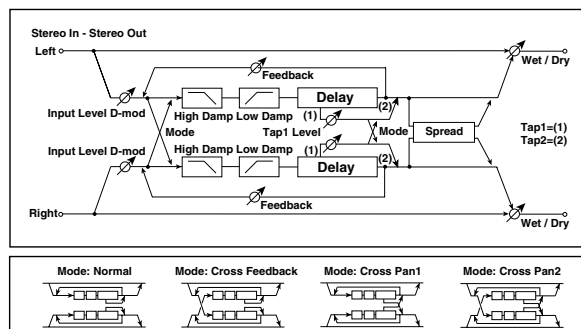
This is a stereo delay, and can be used as a cross-feedback delay effect in which the delay sounds cross over between the left and right by changing the feedback routing.



a	Stereo/Cross Switches between stereo delay and cross-feedback delay	Stereo, Cross
b	L Delay Time [msec] Sets the delay time for the left channel	0.0...680.0msec
c	R Delay Time [msec] Sets the delay time for the right channel	0.0...680.0msec
d	L Feedback Sets the feedback amount for the left channel	-100...+100 
	Src Selects the modulation source of feedback amount	Off...Tempo
	Amt L Sets the modulation amount of the left channel feedback	-100...+100
e	R Feedback Sets the feedback amount for the right channel	-100...+100 
	Amt R Sets the modulation amount of the right channel feedback	-100...+100
f	High Damp [%] Sets the damping amount in the high range	0...100% 
g	Low Damp [%] Sets the damping amount in the low range	0...100% 
h	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100 
	Src Selects the modulation source for the input level	Off...Tempo 
i	Spread Sets the width of the stereo image of the effect sound	-50...+50 
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet 
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 045: Multitap Delay

The left and right Multitap Delays have two taps respectively. Changing the routing of feedback and tap output allows you to create various patterns of complex effect sounds.



a	Mode Switches the left and right delay routing	Normal, Cross Feedback, Cross Pan1, Cross Pan2 
b	Tap1 Time [msec] Sets the Tap1 delay time	0.0...680.0msec
c	Tap2 Time [msec] Sets the Tap2 delay time	0.0...680.0msec
d	Tap1 Level Sets the Tap1 output level	0...100 
e	Feedback (Tap2) Sets the Tap2 feedback amount	-100...+100 
	Src Selects the modulation source of the Tap2 feedback amount	Off...Tempo
	Amt Sets the modulation amount of the Tap2 feedback amount	-100...+100
f	High Damp [%] Sets the damping amount in the high range	0...100% 
g	Low Damp [%] Sets the damping amount in the low range	0...100% 
h	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100 
	Src Selects the modulation source for the input level	Off...Tempo 
i	Spread Sets the width of the stereo image of the effect sound	-100...+100 
	Src Selects the modulation source of the effect sound's stereo image width	Off...Tempo
	Amt Sets the modulation amount of the effect sound's stereo image width	-100...+100
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet 
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## a: Mode

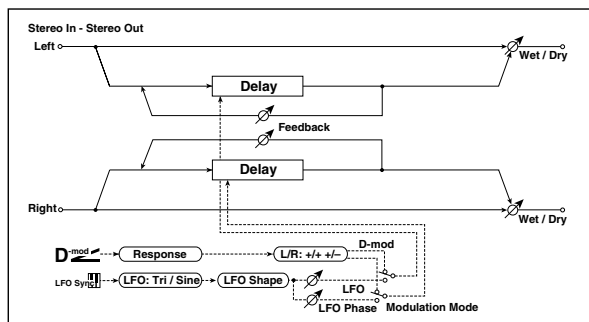
You can change how the left and right delay signals are panned by modifying the routing of the left and right delay as shown in the figure above. You need to input different sounds to each channel in order for this parameter to be effective.

## d: Tap1 Level

This parameter sets the output level of Tap1. Setting a different level from Tap2 will add a unique touch to a monotonous delay and feedback.

## 046: Modulation Delay

This stereo delay uses an LFO to sweep the delay time. The pitch also varies. You will obtain a delay sound with swell and shimmering. You can also control the delay time using a modulation source.



a	Modulation Mode Switches between LFO modulation control and modulation source control	LFO, D-mod
b	D-mod Modulation Reversed L/R control by modulation source	L/R: +/-, L/R: +/- D-mod
	Src Selects the modulation source that controls delay time	Off...Tempo
c	Response Sets the rate of response to the modulation source	0...30
	LFO Waveform Selects LFO Waveform	Triangle, Sine
d	LFO Shape Determines how much the LFO waveform is changed	-100...+100 Fx:020
	LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
e	LFO Sync Switches LFO reset off/on	Off, On D-mod
f	Src Selects the modulation source that resets the LFO	Off...Tempo
	L LFO Phase [degree] Sets the phase obtained when the left LFO is reset	-180...+180 Fx:010
g	R LFO Phase [degree] Sets the phase obtained when the right LFO is reset	-180...+180 Fx:010
	L Depth Sets the depth of the left LFO modulation	0...200
h	R Depth Sets the depth of the right LFO modulation	0...200
	L Delay Time [msec] Sets the left delay time	0.0...500.0
i	R Delay Time [msec] Sets the right delay time	0.0...500.0
	L Feedback Sets the feedback amount of left delay	-100...+100
j	R Feedback Sets the feedback amount of right delay	-100...+100
	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323 Fx:010, D-mod	-Wet...-1:99, Dry, 1:99...Wet
k	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## b: D-mod Modulation

When the modulation source is used for control, this parameter reverses the left and right modulation direction.

e: LFO Sync, e: Src,

f: L LFO Phase [degree], f: R LFO Phase [degree]

The LFO can be reset via a modulation source.

The "Src" parameter sets the modulation source that resets the LFO. For example, you can assign Gate as a modulation source so that the sweep always starts from the specified point.

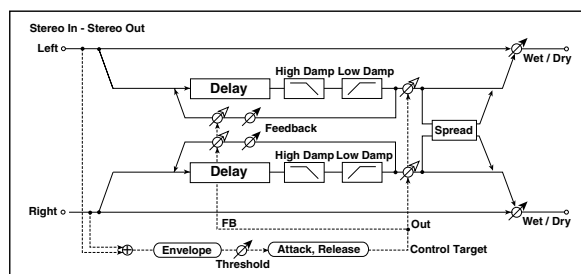
"L LFO Phase" and "R LFO Phase" set the phase obtained when the left and right LFOs are reset. In this way, you can create changes in pitch sweep for the left and right channels individually.



The effect is off when a value of the modulation source specified in the "Src" parameter is 63 or smaller, and the effect is on when the value is 64 or higher. The LFO is triggered and reset to the "L LFO Phase" and "R LFO Phase" settings when the value changes from 63 or smaller to 64 or higher.

## 047: Dynamic Delay

This stereo delay controls the level of delay according to the input signal level. You can use this as a ducking delay that applies delay to the sound only when you play keys at a high velocity or only when the volume level is low.



a	Control Target Selects from no control, output, and feedback	None, Out, FB Fx:010
b	Polarity Reverses level control	+, - Fx:010
	Threshold Sets the level to which the effect is applied	0...100 Fx:010
c	Offset Sets the offset of level control	0...100 Fx:010
	Attack Sets the attack time of level control	1...100 Fx:010
d	Release Sets the release time of level control	1...100 Fx:010
e	L Delay Time [msec] Sets the delay time for the left channel	0.0...680.0msec
f	R Delay Time [msec] Sets the delay time for the right channel	0.0...680.0msec
g	Feedback Sets the feedback amount	-100...+100
h	High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
	Low Damp [%] Sets the damping amount in the low range	0...100% Fx:043
i	Spread Sets the width of the stereo image of the effect sound	-100...+100 Fx:043
j	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323 D-mod	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
k	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## a: Control Target

This parameter selects no level control, delay output control (effect balance), or feedback amount control.

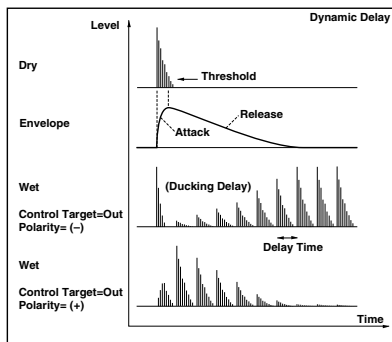
**a: Polarity, b: Threshold, b: Offset, c: Attack, d: Release**

The “Offset” parameter specifies the value for the “Control Target” parameter (that is set to None), expressed as the ratio relative to the parameter value (the “Wet/Dry” value with “Control Target”=Out, or the “Feedback” value with “Control Target”=FB).

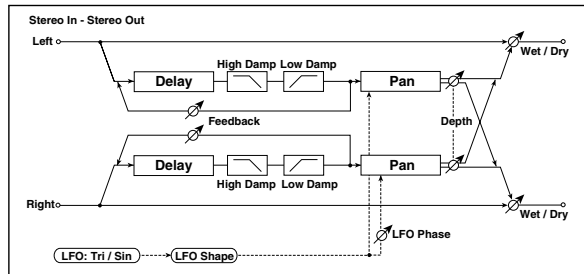
When “Polarity” is **positive**, the “Control Target” value is obtained by multiplying the parameter value by the “Offset” value (if the input level is below the threshold), or equals the parameter value if the input level exceeds the threshold.

When “Polarity” is **negative**, Control Target value equals the parameter value if the input level is below the threshold, or is obtained by multiplying the parameter value by the “Offset” value if the level exceeds the threshold.

The “Attack” and “Release” parameters specify attack time and release time of delay level control.

**048: Autopan Delay**

This stereo delay effect pans the delay sound left and right using the LFO.

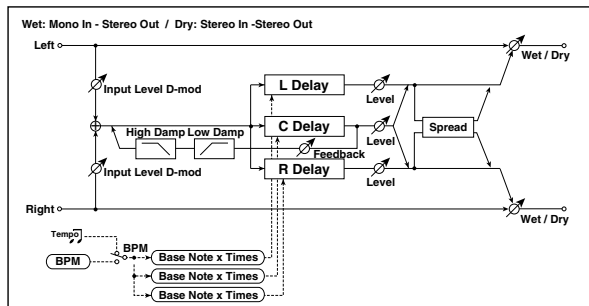


a	L Delay Time [msec] Sets the delay time for the left channel	0.0...680.0msec
	L Feedback Sets the feedback amount for the left channel	-100...+100
b	R Delay Time [msec] Sets the delay time for the right channel	0.0...680.0msec
	R Feedback Sets the feedback amount for the right channel	-100...+100
c	High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
	Low Damp [%] Sets the damping amount in the low range	0...100% Fx:043
d	LFO Waveform Selects LFO Waveform	Triangle, Sine
	LFO Shape Determines how much the LFO waveform is changed	-100...+100 Fx:020
e	LFO Phase [degree] Sets the LFO phase difference between the left and right	-180...+180 Fx:034
f	Panning Frequency [Hz] Sets the panning speed	0.02...20.00Hz
g	Panning Depth Sets the panning width	0...100 D-mod
	Src Selects the modulation source for the panning width	Off...Tempo
	Amt Set the modulation amount of the panning width	-100...+100
h	Wet/Dry Table , “Sets the balance between the effect and dry sounds,” on page 323	Dry, 1:99...99:1, Wet D-mod
	Src Table , “Selects the modulation source of the effect balance,” on page 323	Off...Tempo
	Amt Table , “Sets the modulation amount of the effect balance,” on page 323	-100...+100

## 049: L/C/R BPM Delay

The L/C/R delay enables you to match the delay time with the song tempo. You can also synchronize the delay time with the arpeggiator or sequencer. If you program the tempo before performance, you can achieve a delay effect that synchronizes with the song in real-time. Delay time is set by notes.

**Note:** With extreme values, the sync may be lost.



a	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 E <sup>3</sup> Sync
b	L Delay Base Note Selects the type of notes to specify the delay time for TapL	E <sup>3</sup> Sync
	Times Sets the number of notes to specify the delay time for TapL	x1...x16 E <sup>3</sup>
c	C Delay Base Note Selects the type of notes to specify the delay time for TapC	E <sup>3</sup> Sync
	Times Sets the number of notes to specify the delay time for TapC	x1...x16 E <sup>3</sup>
d	R Delay Base Note Selects the type of notes to specify the delay time for TapR	E <sup>3</sup> Sync
	Times Sets the number of notes to specify the delay time for TapR	x1...x16 E <sup>3</sup>
e	Feedback (C Delay) Sets the feedback amount of TapC	-100...+100 D <sup>mod</sup>
	Src Selects the modulation source for the TapC feedback	Off...Tempo
f	Amt Sets the modulation amount of the TapC feedback	-100...+100
g	High Damp [%] Sets the damping amount in the high range	0...100% E <sup>3</sup> Fx:043
	Low Damp [%] Sets the damping amount in the low range	0...100% E <sup>3</sup> Fx:043
h	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100 E <sup>3</sup> Fx:037, D <sup>mod</sup>
	Src Selects the modulation source for the input level	Off...Tempo E <sup>3</sup> Fx:037
i	Spread Sets the width of the stereo image of the effect sound	0...50 E <sup>3</sup> Fx:043
j	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet D <sup>mod</sup>
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
k	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

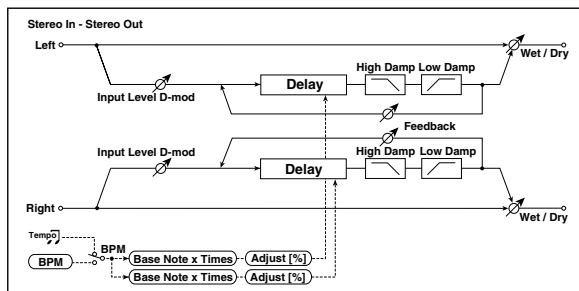
a: BPM, b: L Delay Base Note, b: Times, c: C Delay Base Note, c: Times, d: R Delay Base Note, d: Times

The delay time is the length of the note obtained by multiplying the "Base Note" parameter by the Times value, in relation to the tempo specified by the "BPM" parameter (or the MIDI Clock tempo if "BPM" is set to MIDI).

## 050: BPM Delay

This stereo delay enables you to set the delay time to match the song tempo.

**Note:** With extreme values, the sync may be lost.

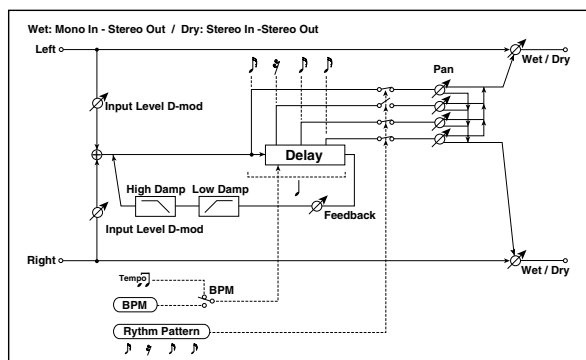


a	BPM Selects MIDI Clock and assigns tempo	MIDI, 40...240 E <sup>3</sup> Fx:049, Sync
b	R > Display the error message if the right channel delay time exceeds the upper limit	----, OVER!! E <sup>3</sup>
	L Delay Base Note Selects the type of notes to specify the left channel delay time	E <sup>3</sup> Fx:049, Sync
c	Times Sets the number of notes to specify the left channel delay time	x1...x16 E <sup>3</sup> Fx:049
	Adjust [%] Fine-adjust the left channel delay time	-2.50...+2.50%
d	R Delay Base Note Selects the type of notes to specify the right channel delay time	E <sup>3</sup> Fx:049, Sync
	Times Sets the number of notes to specify the right channel delay time	x1...x16 E <sup>3</sup> Fx:049
e	Adjust [%] Fine-adjust the right channel delay time	-2.50...+2.50%
	L Feedback Sets the feedback amount for the left channel	-100...+100 D <sup>mod</sup>
f	Src Selects the modulation source of feedback amount	Off...Tempo
	Amt L Sets the modulation amount of the left channel feedback	-100...+100
g	R Feedback Sets the feedback amount for the right channel	-100...+100 D <sup>mod</sup>
	Amt R Sets the modulation amount of the right channel feedback	-100...+100
h	High Damp [%] Sets the damping amount in the high range	0...100% E <sup>3</sup> Fx:043
	Low Damp [%] Sets the damping amount in the low range	0...100% E <sup>3</sup> Fx:043
i	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100 E <sup>3</sup> Fx:037, D <sup>mod</sup>
	Src Selects the modulation source for the input level	Off...Tempo E <sup>3</sup> Fx:037
j	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet D <sup>mod</sup>
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
k	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100



## 051: Sequence Delay

This four-tap delay enables you to select a tempo and rhythm pattern to set up each tap.



a	BPM Selects MIDI Clock and assigns tempo	MIDI, 44...240 E3, Sync
b	Rhythm Pattern Selects a rhythm pattern	♪ - - - ♪ ♪ 3 E3, Sync
c	Tap1 Pan Sets the panning of Tap1	L, 1...99, R
	Tap2 Pan Sets the panning of Tap2	L, 1...99, R
	Tap3 Pan Sets the panning of Tap3	L, 1...99, R
	Tap4 Pan Sets the panning of Tap4	L, 1...99, R
d	Feedback Sets the feedback amount	-100...+100 D-mod
	Src Selects the modulation source of feedback amount	Off...Tempo
	Amt Sets the modulation amount of the feedback	-100...+100
e	High Damp [%] Sets the damping amount in the high range	0...100% E3 Fx:043
	Low Damp [%] Sets the damping amount in the low range	0...100% E3 Fx:043
f	Input Level Dmod [%] Sets the modulation amount of the input level	-100...+100 E3 Fx:037, D-mod
	Src Selects the modulation source for the input level	Off...Tempo E3 Fx:037
g	Wet/Dry Dry, 1:99...99:1, Wet Table, "Sets the balance between the effect and dry sounds," on page 323 D-mod	
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

### a: BPM, b: Rhythm Pattern

With the tempo specified by the "BPM" parameter (or the MIDI Clock tempo if "BPM" is set to **MIDI**), the length of one beat equals the feedback delay time, and the interval between taps becomes equal. Selecting a rhythm pattern will automatically turn the tap outputs on and off. When "BPM" is set to **MIDI**, the lower limit of the "BPM" is **44**.

## Reverb

### Reverb effects

These effects simulate the ambience of reverberation in concert halls.

### 052: Reverb Hall

This hall-type reverb simulates the reverberation of mid-size concert halls or ensemble halls.

### 053: Reverb Smooth Hall

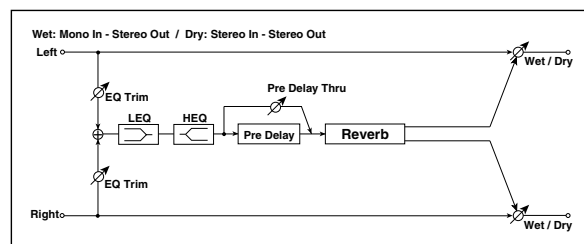
This hall-type reverb simulates the reverberation of larger halls and stadiums, and creates a smooth release.

### 054: Reverb Wet Plate

This plate reverb simulates warm (dense) reverberation.

### 055: Reverb Dry Plate

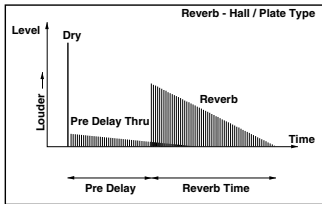
This plate reverb simulates dry (light) reverberation.



a	Reverb Time [sec] Sets the reverberation time	0.1...10.0sec
	High Damp [%] Sets the damping amount in the high range	0...100%
b	Pre Delay [msec] Sets the delay time from the dry sound	0...200msec E3
	Pre Delay Thru [%] Sets the mix ratio of non-delay sound	0...100% E3
c	EQ Trim Table, "Sets the EQ input level," on page 323	0...100
d	Pre LEQ Gain [dB] Table, "Sets the gain of Low EQ," on page 323	-15...+15dB
	Pre HEQ Gain [dB] Table, "Sets the gain of High EQ," on page 323	-15...+15dB
e	Wet/Dry Dry, 1:99...99:1, Wet Table, "Sets the balance between the effect and dry sounds," on page 323 D-mod	
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

b: Pre Delay [msec], b: Pre Delay Thru [%]

The “Pre Delay” sets the delay time to the reverb input, allowing you to control spaciousness. Using the “Pre Delay Thru” parameter, you can mix the dry sound without delay, emphasizing the attack of the sound.

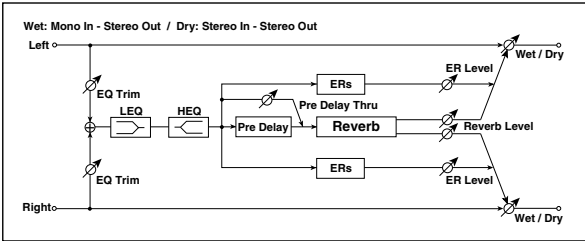


056: Reverb Room

This room-type reverb emphasizes the early reflections that make the sound tighter. Changing the balance between the early reflections and reverb sound allows you to simulate nuances, such as the type of walls of a room.

057: Reverb Bright Room

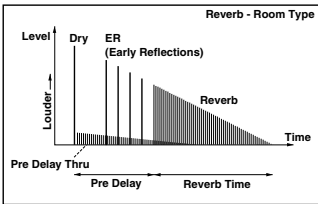
This room-type reverb emphasizes the early reflections that make the sound brighter. See 056: Reverb Room.



a	Reverb Time [sec] Sets the reverberation time	0.1...3.0sec
	High Damp [%] Sets the damping amount in the high range	0...100%
b	Pre Delay [msec] Sets the delay time from the dry sound	0...200msec F <sub>32</sub> :052
	Pre Delay Thru [%] Sets the mix ratio of non-delay sound	0...100% F <sub>32</sub> :052
c	ER Level Sets the level of early reflections	0...100 F <sub>32</sub>
d	Reverb Level Sets the reverberation level	0...100 F <sub>32</sub>
e	EQ Trim Table , “Sets the EQ input level,” on page 323	0...100
f	Pre LEQ Gain [dB] Table , “Sets the gain of Low EQ,” on page 323	–15...+15dB
	Pre HEQ Gain [dB] Table , “Sets the gain of High EQ,” on page 323	–15...+15dB
g	Wet/Dry Table , “Sets the balance between the effect and dry sounds,” on page 323 D <sub>mod</sub>	Dry, 1:99...99:1, Wet
	Src Table , “Selects the modulation source of the effect balance,” on page 323	Off...Tempo
	Amt Table , “Sets the modulation amount of the effect balance,” on page 323	–100...+100

c: ER Level, d: Reverb Level

These parameters set the early reflection level and reverb level. Changing these parameter values allows you to simulate the type of walls in the room. That is, a larger “ER Level” simulates a hard wall, and a larger “Reverb Level” simulates a soft wall.



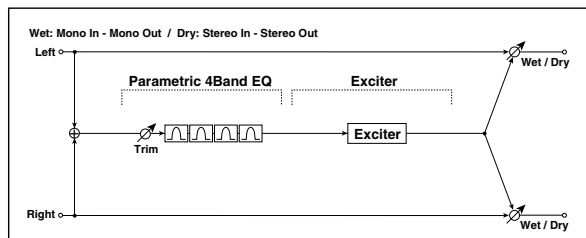
## Mono – Mono Chain

Effects that combine two mono effects connected in series

### 058: P4EQ - Exciter

(Parametric 4-Band EQ – Exciter)

This effect combines a mono-type four-band parametric equalizer and an exciter.

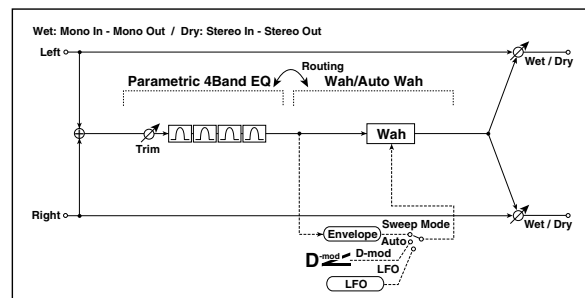


a	[E] Trim Sets the parametric EQ input level	0...100
b	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB
c	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB
d	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB
e	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB
f	[X] Exciter Blend Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
g	[X] Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
h	Wet/Dry Dry, 1:99...99:1, Wet Table , "Sets the balance between the effect and dry sounds," on page 323 D-mod	
	Src Off...Tempo Table , "Selects the modulation source of the effect balance," on page 323	
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

### 059: Par4Eq-Wah

(Parametric 4-Band EQ – Wah/Auto Wah)

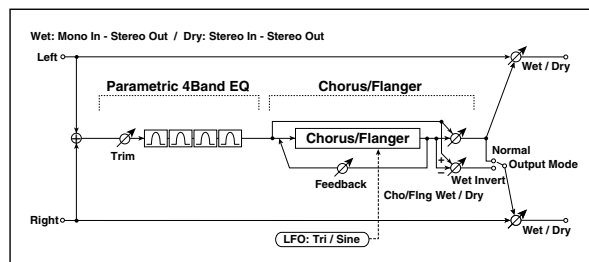
This effect combines a mono-type four-band parametric equalizer and a wah. You can change the order of the connection.



a	[E] Trim Sets the parametric EQ input level	0...100
b	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB
c	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB
d	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB
e	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB
f	[W] Frequency Bottom Sets the lower limit of the wah center frequency	0...100 Fx:009
	Frequency Top Sets the upper limit of the wah center frequency	0...100 Fx:009
g	[W] Sweep Mode Auto, D-mod, LFO Selects the control from auto-wah, modulation source, and LFO Fx:009, D-mod	
	Src Off...Tempo Selects the modulation source for the wah when Sweep Mode=D-mod	
h	[W] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	Resonance Sets the resonance amount	0...100
	LPF Switches the wah low pass filter on and off	Off, On
i	Routing PEQ → WAH, WAH → PEQ Changes the order of the parametric equalizer and wah connection	
j	Wet/Dry Dry, 1:99...99:1, Wet Table , "Sets the balance between the effect and dry sounds," on page 323 D-mod	
	Src Off...Tempo Table , "Selects the modulation source of the effect balance," on page 323	
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 060: P4EQ - Cho/Fling

This effect combines a mono-type four-band parametric equalizer and a chorus/flanger.



a	[E] Trim Sets the parametric EQ input level	0...100
b	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB
c	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB
d	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB
e	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB
f	[F] Delay Time [msec] Sets the delay time	0.0...50.0msec
g	[F] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
h	[F] Depth Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	-100...+100 Fx:020
i	[F] Cho/Fing Wet/Dry Sets the effect balance of the chorus/flanger Fx:010, 020	-Wet...-2:98, Dry, 2:98...Wet
	Output Mode Selects the output mode for the chorus/flanger 	Normal, Wet Invert
j	Wet/Dry Dry, 1:99...99:1, Wet Table , "Sets the balance between the effect and dry sounds," on page 323 	
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

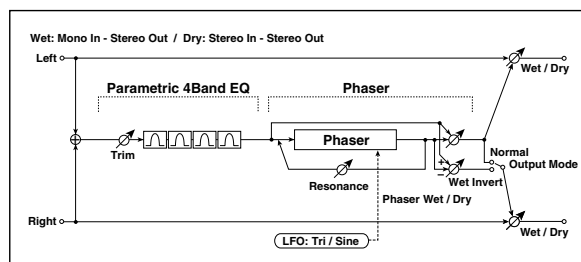
### i: Output Mode


When **Wet Invert** is selected, the right channel phase of the chorus/flanger effect sound is inverted. This creates pseudo-stereo effects and adds spread.

However, if a mono-input type effect is connected after this effect, the left and right sounds may cancel each other, eliminating the chorus/flanger effects.

## 061: P4EQ - Phaser

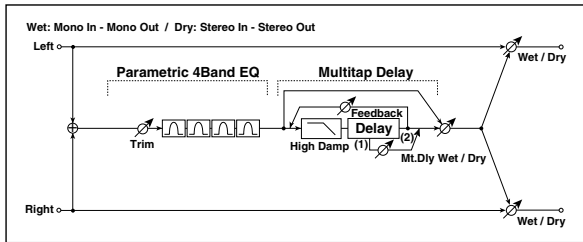
This effect combines a mono-type four-band parametric equalizer and a phaser.



a	[E] Trim Sets the parametric EQ input level	0...100
b	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB
c	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB
d	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB
e	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB
f	[P] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
g	[P] Manual Sets the frequency to which the effect is applied	0...100
h	[P] Depth Sets the depth of LFO modulation	0...100
	Resonance Sets the resonance amount	-100...+100 Fx:023
i	[P] Phaser Wet/Dry Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
	Output Mode Selects the phaser output mode	Normal, Wet Invert Fx:060
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 062: P4EQ - Mt. Delay (Parametric 4-Band EQ – Multitap Delay)

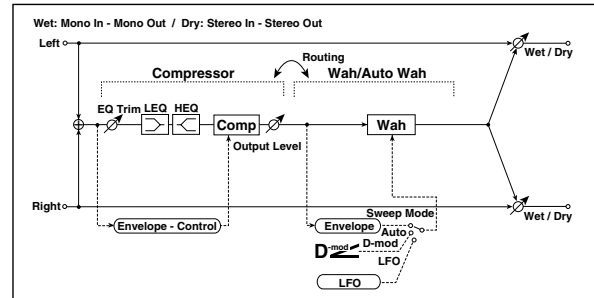
This effect combines a mono-type four-band parametric equalizer and a multitap delay.



a	[E] Trim Sets the parametric EQ input level	0...100
b	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB
c	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB
d	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB
e	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB
f	[D] Tap1 Time [msec] Sets the Tap1 delay time	0...680msec
	Tap1 Level Sets the Tap1 output level	0...100 Fx:045
g	[D] Tap2 Time [msec] Sets the Tap2 delay time	0...680msec
	Feedback Sets the Tap2 feedback amount	-100...+100
h	[D] Mt.Delay Wet/DryDry, 2:98...98:2, Wet Sets the multitap delay effect balance	
	High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
i	Wet/DryDry, 1:99...99:1, Wet Table , "Sets the balance between the effect and dry sounds," on page 323	
	SrcOff...Tempo Table , "Selects the modulation source of the effect balance," on page 323	
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 063: Comp - Wah (Compressor – Wah/Auto Wah)

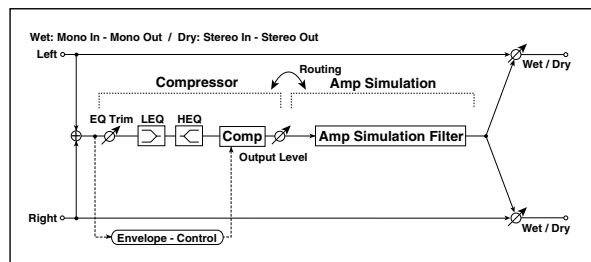
This effect combines a mono-type compressor and a wah. You can change the order of the connection.



a	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
b	[C] Attack Table , "Sets the attack level," on page 323	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002
c	[C] EQ Trim Table , "Sets the EQ input level," on page 323	0...100
d	[C] Pre LEQ Gain [dB] Table , "Sets the gain of Low EQ," on page 323	-15...+15dB
	Pre HEQ Gain [dB] Table , "Sets the gain of High EQ," on page 323	-15...+15dB
e	[W] Frequency Bottom Sets the lower limit of the wah center frequency	0...100 Fx:009
	Frequency Top Sets the upper limit of the wah center frequency	0...100 Fx:009
f	[W] Sweep Mode Selects the control from auto-wah, modulation source, and LFO	Auto, D-mod, LFO Fx:009, D-mod
	Src Selects the modulation source for the wah when Sweep Mode=D-mod	Off...Tempo
g	[W] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
h	[W] Resonance Sets the resonance amount	0...100
	Low Pass Filter Switches the wah low pass filter on and off	Off, On
i	Routing Switches the order of the compressor and wah connection	CMP → WAH, WAH → CMP
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet D-mod
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 064: Comp - Amp Sim (Compressor – Amp Simulation)

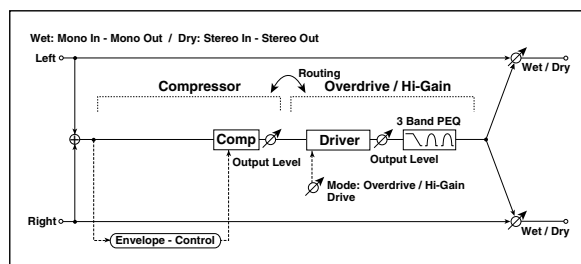
This effect combines a mono-type compressor and an amp simulation. You can change the order of the effect connection.



a	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
b	[C] Attack Table, "Sets the attack level," on page 323	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002
c	[C] EQ Trim Table, "Sets the EQ input level," on page 323	0...100
d	[C] Pre LEQ Gain [dB] Table, "Sets the gain of Low EQ," on page 323	-15...+15dB
	Pre HEQ Gain [dB] Table, "Sets the gain of High EQ," on page 323	-15...+15dB
e	[A] Amplifier Type Selects the type of guitar amplifier	Solid State, British (EL84), American (6L6)
f	Routing Switches the order of the compressor and amp simulation connection	CMP → AMP, AMP → CMP
g	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 065: Comp - OD/HiGain (Compressor – Overdrive/HiGain)

This effect combines a mono-type compressor and an overdrive/high-gain distortion. You can change the order of the effect connection.

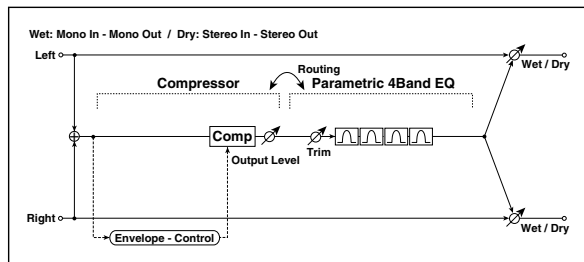


a	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
b	[C] Attack Table, "Sets the attack level," on page 323	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002
c	[O] Drive Mode Switches between overdrive and high-gain distortion	Overdrive, Hi-Gain
	Drive Sets the degree of distortion	1...100 Fx:006
d	[O] Output Level Sets the overdrive output level	0...50 Fx:006, D-mod
	Src Selects the modulation source for the overdrive output level	Off...Tempo
	Amt Sets the modulation amount of the overdrive output level	-50...+50
e	[O] Low Cutoff [Hz] Sets the center frequency for Low EQ (shelving type)	20...1.00kHz
	Gain [dB] Table, "Sets the gain of Low EQ," on page 323	-18...+18dB
f	[O] Mid1 Cutoff [Hz] Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Mid/High EQ 1	-18...+18dB
g	[O] Mid2 Cutoff [Hz] Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Mid/High EQ 2	-18...+18dB
h	Routing Switches the order of the compressor and overdrive connection	CMP → OD, OD → CMP
i	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100



## 066: Comp - P4EQ (Compressor – Parametric 4-Band EQ)

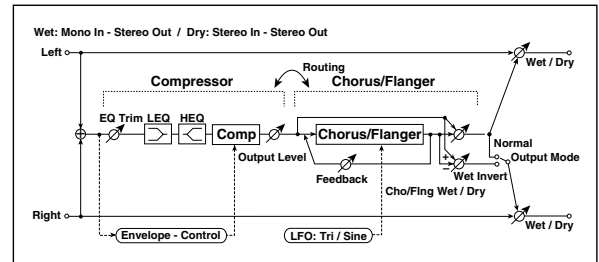
This effect combines a mono-type compressor and a four-band parametric equalizer. You can change the order of the effect connection.



a	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
b	[C] Attack Table, "Sets the attack level," on page 323	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002
c	[E] Trim Sets the parametric EQ input level	0...100
d	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB
e	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB
f	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB
g	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB
h	Routing CMP → PEQ, PEQ → CMP Switches the order of the compressor and parametric EQ connection	
i	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323 D <sub>mod</sub>	Dry, 1:99...99:1, Wet Fx:010, 020
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 067: Comp - ChoFlng (Compressor – Chorus/Flanger)

This effect combines a mono-type compressor and a chorus/flanger. You can change the order of the effect connection.



a	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
b	[C] Attack Table, "Sets the attack level," on page 323	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002
c	[C] EQ Trim Table, "Sets the EQ input level," on page 323	0...100
d	[C] Pre LEQ Gain [dB] Table, "Sets the gain of Low EQ," on page 323	-15...+15dB
	Pre HEQ Gain [dB] Table, "Sets the gain of High EQ," on page 323	-15...+15dB
e	[F] Delay Time [msec] Sets the delay time	0.0...50.0msec
f	[F] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
g	[F] Depth Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	-100...+100 Fx:020
h	[F] Cho/Fling Wet/Dry Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
	Output Mode Selects the output mode for the chorus/flanger	Normal, Wet Invert Fx:010
i	Routing CMP → FLNG, FLNG → CMP Switches the order of the compressor and chorus/flanger connection	
j	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323 D <sub>mod</sub>	Dry, 1:99...99:1, Wet Fx:010, 020
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

### h: Output Mode, i: Routing

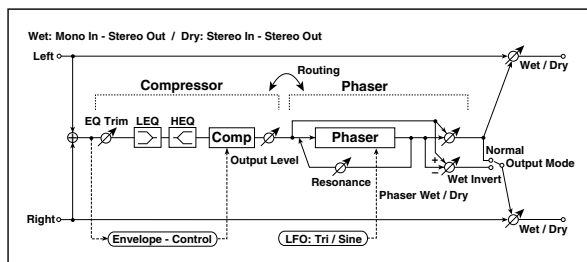
When **Wet Invert** is selected, the right channel phase of the chorus/flanger effect sound is inverted. This creates pseudo-stereo effects and adds spread.

However, if a mono-input type effect is connected after this effect, the left and right sounds may cancel each other, eliminating the chorus/flanger effects.

When "Routing" is set to **FLNG→CMP**, "Output Mode" will be set to **Normal**.

## 068: Comp - Phaser (Compressor – Phaser)

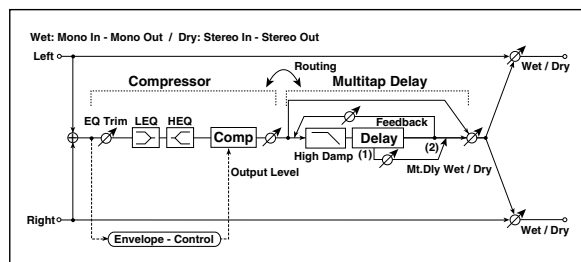
This effect combines a mono-type compressor and a phaser. You can change the order of the effect connection.



a	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
b	[C] Attack Table , "Sets the attack level," on page 323	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002
c	[C] EQ Trim Table , "Sets the EQ input level," on page 323	0...100
d	[C] Pre LEQ Gain [dB] Table , "Sets the gain of Low EQ," on page 323	-15...+15dB
	Pre HEQ Gain [dB] Table , "Sets the gain of High EQ," on page 323	-15...+15dB
e	[P] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
f	[P] Manual Sets the frequency to which the effect is applied	0...100
g	[P] Depth Sets the depth of LFO modulation	0...100
	Resonance Sets the resonance amount	-100...+100 Fx:023
h	[P] Phaser Wet/Dry Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
	Output Mode Selects the phaser output mode	Normal, Wet Invert Fx:067
i	Routing Switches the order of the compressor and phaser connection	CMP→PHS, PHS→CMP Fx:067
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet D <sup>mod</sup>
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 069: Comp - Mt. Delay (Compressor – Multitap Delay)

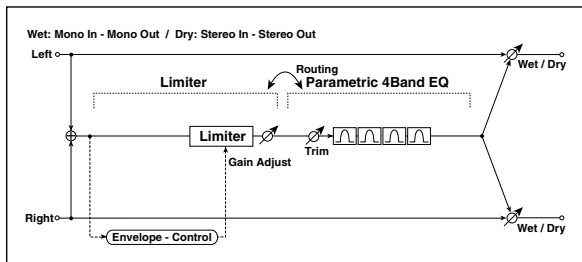
This effect combines a mono-type compressor and a multitap delay. You can change the order of the effect connection.



a	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
b	[C] Attack Table , "Sets the attack level," on page 323	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002
c	[C] EQ Trim Table , "Sets the EQ input level," on page 323	0...100
d	[C] Pre LEQ Gain [dB] Table , "Sets the gain of Low EQ," on page 323	-15...+15dB
	Pre HEQ Gain [dB] Table , "Sets the gain of High EQ," on page 323	-15...+15dB
e	[D] Tap1 Time [msec] Sets the Tap1 delay time	0...680msec
	Tap1 Level Sets the Tap1 output level	0...100 Fx:045
f	[D] Tap2 Time [msec] Sets the Tap2 delay time	0...680msec
	Feedback Sets the Tap2 feedback amount	-100...+100
g	[D] High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
h	[D] Mt.Delay Wet/Dry Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
i	Routing Switches the order of the compressor and multitap delay connection	CMP→DLY, DLY→CMP
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet D <sup>mod</sup>
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 070: Limiter - P4EQ (Limiter – Parametric 4-Band EQ)

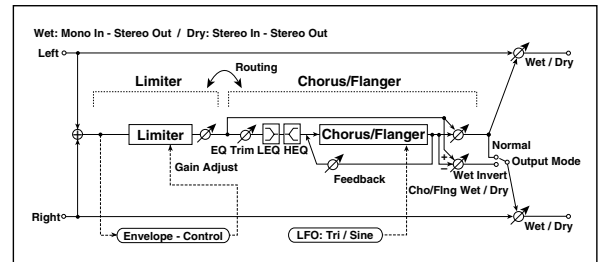
This effect combines a mono-type limiter and a four-band parametric equalizer. You can change the order of the effect connection.



a	[L] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB Fx:003
b	[L] Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
c	[L] Gain Adjust [dB] Sets the limiter output gain	-Inf, -38...+24dB Fx:003
d	[E] Trim Sets the parametric EQ input level	0...100
e	[E] Band1 Cutoff [Hz] Sets the center frequency of Band 1	20...1.00kHz
	Q Sets the bandwidth of Band 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 1	-18...+18dB
f	[E] Band2 Cutoff [Hz] Sets the center frequency of Band 2	50...5.00kHz
	Q Sets the bandwidth of Band 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 2	-18...+18dB
g	[E] Band3 Cutoff [Hz] Sets the center frequency for Band 3	300...10.00kHz
	Q Sets the bandwidth of Band 3	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 3	-18...+18dB
h	[E] Band4 Cutoff [Hz] Sets the center frequency for Band 4	500...20.00kHz
	Q Sets the bandwidth of Band 4	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Band 4	-18...+18dB
i	Routing Switches the order of the limiter and parametric EQ connection	LMT→PEQ, PEQ→LMT
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 D <sup>mod</sup>	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 071: Limiter - Cho/Flang (Limiter – Chorus/Flanger)

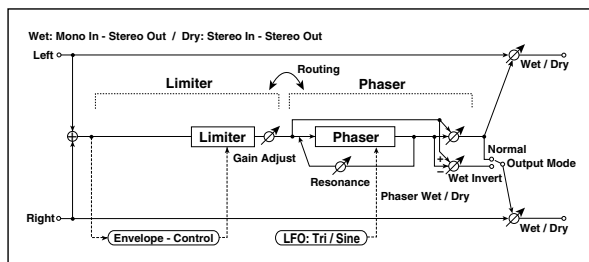
This effect combines a mono-type limiter and a chorus/flanger. You can change the order of the effect connection.



a	[L] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB Fx:003
b	[L] Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
c	[L] Gain Adjust [dB] Sets the limiter output gain	-Inf, -38...+24dB Fx:003
d	[F] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
e	[F] Delay Time [msec] Sets the delay time	0.0...50.0msec
	Depth Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	-100...+100 Fx:020
f	[F] EQ Trim Table , "Sets the EQ input level," on page 323	0...100
g	[F] Pre LEQ Gain [dB] Table , "Sets the gain of Low EQ," on page 323	-15...+15dB
	Pre HEQ Gain [dB] Table , "Sets the gain of High EQ," on page 323	-15...+15dB
h	[F] Cho/Fing Wet/Dry Sets the effect balance of the chorus/flanger Fx:010, 020	-Wet...-2:98, Dry, 2:98...Wet
	Output Mode Selects the output mode for the chorus/flanger	Normal, Wet Invert Fx:067
i	Routing Switches the order of the limiter and chorus/flanger connection Fx:067	LMT→FLNG, FLNG→LMT
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 D <sup>mod</sup>	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 072: Limiter - Phaser

This effect combines a mono-type limiter and a phaser. You can change the order of the effect connection.

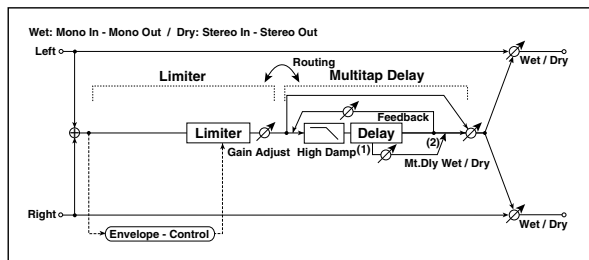


a	[L] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB Fx:003
b	[L] Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
c	[L] Gain Adjust [dB] Sets the limiter output gain	-Inf, -38...+24dB Fx:003
d	[P] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
e	[P] Manual Sets the frequency to which the effect is applied	0...100
f	[P] Depth Sets the depth of LFO modulation	0...100
	Resonance Sets the resonance amount	-100...+100 Fx:023
g	[P] Phaser Wet/Dry Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
	Output Mode Selects the phaser output mode	Normal, Wet Invert Fx:067
h	Routing Switches the order of the limiter and phaser connection	LMT→PHS, PHS→LMT Fx:067
	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet D-mod
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
i	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 073: Limiter - Mt. Delay

(Limiter – Multitap Delay)

This effect combines a mono-type limiter and a multitap delay. You can change the order of the effect connection.



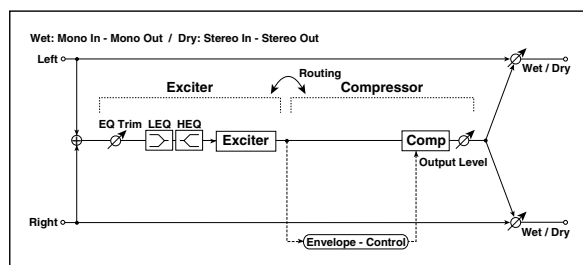
a	[L] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
	Threshold [dB] Sets the level above which the compressor is applied	-40...0dB Fx:003

b	[L] Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
c	[L] Gain Adjust [dB] Sets the limiter output gain	-Inf, -38...+24dB Fx:003
d	[D] Tap1 Time [msec] Sets the Tap1 delay time	0...680msec
	Tap1 Level Sets the Tap1 output level	0...100 Fx:045
e	[D] Tap2 Time [msec] Sets the Tap2 delay time	0...680msec
	Feedback (Tap2) Sets the Tap2 feedback amount	-100...+100
f	[D] Mt.Delay Wet/Dry Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
	High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
g	Routing Switches the order of the limiter and multitap delay connection	LMT→DLY, DLY→LMT
h	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet D-mod
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 074: Exciter - Comp

(Exciter – Compressor)

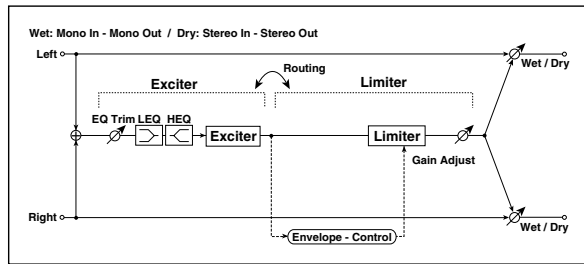
This effect combines a mono-type exciter and a compressor. You can change the order of the effect connection.



a	[X] Exciter Blend Sets the intensity (depth) of the Exciter effect	-100...+100 Fx:011
b	[X] Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	[X] EQ Trim Table, "Sets the EQ input level," on page 323	0...100
d	[X] Pre LEQ Gain [dB] Table, "Sets the gain of Low EQ," on page 323	-15...+15dB
	Pre HEQ Gain [dB] Table, "Sets the gain of High EQ," on page 323	-15...+15dB
e	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
f	[C] Attack Table, "Sets the attack level," on page 323	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002
g	Routing Switches the order of the exciter and compressor connection	XCT→CMP, CMP→XCT
h	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet D-mod
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 075: Exciter - Limiter (Exciter – Limiter)

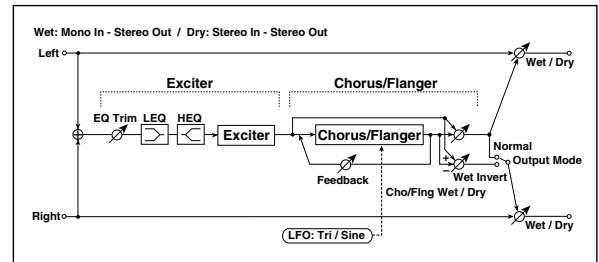
This effect combines a mono-type exciter and a limiter. You can change the order of the effect connection.



a	[X] Exciter Blend Sets the intensity (depth) of the Exciter effect	–100...+100 Fx:011
b	[X] Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	[X] EQ Trim Table, “Sets the EQ input level,” on page 323	0...100
d	[X] Pre LEQ Gain [dB] Table, “Sets the gain of Low EQ,” on page 323	–15...+15dB
	Pre HEQ Gain [dB] Table, “Sets the gain of High EQ,” on page 323	–15...+15dB
e	[L] Ratio Sets the signal compression ratio	1.0:1...50.0:1, Inf:1 Fx:003
f	[L] Threshold [dB] Sets the level above which the compressor is applied	–40...0dB Fx:003
g	[L] Attack Sets the attack time	1...100 Fx:003
	Release Sets the release time	1...100 Fx:003
h	[L] Gain Adjust [dB] Sets the limiter output gain	–Inf, –38...+24dB Fx:003
i	Routing Switches the order of the exciter and limiter connection XCT→LMT, LMT→XCT	
j	Wet/Dry Table, “Sets the balance between the effect and dry sounds,” on page 323 D <sup>mod</sup>	Dry, 1:99...99:1, Wet
	Src Table, “Selects the modulation source of the effect balance,” on page 323	Off...Tempo
	Amt Table, “Sets the modulation amount of the effect balance,” on page 323	–100...+100

## 076: Exciter - Cho/Fng (Exciter – Chorus/Flanger)

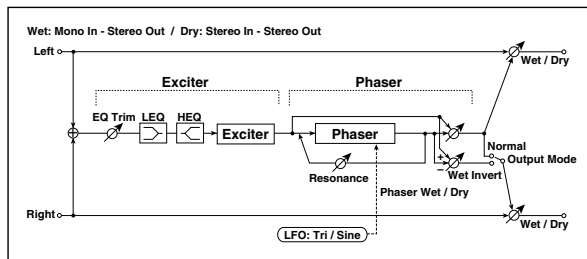
This effect combines a mono-type limiter and a chorus/flanger.



a	[X] Exciter Blend Sets the intensity (depth) of the Exciter effect	–100...+100 Fx:011
b	[X] Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	[X] EQ Trim Table, “Sets the EQ input level,” on page 323	0...100
d	[X] Pre LEQ Gain [dB] Table, “Sets the gain of Low EQ,” on page 323	–15...+15dB
	Pre HEQ Gain [dB] Table, “Sets the gain of High EQ,” on page 323	–15...+15dB
e	[F] Delay Time [msec] Sets the delay time	0.0...50.0msec
f	[F] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
g	[F] Depth Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	–100...+100 Fx:020
h	[F] Cho/Fng Wet/Dry Sets the effect balance of the chorus/flanger D <sup>mod</sup>	–Wet...–2:98, Dry, 2:98...Wet Fx:010, 020
	Output Mode Selects the output mode for the chorus/flanger	Normal, Wet Invert Fx:060
i	Wet/Dry Table, “Sets the balance between the effect and dry sounds,” on page 323 D <sup>mod</sup>	Dry, 1:99...99:1, Wet
	Src Table, “Selects the modulation source of the effect balance,” on page 323	Off...Tempo
	Amt Table, “Sets the modulation amount of the effect balance,” on page 323	–100...+100

## 077: Exciter - Phaser (Exciter – Phaser)

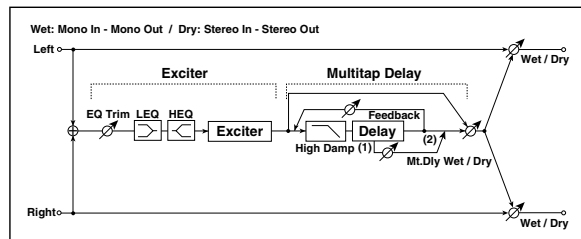
This effect combines a mono-type limiter and a phaser.



a	[X] Exciter Blend Sets the intensity (depth) of the Exciter effect	–100...+100 Fx:011
b	[X] Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	[X] EQ Trim Table , “Sets the EQ input level,” on page 323	0...100
d	[X] Pre LEQ Gain [dB] Table , “Sets the gain of Low EQ,” on page 323	–15...+15dB
	Pre HEQ Gain [dB] Table , “Sets the gain of High EQ,” on page 323	–15...+15dB
e	[P] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
f	[P] Manual Sets the frequency to which the effect is applied	0...100
g	[P] Depth Sets the depth of LFO modulation	0...100
	Resonance Sets the resonance amount	–100...+100 Fx:023
h	[P] Phaser Wet/Dry Sets the phaser effect balance	–Wet...–2:98, Dry, 2:98...Wet Fx:010, 023
	Output Mode Selects the phaser output mode	Normal, Wet Invert Fx:060
i	Wet/Dry Table , “Sets the balance between the effect and dry sounds,” on page 323 <b>D<sup>mod</sup></b>	Dry, 1:99...99:1, Wet
	Src Table , “Selects the modulation source of the effect balance,” on page 323	Off...Tempo
	Amt Table , “Sets the modulation amount of the effect balance,” on page 323	–100...+100

## 078: Exciter - Mt. Delay (Exciter – Multitap Delay)

This effect combines a mono-type exciter and a multitap delay.

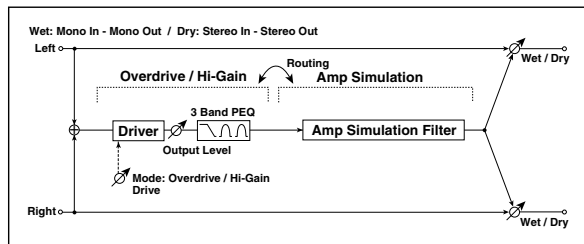


a	[X] Exciter Blend Sets the intensity (depth) of the Exciter effect	–100...+100 Fx:011
b	[X] Emphatic Point Sets the frequency range to be emphasized	0...70 Fx:011
c	[X] EQ Trim Table , “Sets the EQ input level,” on page 323	0...100
d	[X] Pre LEQ Gain [dB] Table , “Sets the gain of Low EQ,” on page 323	–15...+15dB
	Pre HEQ Gain [dB] Table , “Sets the gain of High EQ,” on page 323	–15...+15dB
e	[D] Tap1 Time [msec] Sets the Tap1 delay time	0...680msec
	Tap1 Level Sets the Tap1 output level	0...100 Fx:045
f	[D] Tap2 Time [msec] Sets the Tap2 delay time	0...680msec
	Feedback (Tap2) Sets the Tap2 feedback amount	–100...+100
g	[D] High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
h	[D] Mt.Delay Wet/Dry Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
i	Wet/Dry Table , “Sets the balance between the effect and dry sounds,” on page 323 <b>D<sup>mod</sup></b>	Dry, 1:99...99:1, Wet
	Src Table , “Selects the modulation source of the effect balance,” on page 323	Off...Tempo
	Amt Table , “Sets the modulation amount of the effect balance,” on page 323	–100...+100



## 079: OD/HG - Amp Sim (Overdrive/Hi.Gain – Amp Simulation)

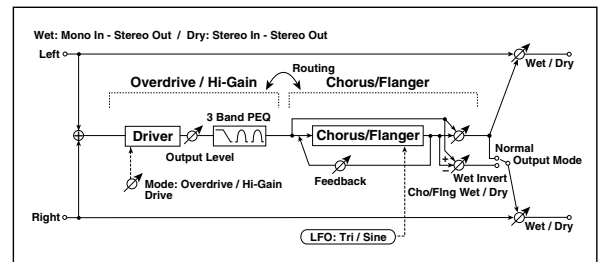
This effect combines a mono-type overdrive/high-gain distortion and an amp simulation. You can change the order of the effect connection.



a	[O] Drive Mode Switches between overdrive and high-gain distortion	Overdrive, Hi-Gain
	Drive Sets the degree of distortion	1...100 Fx:006
b	[O] Output Level Sets the overdrive output level	0...50 Fx:006, D <sup>mod</sup>
	Src Selects the modulation source for the overdrive output level	Off...Tempo
	Amt Sets the modulation amount of the overdrive output level	-50...+50
c	[O] Low Cutoff [Hz] Sets the center frequency for Low EQ (shelving type)	20...1.00kHz
	Gain [dB] Table, "Sets the gain of Low EQ," on page 323	-18...+18dB
d	[O] Mid1 Cutoff [Hz] Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.0kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Mid/High EQ 1	-18...+18dB
e	[O] Mid2 Cutoff [Hz] Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.0kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Mid/High EQ 2	-18...+18dB
f	[A] Amplifier Type Selects the type of guitar amplifier	Solid State, British (EL84), American (6L6)
g	Routing Switches the order of the overdrive and amp simulation connection	OD→AMP, AMP→OD
h	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323 D <sup>mod</sup>	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 080: OD/HG - Cho/Flng (Overdrive/Hi.Gain – Chorus/Flanger)

This effect combines a mono-type overdrive/high-gain distortion and a chorus/flanger. You can change the order of the effect connection.

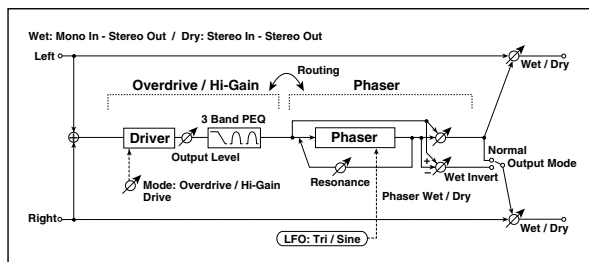


a	[O] Drive Mode Switches between overdrive and high-gain distortion	Overdrive, Hi-Gain
	Drive Sets the degree of distortion	1...100 Fx:006
b	[O] Output Level Sets the overdrive output level	0...50 Fx:006, D <sup>mod</sup>
	Src Selects the modulation source for the overdrive output level	Off...Tempo
	Amt Sets the modulation amount of the overdrive output level	-50...+50
c	[O] Low Cutoff [Hz] Sets the center frequency for Low EQ (shelving type)	20...1.00kHz
	Gain [dB] Table, "Sets the gain of Low EQ," on page 323	-18...+18dB
d	[O] Mid1 Cutoff [Hz] Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.0kHz
	Q Sets the band width of Mid/High EQ 1	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Mid/High EQ 1	-18...+18dB
e	[O] Mid2 Cutoff [Hz] Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.0kHz
	Q Sets the band width of Mid/High EQ 2	0.5...10.0 Fx:006
	Gain [dB] Sets the gain of Mid/High EQ 2	-18...+18dB
f	[F] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
g	[F] Delay Time [msec] Sets the delay time	0.0...50.0msec
	Depth Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	-100...+100 Fx:020
h	[F] Cho/Flng Wet/Dry Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
	Output Mode Selects the output mode for the chorus/flanger	Normal, Wet Invert Fx:067
i	Routing Switches the order of the overdrive and chorus/flanger connection	OD → FLNG, FLNG → OD Fx:067
j	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323 D <sup>mod</sup>	Dry, 1:99...99:1, Wet
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 081: OD/HG - Phaser

### (Overdrive/Hi.Gain – Phaser)

This effect combines a mono-type overdrive/high-gain distortion and a phaser. You can change the order of the effect connection.

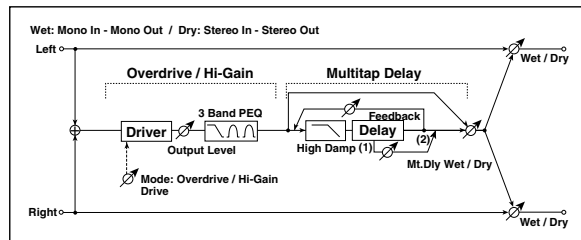


a	[O] Drive Mode Switches between overdrive and high-gain distortion	Overdrive, Hi-Gain	
	Drive Sets the degree of distortion	1...100	Fx:006
b	[O] Output Level Sets the overdrive output level	0...50	Fx:006, D <sup>mod</sup>
	Src Selects the modulation source for the overdrive output level	Off...Tempo	
	Amt Sets the modulation amount of the overdrive output level	-50...+50	
c	[O] Low Cutoff [Hz] Sets the center frequency for Low EQ (shelving type)	20...1.00kHz	
	Gain [dB] Table , "Sets the gain of Low EQ," on page 323	-18...+18dB	
	[O] Mid1 Cutoff [Hz] Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz	
d	Q Sets the band width of Mid/High EQ 1	0.5...10.0	Fx:006
	Gain [dB] Sets the gain of Mid/High EQ 1	-18...+18dB	
	[O] Mid2 Cutoff [Hz] Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz	
e	Q Sets the band width of Mid/High EQ 2	0.5...10.0	Fx:006
	Gain [dB] Sets the gain of Mid/High EQ 2	-18...+18dB	
f	[P] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz	
	LFO Waveform Selects LFO Waveform	Triangle, Sine	
g	[P] Manual Sets the frequency to which the effect is applied	0...100	
	Depth Sets the depth of LFO modulation	0...100	
	Resonance Sets the resonance amount	-100...+100	Fx:023
h	[P] Phaser Wet/Dry Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet	Fx:010, 023
	Output Mode Selects the phaser output mode	Normal, Wet Invert	Fx:067
i	Routing Switches the order of the overdrive and phaser connection	OD → PHS, PHS → OD	Fx:067
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet	D <sup>mod</sup>
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo	
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100	

## 082: OD/HG - Mt. Delay

### (Overdrive/Hi.Gain – Multitap Delay)

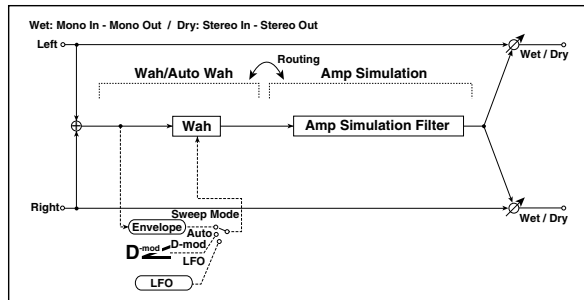
This effect combines a mono-type overdrive/high-gain distortion and a multitap delay.



a	[O] Drive Mode Switches between overdrive and high-gain distortion	Overdrive, Hi-Gain	
	Drive Sets the degree of distortion	1...100	Fx:006
b	[O] Output Level Sets the overdrive output level	0...50	Fx:006, D <sup>mod</sup>
	Src Selects the modulation source for the overdrive output level	Off...Tempo	
	Amt Sets the modulation amount of the overdrive output level	-50...+50	
c	[O] Low Cutoff [Hz] Sets the center frequency for Low EQ (shelving type)	20...1.00kHz	
	Gain [dB] Table , "Sets the gain of Low EQ," on page 323	-18...+18dB	
d	[O] Mid1 Cutoff [Hz] Sets the center frequency for Mid/High EQ 1 (peaking type)	300...10.00kHz	
	Q Sets the band width of Mid/High EQ 1	0.5...10.0	Fx:006
	Gain [dB] Sets the gain of Mid/High EQ 1	-18...+18dB	
e	[O] Mid2 Cutoff [Hz] Sets the center frequency for Mid/High EQ 2 (peaking type)	500...20.00kHz	
	Q Sets the band width of Mid/High EQ 2	0.5...10.0	Fx:006
	Gain [dB] Sets the gain of Mid/High EQ 2	-18...+18dB	
f	[D] Tap1 Time [msec] Sets the Tap1 delay time	0...680msec	
	Tap1 Level Sets the Tap1 output level	0...100	Fx:045
g	[D] Tap2 Time [msec] Sets the Tap2 delay time	0...680msec	
	Feedback Sets the Tap2 feedback amount	-100...+100	
h	[D] Mt.Delay Wet/Dry Sets the multitap delay effect balance	Dry, 2:98...98:2, Wet	
	High Damp [%] Sets the damping amount in the high range	0...100%	Fx:043
i	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet	D <sup>mod</sup>
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo	
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100	

## 083: Wah - Amp Sim (Wah/Auto Wah – Amp Simulation)

This effect combines a mono-type wah and an amp simulation. You can change the order of the effect connection.



a	[W] Frequency Bottom Sets the lower limit of the wah center frequency	0...100 Fx:009
	Frequency Top Sets the upper limit of the wah center frequency	0...100 Fx:009
b	[W] Sweep Mode Selects the control from auto-wah, modulation source, and LFO	Auto, D-mod, LFO Fx:009, D-mod
	Src Selects the modulation source for the wah when Sweep Mode=D-mod	Off...Tempo
c	[W] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
d	[W] Resonance Sets the resonance amount	0...100
	Low Pass Filter Switches the wah low pass filter on and off	Off, On
e	[A] Amplifier Type Selects the type of guitar amplifier	Solid State, British (EL84), American (6L6)
f	Routing Switches the order of the wah and amp simulation connection	WAH → AMP, AMP → WAH
g	Wet/Dry Table, "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet D-mod
	Src Table, "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

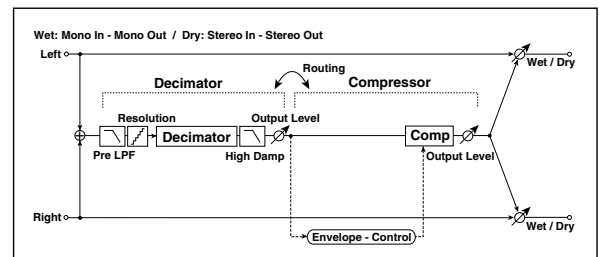
## 084: Decimator - Amp (Decimator – Amp Simulation)

This effect combines a mono-type decimator and an amp simulation. You can change the order of the effect connection.


a	[D] Pre LPFOff, On Turn the harmonic noise caused by lowered sampling on and off	Off, On Fx:014
	High Damp [%] Sets the ratio of high-range damping	0...100%
b	[D] Sampling Freq [Hz] (Sampling Frequency) Sets the sampling frequency	1.00k...48.00kHz
	Resolution Sets the data bit length	4...24 Fx:014
c	[D] Output Level Sets the decimator output level	0...100 Fx:014
d	[A] Amplifier Type Selects the type of guitar amplifier	Solid State, British (EL84), American (6L6)
e	RoutingDECI→AMP, AMP→DECI Switches the order of the wah and amp simulation connection	
f	Wet/DryDry, 1:99...99:1, Wet Table, "Sets the balance between the effect and dry sounds," on page 323	D-mod
	SrcOff...Tempo Table, "Selects the modulation source of the effect balance," on page 323	
	Amt Table, "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 085: Decimator - Comp (Decimator – Compressor)

This effect combines a mono-type decimator and a compressor. You can change the order of the effect connection.

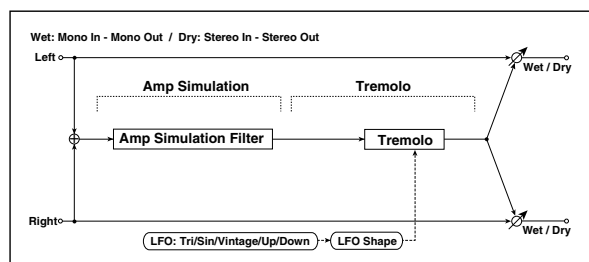



a	[D] Pre LPFOff, On Turn the harmonic noise caused by lowered sampling on and off	Off, On Fx:014
	High Damp [%] Sets the ratio of high-range damping	0...100%
b	[D] Sampling Freq [Hz] (Sampling Frequency) Sets the sampling frequency	1.00k...48.00kHz
	Resolution Sets the data bit length	4...24 Fx:014
c	[D] Output Level Sets the decimator output level	0...100 Fx:014
d	[C] Sensitivity Sets the sensitivity	1...100 Fx:002
	[C] Attack Table, "Sets the attack level," on page 323	1...100 Fx:002
	Output Level Sets the compressor output level	0...100 Fx:002
f	Routing Switches the order of the decimator and compressor connection	DECI→CMP, CMP→DECI

g	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 086: AmpSim - Tremolo (Amp Simulation – Tremolo)

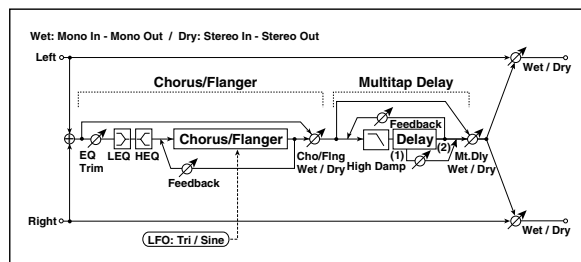
This effect combines a mono-type amp simulation and a tremolo.




a	[A] Amplifier Type Selects the type of guitar amplifier	Solid State, British (EL84), American (6L6)
b	[T] LFO Waveform Selects LFO Waveform	Triangle, Sine, Vintage, Up, Down Fx:032
	LFO Shape Determines how much the LFO waveform is changed	-100...+100 Fx:020
c	[T] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
d	[T] Depth Sets the depth of LFO modulation	0...100
e	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 087: Cho/Fing - Mt.Dly (Chorus/Flanger – Multitap Delay)

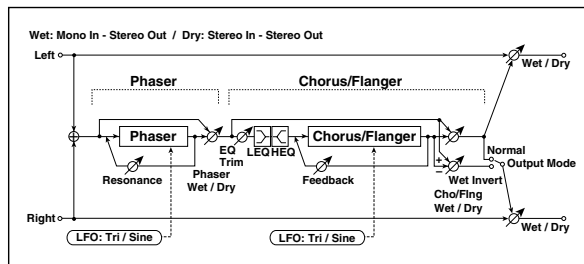
This effect combines a mono-type chorus/flanger and a multitap delay.



a	[F] Delay Time [msec] Sets the delay time	0.0...50.0msec
b	[F] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
c	[F] Depth Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	-100...+100 Fx:020
d	[F] EQ Trim Table , "Sets the EQ input level," on page 323	0...100
e	[F] Pre LEQ Gain [dB] Table , "Sets the gain of Low EQ," on page 323	-15...+15dB
	Pre HEQ Gain [dB] Table , "Sets the gain of High EQ," on page 323	-15...+15dB
f	[F] Cho/Fing Wet/Dry Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
g	[D] Tap1 Time [msec] Sets the Tap1 delay time	0...680msec
	Tap1 Level Sets the Tap1 output level	0...100 Fx:045
h	[D] Tap2 Time [msec] Sets the Tap2 delay time	0...680msec
	Feedback (Tap2) Sets the Tap2 feedback amount	-100...+100
i	[D] Mt.Delay Wet/Dry Sets the multitap delay effect balance	Dry, 1:99...99:1, Wet
	High Damp [%] Sets the damping amount in the high range	0...100% Fx:043
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323 	Dry, 1:99...99:1, Wet
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 088: Phaser - Cho/Flng (Phaser – Chorus/Flanger)

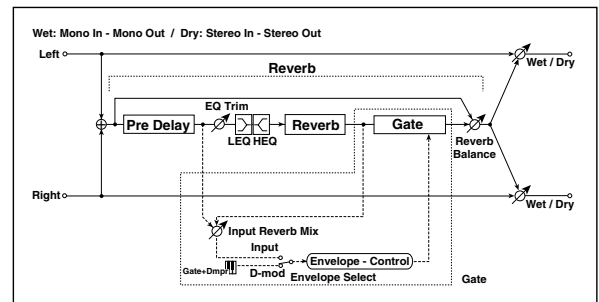
This effect combines a mono-type phaser and a chorus/flanger.



a	[P] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
b	[P] Manual Sets the frequency to which the effect is applied	0...100
	Depth Sets the depth of LFO modulation	0...100
	Resonance Sets the resonance amount	-100...+100 Fx:023
c	[P] Phaser Wet/Dry Sets the phaser effect balance	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 023
d	[F] LFO Frequency [Hz] Sets the LFO speed	0.02...20.00Hz
	LFO Waveform Selects LFO Waveform	Triangle, Sine
e	[F] Delay Time [msec] Sets the delay time	0.0...50.0msec
	Depth Sets the depth of LFO modulation	0...100
	Feedback Sets the feedback amount	-100...+100 Fx:020
f	[F] EQ Trim Table , "Sets the EQ input level," on page 323	0...100
g	[F] Pre LEQ Gain [dB] Table , "Sets the gain of Low EQ," on page 323	-15...+15dB
	Pre HEQ Gain [dB] Table , "Sets the gain of High EQ," on page 323	-15...+15dB
h	[F] Cho/Flng Wet/Dry Sets the effect balance of the chorus/flanger	-Wet...-2:98, Dry, 2:98...Wet Fx:010, 020
	Output Mode Selects the output mode for the chorus/flanger	Normal, Wet Invert Fx:060
i	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet D-mod
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

## 089: Reverb - Gate (Reverb – Gate)

This effect combines a mono-type reverb and a gate.



a	[R] Reverb Time [sec] Sets the reverberation time	0.1...10.0sec
	High Damp [%] Sets the damping amount in the high range	0...100%
b	[R] Pre Delay [msec] Sets the delay time of the reverb sound and gate control signal	0...200msec
c	[R] EQ Trim Table , "Sets the EQ input level," on page 323	0...100
d	[R] Pre LEQ Gain [dB] Table , "Sets the gain of Low EQ," on page 323	-15...+15dB
	Pre HEQ Gain [dB] Table , "Sets the gain of High EQ," on page 323	-15...+15dB
e	[R] Reverb Balance Sets the reverb effect balance	Dry, 1:99...99:1, Wet
f	[G] Envelope Select Switches between modulation source control and input signal control	D-mod, Input Fx:005
	Src Selects the modulation source that controls the gate when Envelope Select is set to D-mod	Off...Gate2+Dmpr Fx:005
g	[G] Input Reverb Mix Sets the balance between the dry and reverb sounds of the gate control signal.	Dry, 1:99...99:1, Wet Fx:005
	Threshold Sets the gate threshold level	0...100 Fx:005
h	[G] Polarity Switches between non-invert and invert of the gate on/off state	+, - Fx:005
i	[G] Attack Sets the attack time	1...100 Fx:005
	Release Sets the release time	1...100 Fx:005
j	Wet/Dry Table , "Sets the balance between the effect and dry sounds," on page 323	Dry, 1:99...99:1, Wet D-mod
	Src Table , "Selects the modulation source of the effect balance," on page 323	Off...Tempo
	Amt Table , "Sets the modulation amount of the effect balance," on page 323	-100...+100

**f: Envelope Select, f: Src, g: Input Reverb Mix, g: Threshold**

The "Envelope Select" parameter enables you to select whether turning the gate on and off is triggered by the input signal level or controlled directly by the modulation source. You can select from **Off** to **Gate2+Dmpr** for the Src parameter to specify the modulation source.

When "Envelope Select" is set to **Input**, the gate is controlled by the level of signals that are the combination of the dry sound and the reverb sound. When the signal level exceeds the threshold, the gate opens and the reverb sound is output.

Normally, set "Input Reverb Mix" to **Dry** (the gate is controlled only by the dry sound). If you wish to extend the gate time, set the "Input Reverb Mix" value higher and adjust the "Threshold" value.

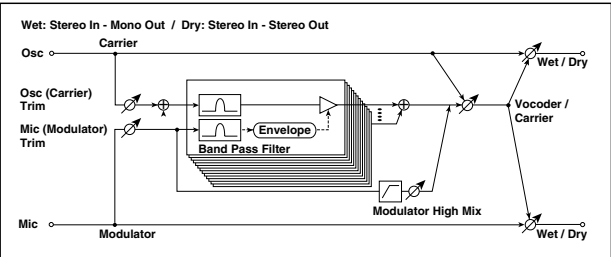
090: Vocoder

This effect can be assigned only to the D FX processor (usually, the modulating effect for the Keyboard tracks). When this effect is selected, the microphone input no longer goes to the Voice Processor, but is routed to the D FX processor.

When programming the Vocoder, you can use one of the specially programmed “Vocoder” Performances (in the SFX bank) as templates.

Before using the Vocoder, you must connect a microphone and, set the 1/MIC selector to the MIC position.

This effect applies the character of the microphone signal (Modulator) to the track’s oscillator signal input (Carrier). Therefore, the voice can modulate one of the sounds of the Pa1X. A common use of this effect is to produce the sound of various instruments by inputting a voice to the Modulator via a microphone. A special effect is also achieved by using rhythm or effect sounds. Strings or distortion guitar sounds with a lot of harmonics are suitable as a Carrier.



a	Osc (Carrier) Trim Sets the input level of the oscillator (Carrier)	0...100
b	Mic (Modulator) Trim Sets the input level of the microphone (Modulator)	0...100
c	Formant Shift Sets the height of the frequency for the vocoder effect	-2...+2
d	Response Sets the speed of the response to the modulator input	0...100
g	Low Gain [dB] Sets the low-range output level of the vocoder	-12...+12
	High Gain [dB] Sets the high-range output level of the vocoder	-12...+12
f	Modulator Mix Sets the high-range output level of the modulator	0...100
h	Vocoder/Carrier Carrier, 1:99...99:1, Vocoder Sets the balance between the vocoder output and the Carrier	
i	Wet/Dry Sets the balance between the effect and dry sounds	Dry, 1:99...99:1, Wet 
	Src Selects the modulation source of the effect balance	Off...Tempo
	Amt Sets the modulation amount of the effect balance	-100...+100

c: Formant Shift

By offsetting the Carrier filter, you can adjust the height of the frequency range to which the vocoder effect is applied. The tonal quality will change significantly.

f: Modulator Mix

This parameter sets the high-range output level of the right channel sound (Modulator). If the modulator is a human voice, it will make the words more clear.

The “Vocoder/Carrier” parameter sets the balance between the vocoder sound and the left channel sound (Carrier). The “Wet/Dry” parameter sets the balance between the effect and dry sound.

If you wish to change the intensity of the vocoder effect, select **Wet** for “Wet/Dry”, and adjust the balance using the “Vocoder/Carrier” parameter.

**Note:** When you assign the Vocoder effect to the D FX processor, the direct input can no longer be heard. The input signal goes entirely to the FX processor. To listen to the direct signal, you can still use the “Wet/Dry” parameter to increase the level of the direct signal (Dry).

Please remember to set the tracks Pan value to Off, and the Send value to 127.

You can add reverb to the Vocoder, by way of the “D to C” parameter.

**Hint:** To create a new Song making use of the Vocoder, enter the Sequencer-Backing Sequence mode with a Performance that includes the Vocoder effect.



# Assignable parameters

## List of Footswitch and EC5 functions

The following functions can be assigned to a footswitch or Korg EC5's switch pedal.

Function	Meaning
Off	No function assigned
Style Start/Stop	Same functions of the control panel buttons with the same name
Play Stop Seq1	
Play Stop Seq2	
Pause Seq1	
Pause Seq2	
Synchro Start	
Synchro Stop	
Tap Tempo/Reset	
Tempo Lock	
Ritardando	Progressively increases the Tempo value
Accelerando	Progressively decreases the Tempo value
Tempo Up	Increases the Tempo value
Tempo Down	Decreases the Tempo value
Intro 1	Same functions of the control panel buttons with the same name
Intro 2	
Intro 3 / Count In	
Ending 1	
Ending 2	
Fill 1	
Fill 2	
Fill 3 / Break	
Variation 1	
Variation 2	
Variation 3	
Variation 4	
Variation Up	Selects the next Variation
Variation Down	Selects the previous Variation
Fade In/Out	Same functions of the control panel buttons with the same name
Memory	
Bass Inversion	
Manual Bass	Selects the next Style
Style Up	
Style Down	Selects the previous Style
Single Touch	Same functions of the control panel buttons with the same name
STS1	
STS2	
STS3	
STS4	
STS Up	Selects the next STS
STS Down	Selects the previous STS
Perform. Up	Selects the next Performance
Perform. Down	Selects the previous Performance

Function	Meaning
Style Change	Style number
Sound Up	Selects the next Sound
Sound Down	Selects the previous Sound
Transpose Down	Same functions of the control panel buttons with the same name
Transpose Up	
Upper Octave Up	
Upper Octave Down	
Punch In/Out	Turns Punch Recording on/off
FX A Mute	
FX B Mute	
FX C Mute	
FX D Mute	
FX All Mute	
Style-Upper1 Mute	
Style-Upper2 Mute	
Style-Upper3 Mute	
Style-Lower Mute	
Style-Drum Mute	
Style-Percussion Mute	
Style-Bass Mute	
Style-Acc1 Mute	
Style-Acc2 Mute	
Style-Acc3 Mute	
Style-Acc4 Mute	
Style-Acc5 Mute	
Style-Acc1-5 Mute	
Song-Melody Mute	Mute of Song track 4 (usually, the Melody track)
Song-Drum&Bass Mode	Mute of all tracks, apart for track 2 (usually Bass) and 10 (usually Drum)
Solo Selected Track	
Damper Pedal	
Soft Pedal	
Sostenuto Pedal	
Bass&Lower Backing	Mutes all tracks, except for Bass and Lower
Ensemble On/Off	
QuarterTone	Turns Quarter Tone on/off
Chord Latch	Holds the recognized chord until the pedal is released
Chord Latch + Damper	Holds the recognized chord until the pedal is released, and sustains the tracks where the Damper has been turned on
Glide	When the pedal is pressed, affected notes on Upper tracks are bent down, according to settings for the Pitch Bend on the same tracks. When the pedal is released, notes return to the normal pitch, at the speed defined by the "Time" parameter (see "Glide" on page 225).
Audio In Mute	

Function	Meaning
Microphone Talkback	Turns all Voice Processor effects down, to let you address the audience. See "Voice Processor Setup: Talk" on page 238.
Voice Proc. Sw. A Tgl	Toggle-style switch controls assigned to the Voice Processor. Press once to activate , a second time to deactivate. See "Voice Processor Preset: Controls" on page 246, for information on the assigned Voice Processor parameters.
Voice Proc. Sw. B Tgl	
Voice Proc. Sw. C Tgl	
Voice Proc. Sw. D Tgl	
Voice Proc. Sw. A Mom	Momentary switch controls assigned to the Voice Processor. Press to activated, release to deactivate. See "Voice Processor Preset: Controls" on page 246, for information on the assigned Voice Processor parameters.
Voice Proc. Sw. B Mom	
Voice Proc. Sw. C Mom	
Voice Proc. Sw. D Mom	
FX CC12 Switch	Standard FX controllers
FX CC13 Switch	
Rotary Spkr On/Off	
Rotary Spkr Fast/Slow	
Drawbar Perc On/Off	
Drawbar Noise On/Off	
Text Page Up	These options let you move to the previous or next page, when reading a text file loaded with a Song (see "Text files loaded with Standard MIDI Files and MP3 files" on page 142) or Song Book entry (see "Lyrics as text files associated to a SongBook entry" on page 159).
Text Page Down	
SongBook Next	Moves to the next SongBook entry in the selected Custom List.
Pad 1	Same functions of the control panel buttons with the same name
Pad 2	
Pad 3	
Pad 4	
Pad Stop	

## List of Assignable Pedal and Assignable Sliders functions

The following functions can be assigned to a continuous pedal or to the Assignable Sliders.

Function	Meaning
Off	No function assigned
Master Volume	
Acc. Volume	Accompaniment Volume
Keyboard Expression	
Joystick +X	Joystick right
Joystick -X	Joystick left
Joystick +Y	Joystick forward
Joystick -Y	Joystick backward
Upper VDF Cutoff	Filter cutoff (for Sounds assigned to the Upper tracks)
Upper VDF Resonance	Filter resonance (for Sounds assigned to the Upper tracks)
Voice Proc. Cnt.Ctl A	Continuous controls assigned to the Voice Processor. See "Voice Processor Preset: Controls" on page 221, for information on the assigned Voice Processor parameters.
Voice Proc. Cnt.Ctl B	
Voice Proc. Cnt.Ctl C	
Voice Proc. Cnt.Ctl D	
Mic In Volume	
FX CC12 Ctl	Standard FX controllers
FX CC13 Ctl	
Max CD Volume [%]	
Max MP3 Volume [%]	

## List of Assignable Switches functions

The following functions can be assigned to the Assignable Switches.

Function	Meaning
Off	No function assigned
Ritardando	Progressively increases the Tempo value
Accelerando	Progressively decreases the Tempo value
Style Up	Selects the next Style
Style Down	Selects the previous Style
Perform. Up	Selects the next Performance
Perform. Down	Selects the previous Performance
FX A Mute	
FX B Mute	
FX C Mute	
FX D Mute	
FX All Mute	
Style-Upper1 Mute	
Style-Upper2 Mute	
Style-Upper3 Mute	
Style-Lower Mute	
Style-Drum Mute	
Style-Percussion Mute	
Style-Bass Mute	
Style-Acc1 Mute	
Style-Acc2 Mute	
Style-Acc3 Mute	
Style-Acc4 Mute	
Style-Acc5 Mute	
Style-Acc1-5 Mute	
Song-Melody Mute	Mute of Song track 4 (usually, the Melody track)

Function	Meaning
Song-Drum&Bass Mode	Mute of all tracks, apart for track 2 (usually Bass) and 10 (usually Drum)
Solo Selected Track	
Bass&Lower Backing	Mutes all tracks, except for the Bass and Lower tracks
QuarterTone	Turns Quarter Tone on/off
Audio In Mute	
Microphone Talkback	Turns all Voice Processor effects down, to let you address the audience. See "Voice Processor Setup: Talk" on page 238.
Voice Proc. Sw. A Tgl	Toggle-style switch controls assigned to the Voice Processor. Press once to activate, a second time to deactivate. See "Voice Processor Preset: Controls" on page 246, for information on the assigned Voice Processor parameters.
Voice Proc. Sw. B Tgl	
Voice Proc. Sw. C Tgl	
Voice Proc. Sw. D Tgl	
Voice Proc. Sw. A Mom	Momentary switch controls assigned to the Voice Processor. Press to activate, release to deactivate. See "Voice Processor Preset: Controls" on page 246, for information on the assigned Voice Processor parameters.
Voice Proc. Sw. B Mom	
Voice Proc. Sw. C Mom	
Voice Proc. Sw. D Mom	
FX CC12 Switch	Standard FX controllers
FX CC13 Switch	
Rotary Spkr On/Off	
Rotary Spkr Fast/Slow	
Drawbar Perc On/Off	
Drawbar Noise On/Off	
Text Page Up	These options let you move to the previous or next page, when reading a text file loaded with a Song (see "Text files loaded with Standard MIDI Files and MP3 files" on page 142) or Song Book entry (see "Lyrics as text files associated to a SongBook entry" on page 159).
Text Page Down	
SongBook Next	Moves to the next SongBook entry in the selected Custom List.

## List of functions assignable to Voice Processor's Continuous Controls

The following Voice Processor functions can be assigned to a continuous pedal or to the Assignable Slider, by using one of the four corresponding <Cnt> "meta-functions" available on the "Voice Processor Preset: Controls" page of the Global mode (see "Voice Processor Preset: Controls").

Lead Voice Level	Voice 3 Level	Thicken Level	Lead to Delay
Harmony Output Level	Voice 3 Gender	Thicken Detune	Harmony to Delay
Voice 1 Level	Voice 4 Level	Thicken Spread	Delay to Reverb
Voice 1 Gender	Voice 4 Gender	Vibrato Depth	Reverb/Delay Balance
Voice 2 Level	Harmony Smooth	Lead to Reverb	Effect Level
Voice 2 Gender	Human Style Amount	Harmony to Reverb	Voice Modeling Level

## List of functions assignable to Voice Processor's Switch Controls

The following Voice Processor functions can be assigned to a footswitch, to an Assignable Switch, or to an EC5 switch pedal, by using one of the four corresponding <Sw> "meta-functions" available on the "Voice Processor Preset: Controls" page of the Global mode (see "Voice Processor Preset: Controls").

Lead On/Off	Thicken On/Off	Voice 1 On/Off	Voice 4 On/Off
Harm/Model On/Off	Latch On/Off	Voice 2 On/Off	Harmony/Modeling Switch
Effect On/Off	Harmony Hold	Voice 3 On/Off	Pitch Correction On/Off

## Scales

The following is a list of scales (or tunings) you can select in various operating modes.

Equal	Equal tuning, the standard scale for modern Western music. It is made of 12 identical semi-tones.
Pure Major	Major chords in the selected key are perfectly tuned.
Pure Minor	Minor chords in the selected key are perfected tuned.
Arabic	An arabic scale, using quarters of tone. Set the Key parameter as follow: C - for the “rast C/bayati D” scale D - for the “rast D/bayati E” scale F - for the “rast F/bayati G” scale G - for the “rast G/bayati A” scale A# - for the “rast Bb/bayati C” scale
Pythagorean	Pythagorean scale, based on the music theories of the great Greek philosopher and mathematician. It is most suitable for melodies.
Werckmeister	Late Baroque/Classic Age scale. Very suitable for XVIII Century music.
Kirnberger	Harpsichord scale, very common during the XVIII Century.
Slendro	Scale of the Indonesian Gamelan. The octave is divided in 5 notes (C, D, F, G, A). The remaining notes are tuned as in the Equal tuning.
Pelog	Scale of the Indonesian Gamelan. The octave is divided in 7 notes (all white keys, when Key is = C). The black keys are tuned as in the Equal tuning.
Stretch	Simulates the “stretched” tuning of an acoustic piano. Basically an equal tuning, the lowest notes are slightly lower, while the highest notes are slightly higher than the standard.
User	User scale, i.e. scale programmed by the user for the Style Play, Backing Sequence and Song Play modes. The user scale can be saved to a Performance, Style Performance, STS or Song. You can't select a User scale in Global mode.

## MIDI Controller

The following is a table including all Control Change messages, and their effect on various Pa1X functions.

CC#	CC Name	Pa1X Function
0	Bank Select	Program selection
1	Mod1 (Y+)	Joystick forward
2	Mod2 (Y-)	Joystick backward
3	Undef. ctl	
4	Foot ctl	
5	Port.time	
6	Data ent.	
7	Volume	Track volume
8	Balance	
9	Undef. ctl	
10	Pan Pot	Track panning
11	Expression	Expression
12	Fx Ctl 1	
13	Fx Ctl 2	
14-15	Undef. ctl	
16	Gen.pc.1	
17	Gen.pc.2	
18	Slider	
19	Gen.pc.4	
20-31	Undef. ctl	
Control Change #32-63 are the LSB (Least Significant Byte) of Control Change #0-31, i.e. the MSB (Most Significant Byte), and are changed according to their MSB counterparts.		
64	Damper	Damper pedal
65	Portamento	
66	Sostenuto	Sostenuto pedal
67	Soft pedal	Soft pedal
68	Legato	
69	Hold 2	
70	Sustin level	
71	F.Res.Hp	Filter resonance
72	Release	Release time
73	Attack	Attack time
74	F.CutOff	Filter cutoff (Brilliance)
75	Decay T.	Decay time
76	Lfo1 Sp.	Vibrato speed
77	Lfo1 Dpt	Vibrato depth
78	Lfo1 Dly	Vibrato initial delay
79	FilterEg	
80	Gen.pc.5	
81	Gen.pc.6	
82	Gen.pc.7	
83	Gen.pc.8	
84	Port.ctl	
85-90	Undef. ctl	
91	Fx A/C	A/C (reverb) send level
92	Fx 2 ctl	
93	Fx B/D	B/D (modul.) send level

CC#	CC Name	Pa1X Function
94	Fx 4 ctl	
95	Fx 5 ctl	
96	Data Inc	
97	Data Dec	
98	NRPN Lsb	See table below <sup>(*)</sup>
99	NRPN Msb*	See table below <sup>(*)</sup>
100	RPN Lsb	
101	RPN Msb	
102-119	Undefined ctl	
120	AllSOff	
121	Res Ctl	Reset All Controllers
122	LocalCt	
123	NoteOff	
124	OmniOff	
125	Omni On	
126	Mono On	
127	Poly On	

(\*) The following NRPN messages are recognized by the Pa1X:

NRPN	CC#99 (MSB)	CC#98 (LSB)	CC#06 (Data Entry)
Vibrato Rate	1	8	0...127 <sup>(a)</sup>
Vibrato Depth	1	9	0...127 <sup>(a)</sup>
Vibrato Decay	1	10	0...127 <sup>(a)</sup>
Filter Cutoff	1	32	0...127 <sup>(a)</sup>
Resonance	1	33	0...127 <sup>(a)</sup>
EG Attack Time	1	99	0...127 <sup>(a)</sup>
EG Decay Time	1	100	0...127 <sup>(a)</sup>
EG Release Time	1	102	0...127 <sup>(a)</sup>
Drum Filter Cutoff	20	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum Filter Resonance	21	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum EG Attack Time	22	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum EG Decay Time	23	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum Coarse Tune	24	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum Fine Tune	25	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum Volume	26	dd <sup>(b)</sup>	0...127
Drum Panpot	28	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum Rev Send (FX 1)	29	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>
Drum Mod Send (FX 2)	30	dd <sup>(b)</sup>	0...127 <sup>(a)</sup>

(a). 64 = No change to the original parameter's value

(b). dd = Drum Instrument No. 0...127 (C0...C8)

**Note:** These controls are reset when stopping the Song, or selecting a new Song.



## MIDI Implementation Chart

KORG Pa1X  
OS Version 2.0 - Sept. 20, 2004

Function		Transmitted	Recognized	Remarks
Basic Channel	Default	1-16	1-16	Memorized
	Changed	1-16	1-16	
Mode	Default		3	
	Messages	X	X	
	Altered	*****		
Note Number:		0-127	0-127	
	True Voice	*****	0-127	
Velocity	Note On	O 9n, V=1-127	O 9n, V=1-127	
	Note Off	X V=64	X	
Aftertouch	Poly (Key)	O	O	Sequencer data only *A
	Mono (Channel)	O	O	*A
Pitch Bend		O	O	
Control Change	0, 32	O	O	Bank Select (MSB, LSB) *A
	1, 2	O	O	Modulations *A
	6	O	O	Data Entry MSB *A
	38	X	O	Data Entry LSB *A
	7, 11	O	O	Volume, Expression *A
	10, 91, 93	O	O	Panpot, A/C FX Send, B/D FX Send *A
	64, 66, 67	O	O	Damper, Sostenuto, Soft *A
	65, 5	O	O	Portamento On/Off, Portamento Time *A
	71, 72, 73	O	O	Harmonic Content, EG time (Release, Attack) *A
	74, 75	O	O	Brightness, Decay Time *A
	76, 77, 78	O	O	Vibrato Rate, Depth, Delay *A
	98, 99	O	O	NRPN (LSB, MSB) *A, 1
	100, 101	O	O	RPN (LSB, MSB) *A, 2
	120, 121	X	O	All sounds off, Reset all controllers *A
Program Change		O 0-127	O 0-127	*A
	True #	*****	0-127	
System Exclusive		X	X	*3
System Common	Song Position	X	X	
	Song Select	X	X	
	Tune	X	X	
System Real Time	Clock	O	O	*4
	Commands	O	O	*4
Aux Messages	Local On/Off	X	X	
	All Notes Off	X	O (123-127)	
	Active Sense	O	O	
	Reset	X	X	
Notes		*A: Sent and received when MIDI Filters In and Out are set to Off in Global mode. *1: Drawbars settings, Sound parameters, Selection of SongBook entries. *2: LSB, MSB = 00,00: Pitch Bend range, =01,00: Fine Tune, =02,00: Course Tune. *3: Includes Inquiry and Master Volume messages, FX settings, Quarter Tone settings. *4: Transmitted only when the Clock Send parameter (Global mode) is set to on.		

Mode 1:OMNI ON, POLY  
Mode 3:OMNI OFF, POLYMode 2:OMNI ON, MONO  
Mode 4:OMNI OFF, MONOO: Yes  
X: No

# Parameters

## Control panel and operating mode parameters

The following table shows the parameters you can save to memory when selecting one of the “Write” commands from the Style Play, Song Play, Sequencer, Global and Disk mode page menu, as well as when pressing the “Write” button in the SongBook > Book Edit 1 page.

**Legend:** Perf (Performance), STS (Style’s STS), Sty Perf (Style Performance), STS SB (SongBook’s STS), SB (SongBook Entry), Sty Stp (Style Play Setup), Sng Stp (Song Play Setup), Glb Stp (Global Setup), Mid Stp (MIDI Setup), VP Stp (Voice Processor Setup), VP Tlk (Voice Processor Talk Setup), VP Pst (Voice Processor Preset), Dsk Stp (Disk Setup).

Page	Parameter	Perf	STS	Sty Perf	STS SB	SB	Global									Note		
							Sty Stp	Sng Stp	Seq Stp	Glb Stp	Mid Stp	VP Stp	VP Tlk	VP Pst	Dsk Stp			
Control Panel																		
	Master Volume (Slider)	Analog control																
	Acc./Seq Volume (Slider)																St/Sg	
	Assign. Slider Functions									√								
	Slider Mode	√	√		√											L5	G	
	Drawbar Settings	√	√	√	√	√												
	Selected Operating Mode	Style Play selected at startup																
	Memory					√												
	Bass Inversion	√	√		√												L7	
	Manual Bass	√	√		√												L10	
	Fade In/Out																	
	Selected Style Number	√																
	Single Touch	Set to “On” at startup																
	Tap Tempo / Reset																	
	Synchro Start/Stop						√											
	Start/Stop																	
	Style Element (Intro 1-3, Ending 1/2, Var 1-4, Fill 1-3)	√		√		√												G
	Sequencer 1/2 Transport																	
	Balance (Slider)																	
	Selected STS	STS#1 selected when selecting a Style (with SINGLE TOUCH = On)																
	Tempo	√		√		√												G
	Tempo Lock	Set to “Off” at startup																
	Display Hold	Set to “Off” at startup																
	Chord Scanning	√	√		√													G
	Keyboard Mode	√	√		√													
	Style Change	Set to “Off” at startup																
	Perf./Sound Select						√											
	Selected Performance	Performance 1-1 selected at startup																
	Selected Sound	K/St	K	St	K	St												T
	SongBook																	
	Ensemble On/Off	√	√		√													
	Assign. Switch Functions	√	√		√												L4	G
	Pads	√	√		√												L3	
	Master Transpose	√		√		√											L1	
	Upper Octave Transpose	U	U		U													T
Style Play Mode																		
Main (Kbd Trk)	Selected Style	√				√											G	
	Meter	Saved in the Style pattern																
	Tempo	√		√		√												
	Selected Perf/STS																G	
	Selected Songs																	
	Keyboard Sounds	K	K		K													
	Upper Trk Octave Transp.	U	U		U													
Main (Sty Trk)	Master Transpose	√		√		√										L1	G	
	Original Style Sounds	√		√		√											SG	
	Style Trk Octave Transp.	St		St		St												
Main • Volume	Style Trk Sounds	St		St		St	Selected when “Original Style Sounds” is set to “Off”											T
	Track Volume	K/St	K	St	K	St												
Main • STS Name	Play/Mute	K/St	K	St	K	St										L8		
	Selected STS	STS#1 selected when selecting a Style (with SINGLE TOUCH = On)																
Main • Mic	Harmony/Modeling													√				
	Lead													√				
	V1-V4													√				
	Pitch													√				
	Thicken													√				
	Effects													√				
	Talk												√					
	Play/Mute																	
	VP Preset	√	√		√												L2	
VP Lock									√									

Page	Parameter	Perf	STS	Sty Perf	STS SB	SB	Global										Note
							Sty Stp	Sng Stp	Seq Stp	Glb Stp	Mid Stp	VP Stp	VP Tlk	VP Pst	Dsk Stp		
Main • Sub-Scale	Scale	✓	✓		✓											L14	G
	Key	✓	✓		✓											L14	
	Quarter Tone															L14	
	Detuned Notes	✓	✓		✓											L14	
	Scale Lock									✓							
Main • Pad	Pad Assignment	✓	✓		✓											L3	G
	Pad lock									✓							
Main • Split	Split Point	✓	✓		✓											L6	G
	Chord Recogn. Mode	✓	✓		✓											L11	
	Split Point Lock									✓							
Mix/Tun • Volume/Pan	Style Preferences Lock									✓							G
	Upper Volume Link						✓										
	Pan	K/St	K	St	K	St											
	Volume	K/St	K	St	K	St											
Mix/Tun • FX Send	Play/Mute	K/St	K	St	K	St										L8	T
	Send Level	K/St	K	St	K	St											
Mix/Tun • Tuning	Play/Mute	K/St	K	St	K	St										L8	T
	PB Sensitivity	K/St	K	St	K	St											
	Trk Octave Transpose	K/St	K	St	K	St											
	Detune	K/St	K	St	K	St											
Mix/Tun • Sub-Scale	Play/Mute	K/St	K	St	K	St										L8	G
	Scale	✓	✓		✓											L14	
	Key	✓	✓		✓											L14	
	Quarter Tone															L14	
	Detuned Notes	✓	✓		✓												
Effects • FX Select	Scale Lock									✓							G
	FX (A-B)	✓		✓		✓											
	FX (C-D)	✓	✓		✓												
	Wet/Dry (A-B)	✓		✓		✓											
	Wet/Dry (C-D)	✓	✓		✓												
	B to A	✓		✓		✓											
	D to C	✓	✓		✓												
	Mod. Track (A-B)	✓		✓		✓											
Effects • FX A-D	Mod. Track (C-D)	✓	✓		✓												G
	Selected FX (A-B)	✓		✓		✓											
	Selected FX (C-D)	✓	✓		✓												
	FX Parameters (A-B)	✓		✓		✓											
Trk Ctrl • Mode	FX Parameters (C-D)	✓	✓		✓												T
	Int/Ext	K/St	K	St	K	St											
	Type	K/St	K	St	K	St											
Trk Ctrl • Drum Volume	Play/Mute	K/St	K	St	K	St										L8	T
	Drum Family Volume	K/St	K	St	K	St											
Trk Ctrl • Easy Edit	Play/Mute	K/St	K	St	K	St										L8	T
	Sound Parameters	K/St	K	St	K	St											
Kbd Ens • Kbd Control	Play/Mute	K/St	K	St	K	St											
	Damper	K	K		K												
	Joystick X	K	K		K												
	Joystick Y	K	K		K												
	Expression	K	K		K												
Kbd Ens • Key/Vel Range	Play/Mute	K	K		K												
	Top/Btm Key	U	U		U												
	Top/Btm Velocity	U	U		U												
Kbd Ens • Ensemble	Play/Mute	K	K		K												
	Ensemble	✓	✓		✓												
	Note Velocity	✓	✓		✓												
	Tempo	✓	✓		✓												
	Feedback	✓	✓		✓												
Style Ctrl • Drum/Fill	Ens Track Assign	U	U		U												G
	Play/Mute	K	K		K												
	Drum Mapping Var 1-4	✓		✓		✓											
	Kick and Snare Design.	✓		✓		✓											
Style Ctrl • Kbd Rng/Wrap	Fill Mode 1-3	✓		✓		✓										L13	T
	Fill Mode Lock									✓							
	Play/Mute	✓		✓		✓										L8	
	Keyboard Range On/Off	✓		✓		✓											
Pad/Switch • Pad	Wrap Around	✓		✓		✓											G
	Play/Mute	✓		✓		✓										L8	
	Pad 1-4	P	P		P											L3	
	Volume	P	P		P											L3	
	Pan	P	P		P											L3	
	C Send	P	P		P											L3	
Pad/Switch • Assign. Sw.	D Send	P	P		P											L3	G
	Pad Lock									✓							
Pref • Style Pref	Switch 1-4	✓	✓		✓											L4	G
	Assign. Sw. Lock									✓							
	Chord Recogn. Mode	✓	✓		✓											L11	
	Velocity Control	✓	✓		✓											L11	
	Scale Mode	✓	✓		✓											L11	
Style Ctrl • Kbd Rng/Wrap	Memory Mode	✓	✓		✓											L11	G
	Style Pref Lock									✓							

Page	Parameter	Perf	STS	Sty Perf	STS SB	SB	Global											Note	
	Sty Stp	Sng Stp	Seq Stp	Glb Stp	Mid Stp	VP Stp	VP Tlk	VP Pst	Dsk Stp										
Pref • Global Setup	Midi Setup						√										G		
	Perf/Sound Default						√												
	Velocity Control Value						√												
	Upper Volume Link						√												
	Variation/STS Link						√												
Bass & Lower Backing																			
Song Play Mode																			
Main (Kbd Trk)	Selected Songs																		
	Meter								Saved in the Song										
	Tempo								Saved in the Song										
	Selected Perf/STS					√											G		
	Selected Style																		
	Keyboard Sounds	K				K													
	Upper Trk Octave Transp.	U				U													
Master Transpose	√					√									L1	G			
Main (Sng Trk 1-8, 9-16)	Song Trk Octave Transp.																T		
	Song Trk Sounds																		
Main • Volume	Track Volume	K				K											T		
	Play/Mute	K				K			Sg										
Main • Jukebox	Selected Song																		
Main • Lyrics-Options	Characters							√									G		
	Link int/Ext Video							√											
	Show Chords							√											
	Text Follow							√											
Main • STS Name	Selected STS	STS#1 selected when selecting a Style (with SINGLE TOUCH = On)																	
Main • Mic	Harmony/Modeling																G		
	Lead														√				
	V1-V4														√				
	Pitch														√				
	Thicken														√				
	Effects														√				
	Talk																		
	Play/Mute												√						
	VP Preset	√				√										L2			
	VP Lock								√										
Main • Sub-Scale	Scale	√				√					√						L14		
	Key	√				√											L14		
	Quarter Tone																L14		
	Detuned Notes	√				√											L14		
	Scale Lock									√									
Main • Pad	Pad Assignment	√				√											L3		
	Pad lock									√									
Main • Split	Split Point	√				√											L6		
	Chord Recogn. Mode	√				√											L11		
	Split Point Lock									√									
	Style Preferences Lock									√									
Mix/Tun • Volume/Pan	Upper Volume Link						√										G		
	Pan	K				K													
	Volume	K				K													
	Play/Mute	K				K			Sg										
Mix/Tun • FX Send	Send Level	K				K													
	Play/Mute	K				K			Sg										
Mix/Tun • Tuning	PB Sensitivity	K				K											T		
	Trk Octave Transpose	K				K													
	Detune	K				K													
	Play/Mute	K				K			Sg										
Effects • FX Select	FX (A-B)							√									G		
	FX (C-D)	√(*)				√(*)		√(**)											
	Wet/Dry (A-B)							√											
	Wet/Dry (C-D)	√(*)				√(*)		√(**)											
	B to A							√											
	D to C	√(*)				√(*)		√(**)											
	Mod. Track (A-B)							√											
	Mod. Track (C-D)	√(*)				√(*)		√(**)											
Effects • FX A-D	Selected FX (A-B)							√									G		
	Selected FX (C-D)	√(*)				√(*)		√(**)											
	FX Parameters (A-B)							√											
	FX Parameters (C-D)	√(*)				√(*)		√(**)											
(*) Depends on the “Perf. Recalls FX CD” parameter — (**) Depends on the “Seq.2 FX Mode” parameter																			
Trk Ctrl • Mode	Int/Ext	K				K			Sg								T		
	Type	K				K													
	Play/Mute	K				K			Sg										
Trk Ctrl • Drum Volume	Drum Family Volume	K				K											T		
	Play/Mute	K				K			Sg										
Trk Ctrl • Easy Edit	Sound Parameters	K				K											T		
	Play/Mute	K				K			Sg										
Kbd Ens • Kbd Control	Damper	K				K													
	Joystick X	K				K													
	Joystick Y	K				K													
	Expression	K				K													
	Play/Mute	K				K			Sg										

Page	Parameter	Perf	STS	Sty	Perf	STS	SB	Global									Note				
								Sty	Stp	Sng	Stp	Seq	Stp	Glb	Stp			Mid	Stp	VP	Stp
Kbd Ens • Key/Vel Range	Top/Btm Key	U				U															
	Top/Btm Velocity	U				U															
	Play/Mute	K				K				Sg											T
Kbd Ens • Ensemble	Ensemble	✓				✓															
	Note Velocity	✓				✓															
	Tempo	✓				✓															
	Feedback	✓				✓															
	Ens Track Assign	U				U															
	Play/Mute	K				K				Sg											T
Pad/Switch • Pad	Pad 1-4	P				P														L3	
	Volume	P				P														L3	
	Pan	P				P														L3	
	C Send	P				P														L3	G
	D Send	P				P														L3	
	Pad Lock											✓									
Pad/Switch • Assign. Sw.	Switch 1-4	✓				✓														L4	
	Assign. Sw. Lock											✓									G
Jukebox Editor	Saved as a .JBX file																				
Groove Quantize	Various Parameters																				
Pref • Track Settings	Melody									✓											
	Drum									✓											
	Bass									✓											
	Harmony Track									✓											
Pref • General Control	Midi Setup									✓											
	Perf recalls FX CD									✓											
	Lyrics/Balance Link									✓											
	Link Mode									✓											G
	Seq.2 FX Mode									✓											
	HD Path									✓											
SongBook Mode																					
SongBook List																					
Saved into an .SBD file																					
Book Edit 1	Genre, Artist, Key info, Tempo, Meter Info, Master Transpose						✓														
	Style/Song Reference						✓														
	STS Data					✓															
Book Edit 2	Synchro Start, Synchro Stop, Memory						✓														
	TXT File Reference						✓														
	Song Selection Number						✓														
SongBook Custom List																					
Saved into an .SBL file																					
Sequencer Mode																					
See table “Style, Pad and Song parameter” on page 384																					
Main	Play/Mute									Sg											T
Pref • Global Setup	Midi Setup									✓											
	Harmony Track									✓											G
Sound Mode																					
Saved into a Sound																					
Global Mode																					
Gen Ctrl • Basic	Velocity Curve										✓										
	A.Touch Curve										✓										
	Master Tuning										✓										
	Reverb Offset										✓										
	Fade In Time										✓										
	Fade Out Time										✓										
	Acc/Rit Step										✓										
	Acc/Rit Curve										✓										
Gen Ctrl • Transp Ctrl	Glide Time										✓										
	Transp applies to Sty/Kbd										✓										
	Transp applies to Seq 1/2										✓										
	Transp applies to Midi In Scale and Transp Position										✓										G
Gen Ctrl • Scale	Main Scale										✓										
	Key										✓										G
Gen Ctrl • Lock	Locks										✓										G
Gen Ctrl • Interface	Language										✓										
	Show PC Number										✓										
	Show Track Activity										✓										G
	Auto Style Select										✓										
	Auto Perf/Sound Select										✓										
Ctrl • Pedal/Switch	Pedal/Footswitch										✓										
	Damper Polarity										✓										G
	Pedal/Switch Polarity										✓										
Ctrl • Assignable Sliders	Assign. Sliders A1-8, B1-8										✓										G
Ctrl • EC5	EC A-E										✓										G
MIDI • Midi Stp/GenCtrl	Midi Setup							✓	✓	✓											
	Note to RX Noise Enable																				
	Clock Send												✓								G
	Clock Source																				
	Local Control On																				
	MIDI A Out/Thru Mode												✓								
	MIDI B Out/Thru Mode												✓								G

Page	Parameter	Perf	STS	Sty Perf	STS SB	SB	Global											Note
							Sty Stp	Sng Stp	Seq Stp	Glb Stp	Mid Stp	VP Stp	VP Tlk	VP Pst	Dsk Stp			
MIDI • Midi In Control	Midi In Oct Transp										√						G	
	Midi In Mute/Unmute										√							
	Chord 1 Midi Channel										√							
	Chord 2 Midi Channel										√							
	Upper Octave Transp										√							
	Lower Octave Transp										√							
	Midi In Velocity Value										√							
	VP Midi In Channel										√							
	VP Oct Transp In										√							
	VP In Note Range H/L										√							
MIDI • Midi In Ch.	Channels										√					T		
MIDI • Midi Out Ch.	Channels										√							
MIDI • Filters	Midi In Filters										√					G		
	Midi Out Filters										√							
Audio Out • Sty/Kbd	Tracks									√						T		
Audio Out • Seq 1	Tracks									√						T		
Audio Out • Seq 2	Tracks									√						T		
Audio Out • Drums	Drum Output									√						G		
	Drum Category									√								
Audio Out • Audio In	VP Out									√						G		
	Metronome Mode									√								
Audio Out • Metro/SP	Metronome Volume									√						G		
	Click Out									√								
	SPDIF On/Off									√								
	Speaker On/Off									√								
	MP3 Max Volume									√							G	
CD Max Volume									√									
VP Setup • Setup	VP Setup											√				G		
	Vibrato Mode											√						
	Vibrato RX Enable											√						
	Octave Transpose											√						
	Pitch Bend Range											√						
	Damper Mode											√						
VP Setup • Lead Voice	Mic In Low Cut											√				G		
	Delay Compensation											√						
	Pan											√						
	Level											√						
VP Setup • Dyn/EQ	Dyn Assign											√				G		
	EQ Assign											√						
	Dyn-Threshold											√						
	Dyn-Ratio											√						
	Dyn-Gate											√						
	EQ-Low Gain											√						
	EQ-Low Freq											√						
	EQ-Mid Gain											√						
	EQ-Mid Freq											√						
	EQ-Mid Q											√						
EQ-High Gain											√							
EQ-High Freq											√							
VP Setup • Talk	Talk On/Off												√			G		
	Auto Talk												√					
	Ld to Rev												√					
	FX Lev												√					
	Master Vol. Attenuation												√					
	Rev-Type												√					
	Rev-PreDelay												√					
	Rev-Decay												√					
	Rev-Low Color												√					
	Rev-High Color												√					
	Thicken On/Off												√					
	Thicken-Detune												√					
	Thicken-Spread												√					
Level												√						
VP Preset • Preset	VP Preset	√	√		√											G		
	Harmony/Modeling Sw.													√				
	Lead On/Off													√				
	V1-V4 On/Off													√				
	Pitch On/Off													√				
	Thicken On/Off													√				
	Harm./Model. On/Off													√				
Effects On/Off													√					
VP Preset Lock									√									
VP Preset • Thick/Pitch	Thk-On/Off									√				√		G		
	Thk-Detune													√				
	Thk-Spread													√				
	Thk-Level													√				
	Ptch-On/Off													√				
	Ptch-Root													√				
	Ptch-Scale Type													√				
	Ptch-Attack													√				
	Ptch-Amount													√				
	Ptch-Window													√				
Ptch-Custom Scale													√					



Page	Parameter	Perf	STS	Sty	Perf	STS	SB	Global									Note		
								Sty Stp	Sng Stp	Seq Stp	Glb Stp	Mid Stp	VP Stp	VP Tlk	VP Pst			Dsk Stp	
VP Preset • V. Modeling	Resonance / Amount														✓		G		
	Spectral / Amount														✓				
	Growl / Amount														✓				
	Inflection / Amount														✓				
	Vibrato / Amount														✓				
	Level														✓				
VP Preset • Harmony	Pan														✓		G		
	On/Off														✓				
	Latch On/Off														✓				
	Harmony Mode														✓				
	Root														✓				
	Type														✓				
	Human. Style														✓				
	Amount														✓				
	Tuning														✓				
	Portamento														✓				
	PB Assign														✓				
	Smooth														✓				
VP Preset • Harm. Voices	Harm Note Input Source														✓		G		
	Attack														✓				
	Release														✓				
	Level														✓				
	Voice On/Off														✓				
	Gender														✓				
	Voicing														✓				
	Vibrato Style														✓				
VP Preset • Effects	Vibrato Amount														✓		G		
	Level														✓				
	Pan														✓				
	CV Map-Note In														✓				
	CV Map-Note Out														✓				
	Lead to Rev														✓				
	Harm/Model to Rev														✓				
	Harm/Model to Dly														✓				
	Lead to Dly														✓				
	Dly to Rev														✓				
	Rev/Dly Balance														✓				
	FX Level														✓				
	Rev-Type														✓				
	Rev-PreDelay														✓				
	Rev-Decay														✓				
	Rev-Low Color														✓				
	Rev-High Color														✓				
	VP Preset • Controls	Dly-Type														✓			G
Dly-Delay															✓				
Dly-Feedback															✓				
Dly-Source															✓				
Dly-R(atio)															✓				
Dly-Hi Freq Damp															✓				
Cnt.Ctl A-D															✓				
Sw.Ctl A-D															✓				
Video Interface		System										✓						G	
		Characters										✓							
	Colors										✓								
	Position X/Y										✓								
Touch Screen Calib	Calibration																		
Disk Mode																			
Preferences	Global Protect															✓			
	Hard Disk Protect															✓			
	Factory Styles/Pad Protect																		
	PCM Autoload															✓			
	Hide Unknown Files															✓			
	HD Sleep Time															✓			

#### List of abbreviations used in the above table

G = General parameters

SG = Style tracks, globally

T = Selected tracks

U = Upper tracks only

K = Keyboard tracks only

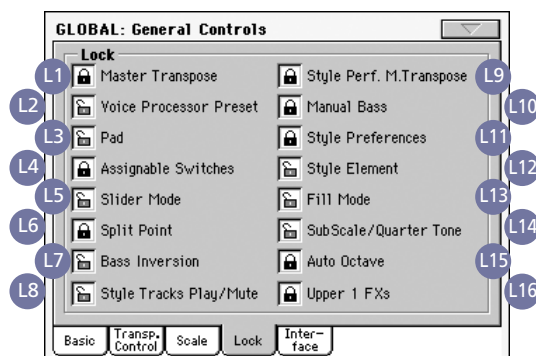
Rt = Realtime tracks only

St = Style tracks only

Sg = Song tracks only

P = Pad tracks only

L[n] = Subject to the corresponding Lock (see diagram)



## Style, Pad and Song parameter

The following table shows the parameters you can save into the Style when selecting the “Write Style” command from the Style Record mode page menu; into the Pad when selecting the “Write Pad” command from the Pad Record mode page menu; and into the Song when selecting the “Save Song” command from the Sequencer mode page menu.

Parameter	Style			Pad		Song		
	Header	Tracks	Master Track	Header	Track	Header	Tracks	Master Track
Volume (GM Master Volume) <sup>(a)</sup>						√		√
Tempo			√	Uses Arranger/Sequencer's Tempo		√		√
Meter (Time Signature)	√			√		√		√
Sounds <sup>(b)</sup>	√			√		√	√	
Note On/Off		√			√		√	
Pitch Bend		√			√		√	
After Touch							√	
Control Change <sup>(c)</sup>		√			√		√	
Quarter Tone <sup>(a)</sup>								√
Quarter Tone Reset <sup>(a)</sup>								√
Pad Sync				√				
Pad Type				√				
Chord Variation Length	√			√				
Original Key/Chord	√			√				
NTT	√			√				
Wrap Around				√				
Expression	√	√		√	√	√	√	
Keyboard Range	√			√				
Chord Variation Table	√			√				
Track Type (Drum/Perc/Bass/Acc)	√			√				
Trigger Mode	√			√				
Tension	√			√				
Play/Mute status <sup>(a)</sup>	√			√		√		
Master Transpose <sup>(a)</sup>						√		
Volume						√	√	
Pan						√	√	
FX Block <sup>(a)</sup>						√		
FX Send						√	√	
Detune						√	√	
Scale <sup>(a)</sup>						√		√
Key						√		√
Note						√		√
Detune						√		√
Scale Yes/No <sup>(a)</sup>						√		
Pitch Bend Range						√	√	
FX Select (A, B, C, D) <sup>(a)</sup>						√		√
Modulation Track <sup>(a)</sup>						√		
FX Feedback Send (B>A or D>C) <sup>(a)</sup>						√		√
FX Parameters (A, B, C, D)						√		

(a). Saved as SysEx data.

(b). For these Sounds to be used in a Style, the “Original Style Sounds” parameter must be checked in the Style Play mode. See “Original Style Sounds” on page 78.

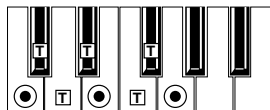
(c). Not all Control Change messages are allowed in Styles/Pads. Please see “List of recorded events” on page 101 for more information.

# Recognized chords

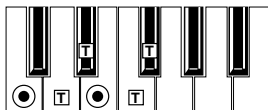
The following pages show the most important chords recognized by the Pa1X, when the selected Chord Recognition mode is Fingered 2 (see “Chord Recognition Mode” on page 93). Recognized chords may vary with a different Chord Recognition mode.

## Major

3-note

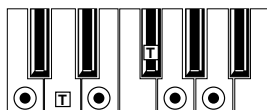


2-note

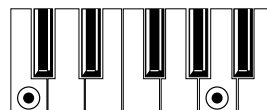


## Major 6th

4-note

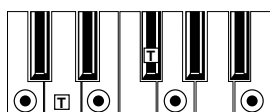


2-note

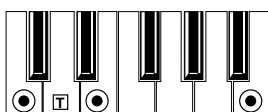


## Major 7th

4-note



3-note

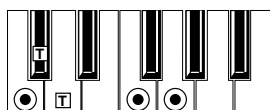


2-note

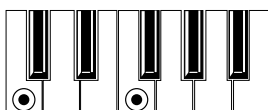


## Sus 4

3-note

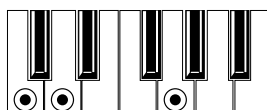


2-note



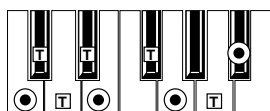
## Sus 2

3-note

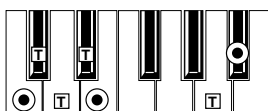


## Dominant 7th

4-note



3-note

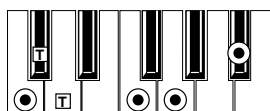


2-note

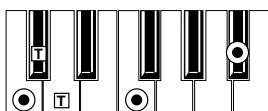


## Dominant 7th Sus 4

4-note

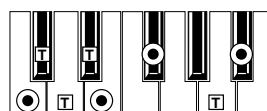


3-note



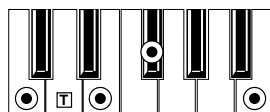
## Dominant 7th <sup>b</sup>5

4-note



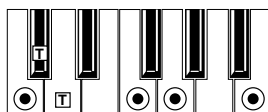
## Major 7th <sup>b</sup>5

4-note



## Major 7th Sus 4

4-note

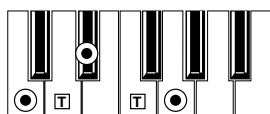


● = constituent notes of the chord

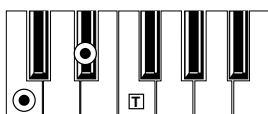
T = can be used as tension

### Minor

3-note

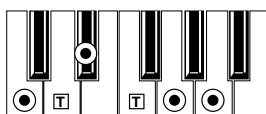


2-note



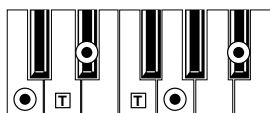
### Minor 6th

4-note



### Minor 7th

4-note

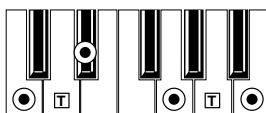


3-note

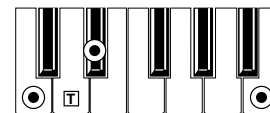


### Minor-Major 7th

4-note

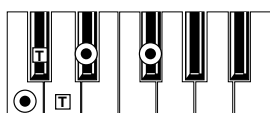


3-note



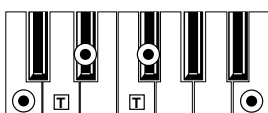
### Diminished

3-note



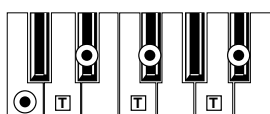
### Diminished Major 7th

4-note



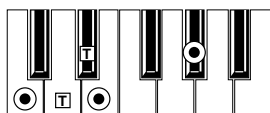
### Minor 7th $\flat 5$

4-note



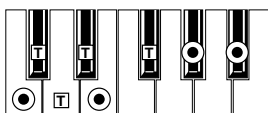
### Augmented

3-note



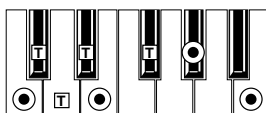
### Augmented 7th

4-note



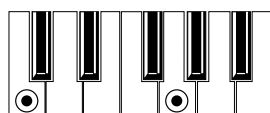
### Augmented Major 7th

4-note



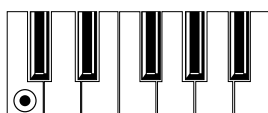

### No 3rd

2-note



### No 3rd, no 5th

1-note


 = constituent notes of the chord

 = can be used as tension

## Installing the hard disk (Pa1X only)

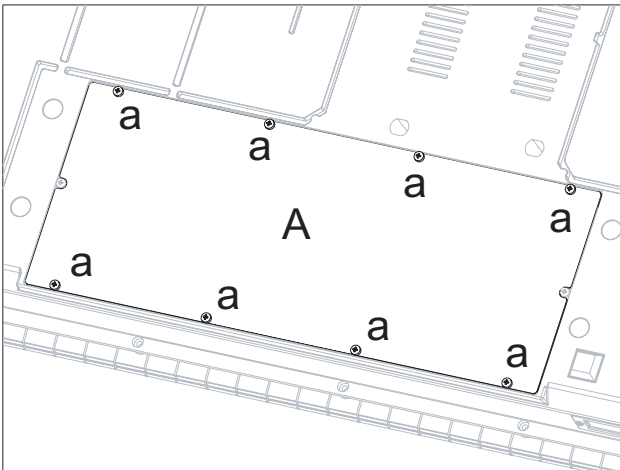
You can install a 2.5" ATA hard disk drive into your Pa1X, for quick and easy data storage and retrieval. Please contact your Korg dealer for more information. Before you begin, turn the instrument off, and disconnect the power cable.

**Warning:** Installation of the hard disk drive is done as the user's own risk. Korg will assume no responsibility for any damage or injury resulting from its improper installation or use.

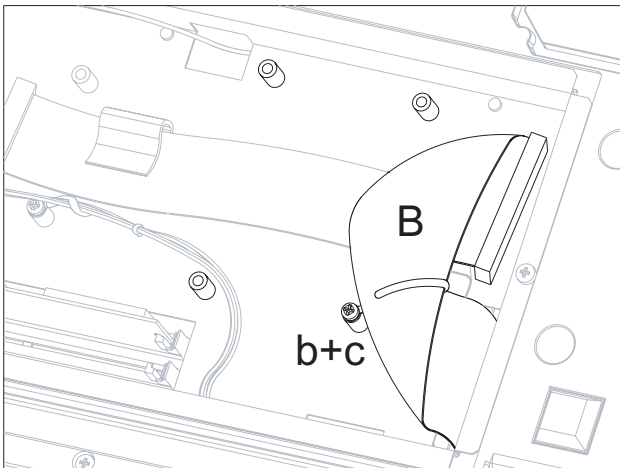
**Note:** To install the hard disk, you will need a cross-point screwdriver.

1. Turn the instrument upside down, and remove the eight screws (a), to open the cover (A) and gain access to the option compartment.

**Note:** Block any possible access to the inside of the instrument during installation to prevent any items from falling inside. In the event something does fall into the instrument, please immediately contact your nearest Service Center.

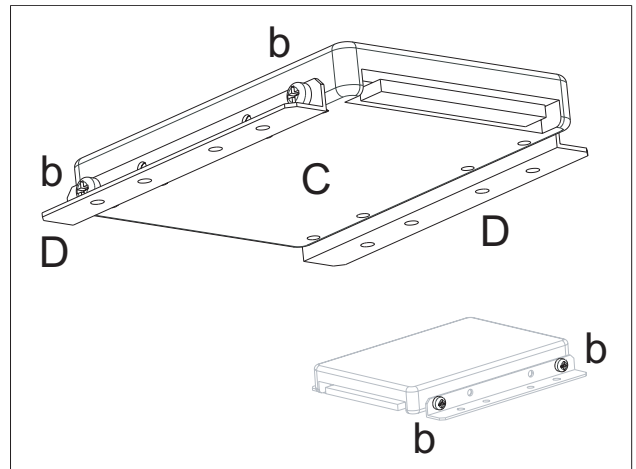


2. As you face the option compartment opening, locate the area dedicated to the hard disk, i.e., the one with the four small vertical spacers and the cable (B). Unscrew the screw (b) and remove the clip (c), securing the cable (B) to one of the spacers. Save the screw and the clip, you will need them to complete the hard disk installation.

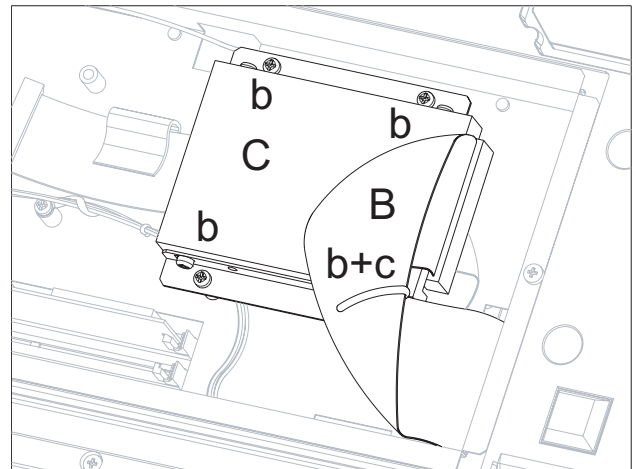


3. Connect the two mounting brackets (D) to the hard disk (C), by using four of the M3x6 screws (b). (Both the

mounting brackets and the M3x6 screws should have been supplied with your Pa1X).



4. Place the assembled hard disk unit over the four spacers in the option compartment, as shown in the diagram. Secure the hard disk unit to the spacers using the remaining four M3x6 screws (b). Be sure to fix the clip (c), previously removed, to the original spacer, as shown in the diagram. Connect the data cable (B) to the hard disk (C), then secure the cable (B) with the clip (c).

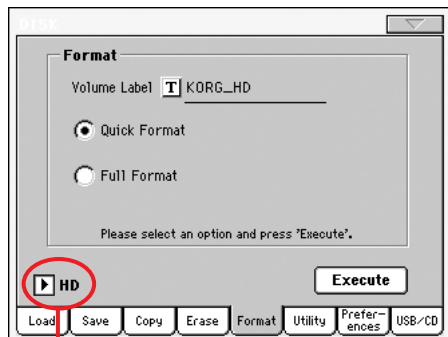


5. Close and secure the compartment cover by reversing the procedure described in step 1.

## Formatting the hard disk

When the installation is finished, reconnect the power cable and turn the instrument on. You must format the hard disk before it can be used.

1. Press DISK to access the Disk edit mode.
2. Select the “Format” page.



Device selector

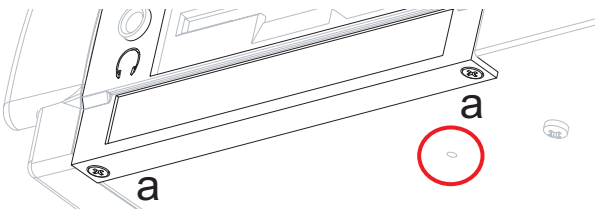
3. Use the Device selector to select the hard disk (“HD”).
4. Press the **T** (Text Edit) button in the display to assign a label (name) to the hard disk.
5. Select the Full Format option, then press the Execute button, and follow the instructions that appear in the display.



# Installing the Korg CDRW-1 Drive

Please note: Follow these instructions if your Pa1X (a) does not include a small screw under the CD-RW slot (shown in the diagram), and (b) does not include a mounting tray inside the slot itself.

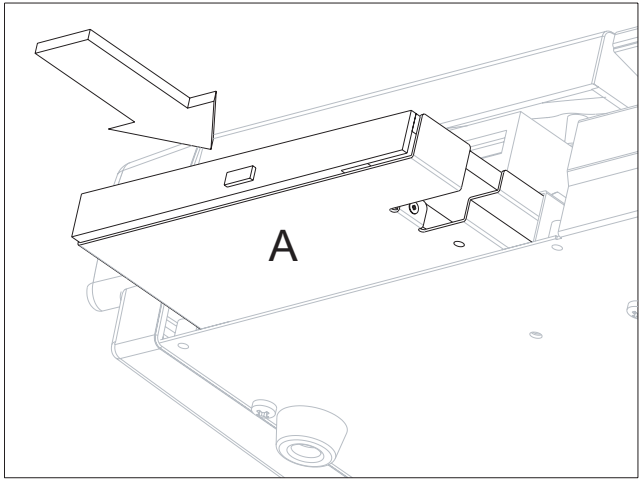
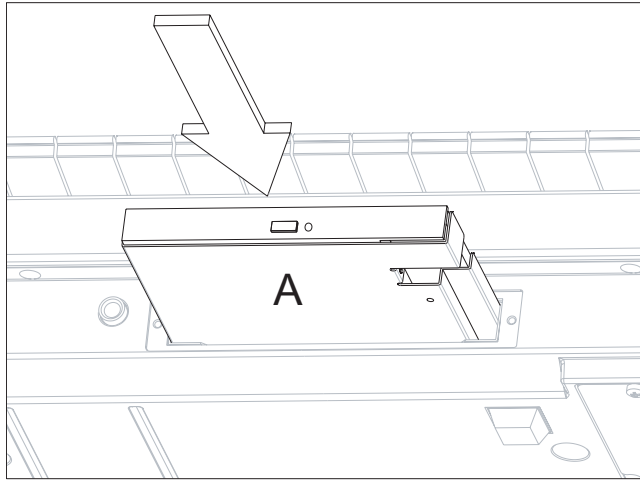
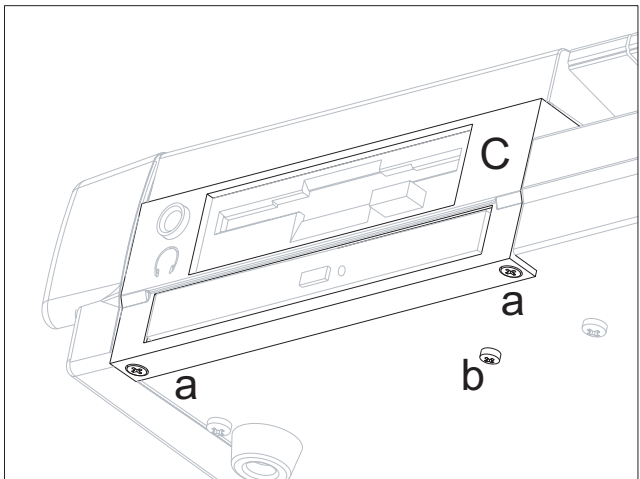
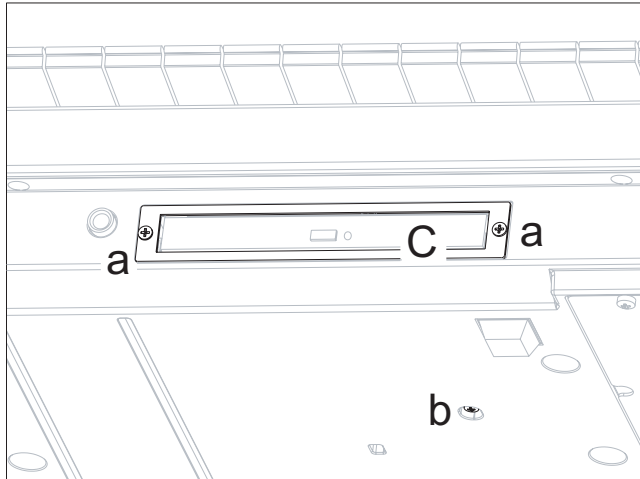
If the above is not true, please follow the instructions you can download from our website ([www.korgpa.com](http://www.korgpa.com)).



A Korg CDRW-1 CD player/writer can be installed into your Pa1X. Installation will require a “+” (cross-point) screwdriver. Please contact your Korg dealer for more information on how to obtain this option.

**Warning:** Installation of the CD drive is done at the user’s own risk. Korg will assume no responsibility for any damage or injury resulting from improper installation or use.

Pa1X Pro	Pa1X
1) Before you begin, turn the instrument off, and disconnect the power cable. 2) Push the small unlock button with the tip of a pen, to open the CD drive’s (A) cover, and remove the paper protection.	
3) With the help of a cross-point screwdriver, remove the two screws (a) securing the floppy disk drive cover (B), and remove the cover itself.	3) With the help of a cross-point screwdriver, remove the two screws (a) securing the CD slot cover (B), and remove the cover itself.

Pa1X Pro	Pa1X
<p>4) Slide the CD drive (A) into the instrument. Push it all the way in, to make sure that the CD drive mounts to the connector inside the Pa1X (two 'clicks' should be felt on your fingers when the connector on the CD drive is correctly inserted).</p>	
	
<p>5) Turn the instrument on. Go to the Disk mode, and select the CD device by using the Device pop-up on the lower left corner of the Load, Save, Copy, and Erase pages. If it works, go on with the next step to complete installation.</p> <p>6) Screw screw (b) to secure the CD drive in place. Apply the cover (C) supplied with the Pa1X, and secure it with the two previously extracted screws (a).</p>	
	

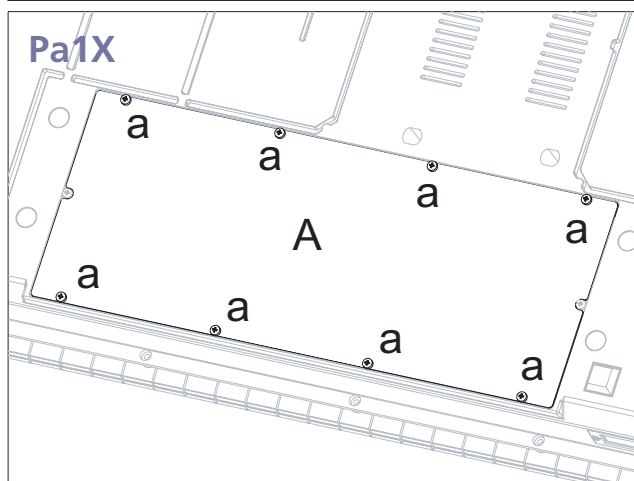
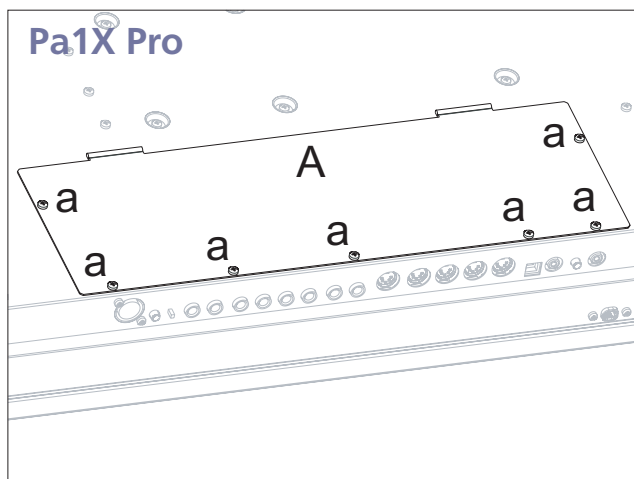
We suggest saving all removed components in a safe place for future use.

## Installing additional RAM

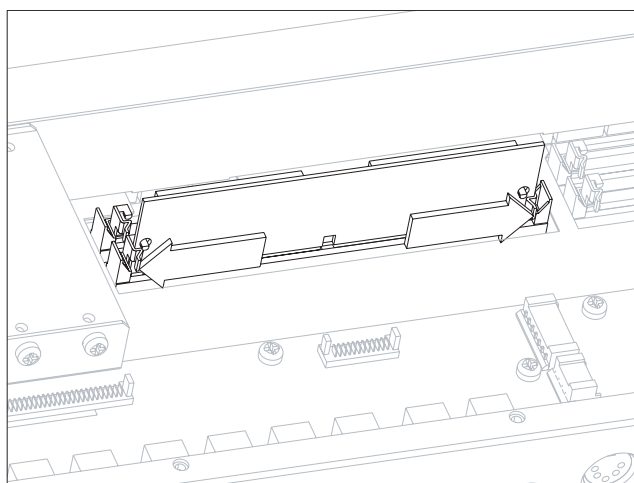
Pa1X comes equipped with 16MB of RAM already installed, which can be used for storing samples and Song editing. You can install an additional 16MB of RAM in the form of a single 72-pin SIMM module (for a list of tested SIMMs, see [www.korgpa.com](http://www.korgpa.com)). Please contact your Korg dealer for more information.

1. Before you begin, turn the instrument off, and disconnect the power cable.
2. Turn the instrument upside down, and remove the screws (a), to open the cover (A) and gain access to the option compartment.

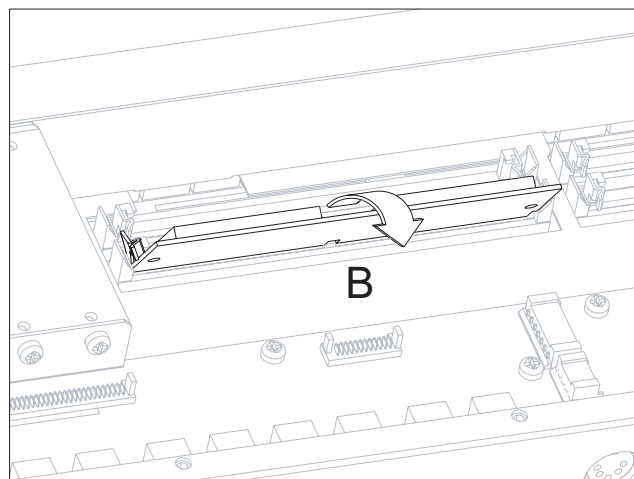
**Note:** Block any possible access to the inside of the instrument during installation to prevent any items from falling inside. In the event something does fall into the instrument, please immediately contact your nearest Service Center.



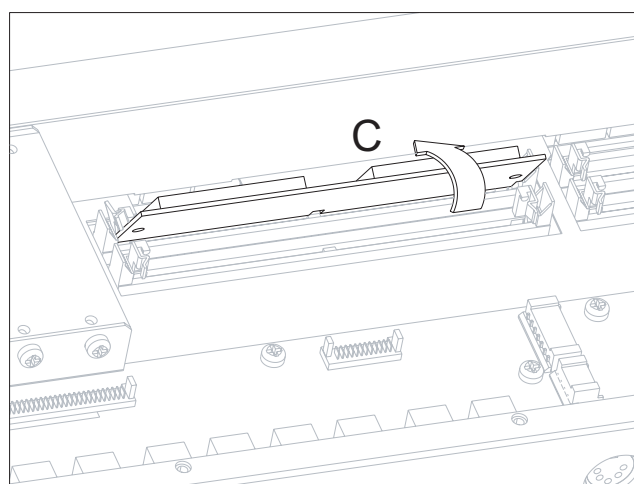
3. As you face the option compartment opening, locate the two RAM slots. A 16MB SIMM module is already present in one of the slots.
4. Lightly push out on the two securing clamps (one on each end).



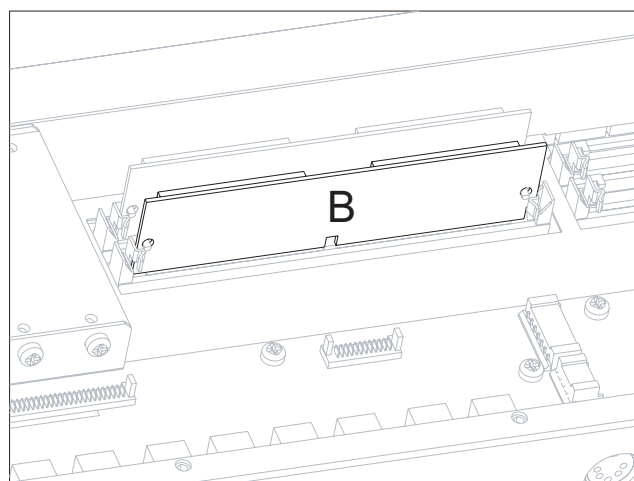
5. Remove the existing module (B), by gently rotating it forward as shown in the diagram.



6. Insert the new SIMM module (C) into the slot that was originally empty, as shown in the diagram. Line up the lower side of the module with the slot base, then rotate the module up, and delicately push until it is firmly seated in place. Be sure the module is correctly inserted. If not, extract it and repeat the operation.



7. Now re-insert the SIMM module (B) that you removed in step 5, using the same method as used with the new module (C).
8. Close and secure the compartment cover by reversing the operations seen on step 2.

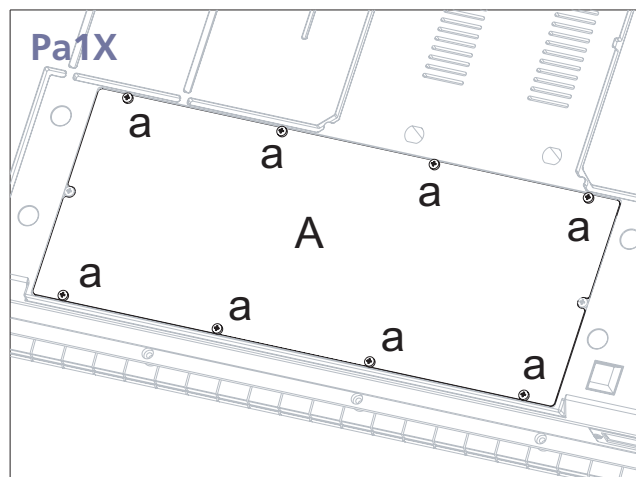
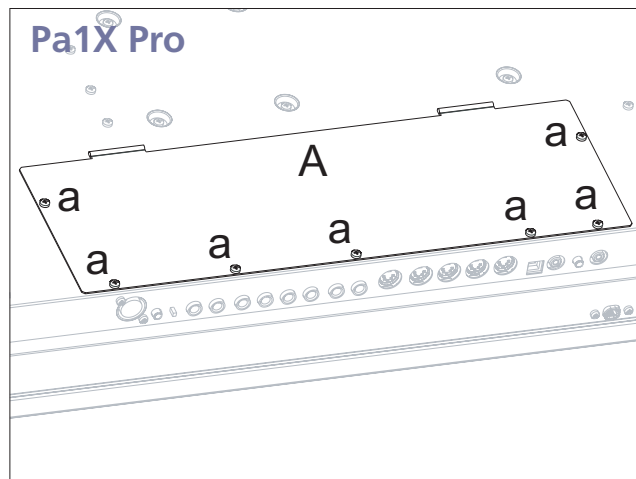


## Installing ROM expansions

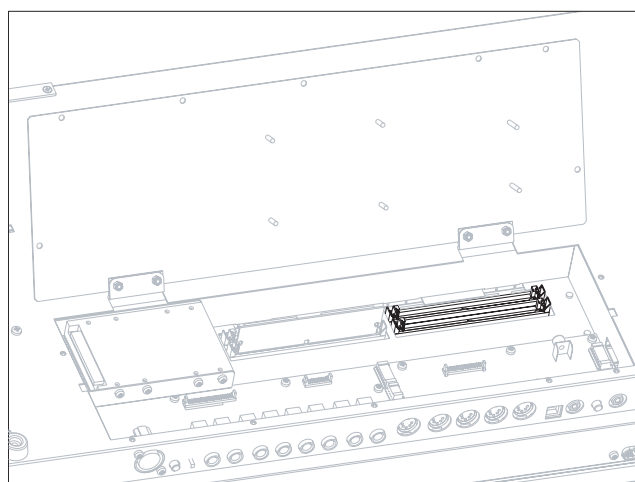
Pa1X can be fitted with up to two dedicated Sound expansion boards. Please, check on [www.korgpa.com](http://www.korgpa.com), or contact your Korg dealer for more information on the available options.

1. Before you begin, turn the instrument off, and disconnect the power cable.
2. Turn the instrument upside down, and remove the screws (a), to open the cover (A) and gain access to the option compartment.

**Note:** Block any possible access to the inside of the instrument during installation to prevent any items from falling inside. In the event something does fall into the instrument, please immediately contact your nearest Service Center.

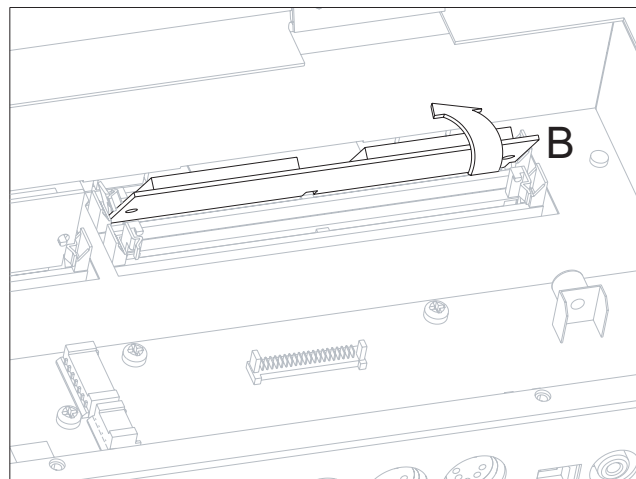


3. As you face the option compartment opening, locate the two ROM slots.

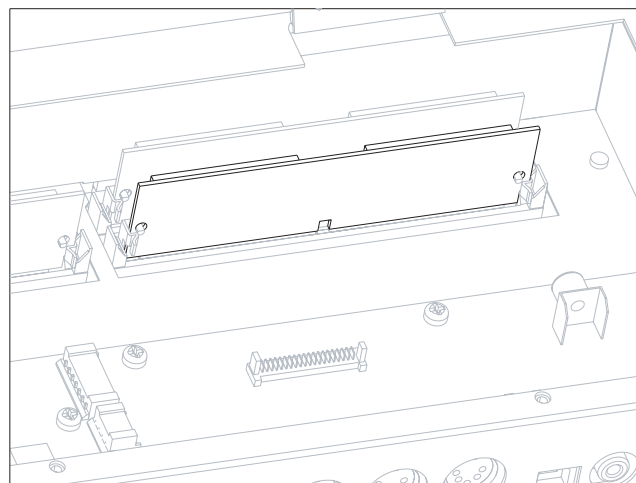


4. Insert the first ROM expansion module (B) – the only one, if it is the only one you purchased – in the slot farther from you, as shown in the diagram. Line up the lower side of the module with the slot base, then rotate the module up, and delicately push until it is firmly seated in place. Be sure the module is correctly inserted. If not, extract it and repeat the operation.

**Note:** You could also install the module in the other slot, but this way installing a second module later will be easier.



5. If you purchased a second ROM sound module (C), install it by following the same procedure seen for the first module (B).
6. Close and secure the compartment cover by reversing the operations seen on step 2.





# Installing the Video Interface (VIF3)

You can install a Korg VIF3 Video Interface into your Pa1X or Pa1X Pro. This interface will let you connect a video monitor or video projector, to read lyrics on an external device. The card can be installed by the user. **Korg is not responsible for any damage or injury caused by incorrect installation of this card by unauthorized personnel.**

## NTSC, PAL, SECAM

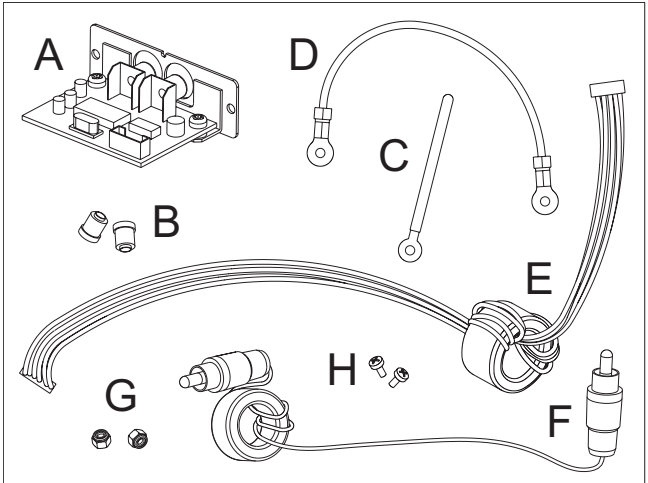
The following instruction refer both to the VIF3-PAL and VIF3-NTSC versions of the board. When connecting the VIF3-PAL to a SECAM-compliant TV, the image will be shown in black and white.

## Precautions

- Installation of the card is done at the user's own risk. Korg will assume no responsibility for any damage or injury resulting from its improper installation or use.
- Be sure to disconnect the instrument from the AC plug, before opening it.
- To prevent your body's static electricity from damaging the board's components, touch an unpainted metallic component before proceeding with the installation.

## Part listing

Before beginning with the installation, please be sure all the following parts are included with your kit. Some parts are needed only when installing the board on a particular model, but not on others. In addition, you will need a cross-point screwdriver and a pair of pliers (not supplied).



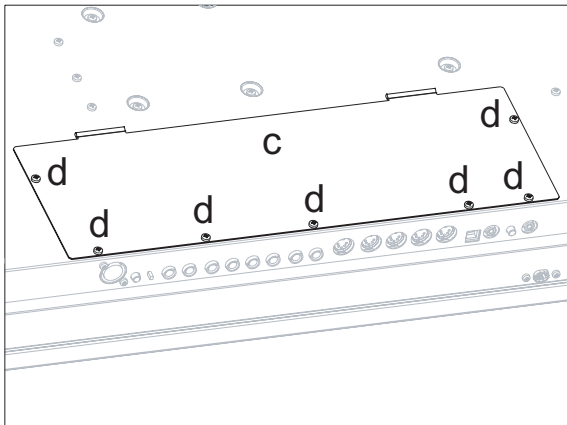
	Part name	Pa1X Pro	Pa1X	
A	Video card	√	√	× 1
B	Plastic spacers	√		× 2
C	Cable holder clip	√		× 1
D	Ground cable	(not needed)		× 1
E	Video card cable	(not needed)		× 1
F	Video cable	(not needed)		× 1
G	Nuts	√		× 2
H	2.9 x 9.5 self-threading screw	(not needed)		× 2

**Note:** The checkmark means the part is needed for the corresponding instrument. Some components are only for the Pa80 and Pa60, therefore are not needed on the Pa1X or Pa1X Pro.

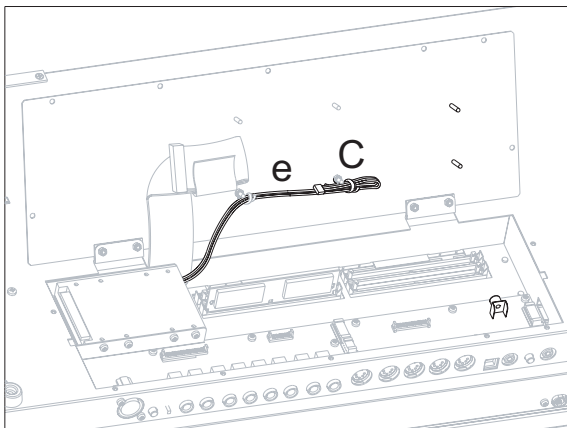
## Installation on the Pa1X Pro

1. Turn the instrument upside down, and remove the seven screws (d), to open the cover (c) and gain access to the option compartment.

**Note:** Block any possible access to the inside of the instrument during installation to prevent any items from falling inside. In the event something does fall into the instrument, please immediately contact your nearest Service Center.

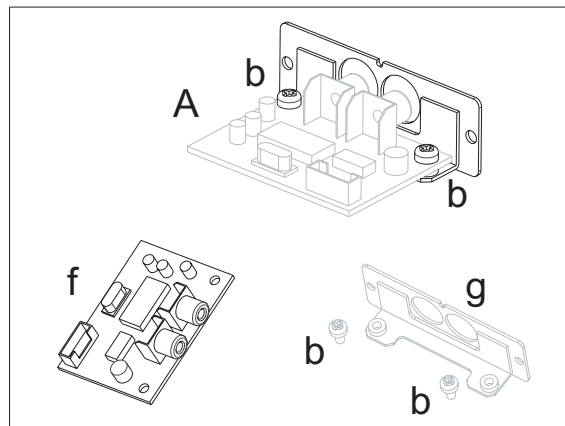


2. As you face the option compartment opening, locate the area reserved for the video interface, i.e., the one with the two small vertical spacers and the cable (e), secured by two clips. Unfasten the cable (e) from the clip (C), and rewire the clip around the unfastened cable.

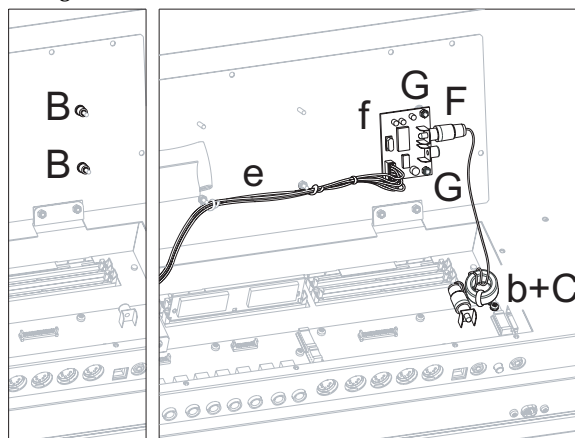


3. Examine the video interface (A) included with the kit. Note how the IC board (f) is joined to the support (g) by means of the two screws (b). Unscrew the two screws (b) to separate them. You will not need the removed screws (b) and

support (g) for the installation on the Pa1X Pro, nevertheless we suggest to save them for any future use.



4. Insert the two plastic spacers (B) into the corresponding screws on the option compartment cover, as shown in the diagram. Secure the IC board (f) to the two spacers (B), using the two self-locking nuts (G). Connect the terminal lug of the cable (e) and the terminal lug without a ring (F) to the corresponding connectors on the IC board. Unscrew the screw (b) from the connector board in the option compartment, then re-insert it after securing to it the clip (C) included with the accessory kit. Use the clip to lock the ring of the free cable terminal lug (F). Connect this terminal to the RCA connector on the connector board, as shown in the diagram.

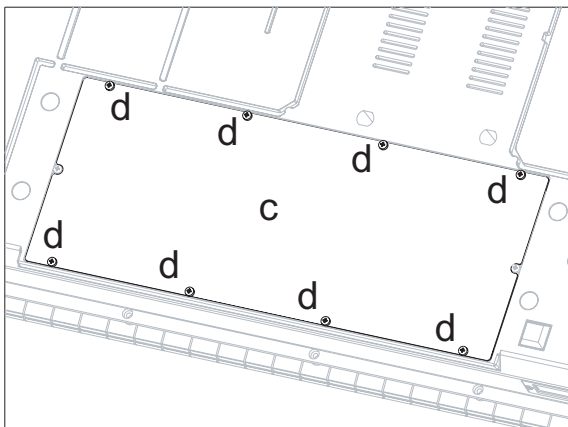


5. Close and secure the compartment cover by reversing the procedure described in step 1.

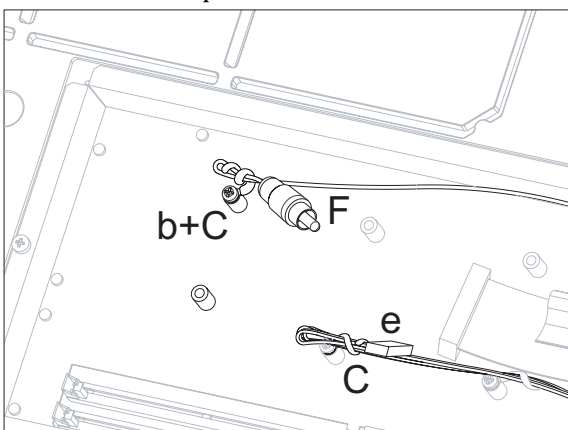
## Installation on the Pa1X

1. Turn the instrument upside down, and remove the eight screws (d), to open the cover (c) and gain access to the option compartment.

**Note:** Block any possible access to the inside of the instrument during installation to prevent any items from falling inside. In the event something does fall into the instrument, please immediately contact your nearest Service Center.

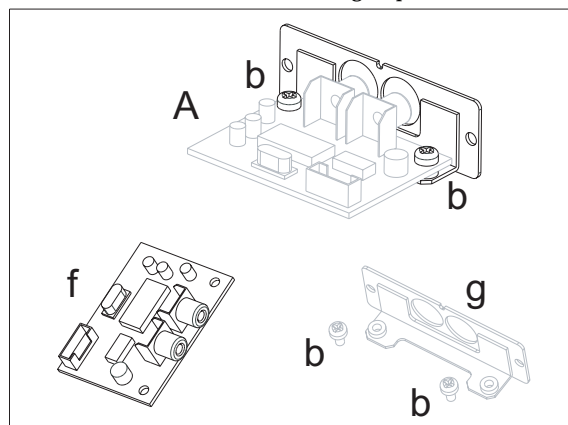


2. As you face the option compartment opening, locate the area reserved for the video interface, i.e., the one with the two small vertical spacers, the cable (e), secured by two clips, and the cable (F), secured by the clip (C). Note how the clip (C) is secured to one of the two vertical spacers by means of the screw (b). Unscrew the screw (b) and remove the clip (C). Then unfasten the cable (e) from the clip (C), as shown in the diagram. Save the screw and the clip, you will need them to complete the video interface installation.

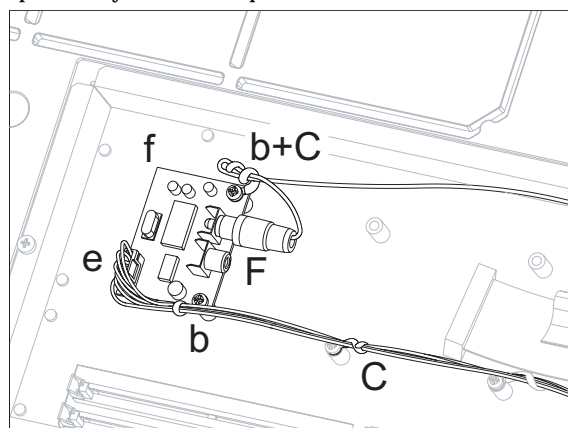


3. Note how the IC board (f) is joined to the support (g) by means of the two screws (b). Unscrew the two screws (b) to separate them. You will not need the removed support (g) for the installation on the Pa1X, nevertheless we suggest to

save them for any future use. On the contrary, the removed screws will be needed in the following step.



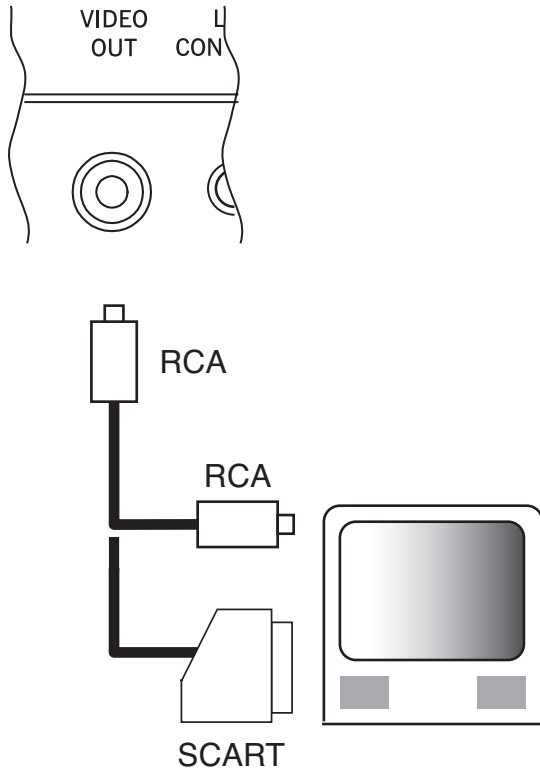
4. Secure the IC board (f) to the two vertical spacers using the two screws (b), previously removed. Please remember to re-insert the clip (C) at its original position. Connect the terminal lug of the cable (F) to the corresponding connector on the IC board. Secure the cable to the clip (C). Finally, connect the cable (e) to the IC board, and secure it using the previously loosened clip (C).



5. Close and secure the compartment cover by reversing the procedure described in step 1.

## Connections and setup

1. Connect the instrument's video output to the video input of the television set. Depending on the type of television set, you can use a cable of the type "RCA-to-RCA" (if the television set is equipped with a Video Composite input), or "RCA-to-SCART" (if the television set is equipped with a SCART connector). You can buy the needed cables at a store that sells television equipment.



2. Turn the instrument on, and press the GLOBAL button to gain access to the Global edit mode. Go to the "Video Interface: Video Out" page, and select the video standard (PAL or NTSC) depending to the installed video board (VIF3-PAL or VIF3-NTSC).
3. Select the "Write Global-Global Setup" command from the page menu to save the settings in memory. The Write Global-Global Setup dialog box will appear. Press OK to confirm.
4. Turn the television set on, and tune it on the AV1 or AV2 input.
5. In the same page of the Global, use the Colors parameter to choose the preferred set of colors for the lyrics and the background.

# Installing the MP3 Board (EXBP-MP3)

You can install a Korg EXBP-MP3 board into your Pa1X or Pa1X Pro. This user-installable card will let your Pa1X and Pa1X Pro play and record MP3 files, allowing for easy music data exchange with any personal computer or stand-alone MP3 player.

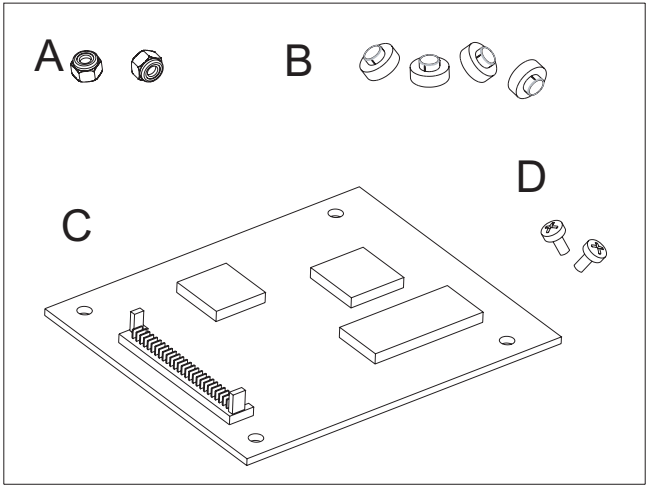
Please note Korg is not responsible for any damage or injury caused by incorrect installation of this card by unauthorized personnel.

## Precautions

- Installation of the card is done at the user's own risk. Korg will assume no responsibility for any damage or injury resulting from its improper installation or use.
- Be sure to disconnect the instrument from the AC plug, before opening it.
- To prevent your body's static electricity from damaging the board's components, touch an unpainted metallic component before proceeding with the installation.

## Part listing

Before beginning with the installation, please be sure all the following parts are included with your kit. Some parts are needed only when installing the board on a particular model, but not on others. In addition, you will need a cross-point screwdriver (Pa1X/Pa1X Pro) and a 5.5mm hexagon wrench or a pair of pliers (Pa1X Pro) (not supplied).



	Part name	Pa1X Pro	Pa1X	
A	Self-locking nuts	√		× 2
B	Plastic spacers	√		× 4
C	MP3 card	√	√	× 1
D	M3×6 screws		√	× 2

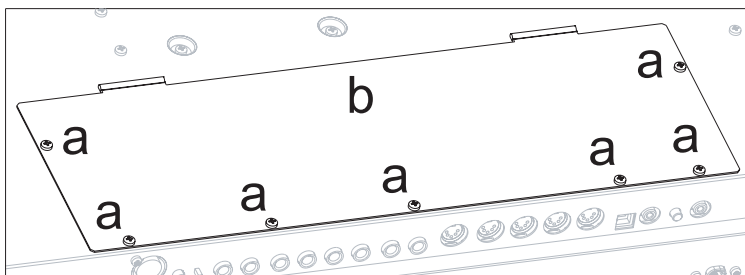
**Note:** The checkmark means the part is needed for the corresponding instrument.

## Installation

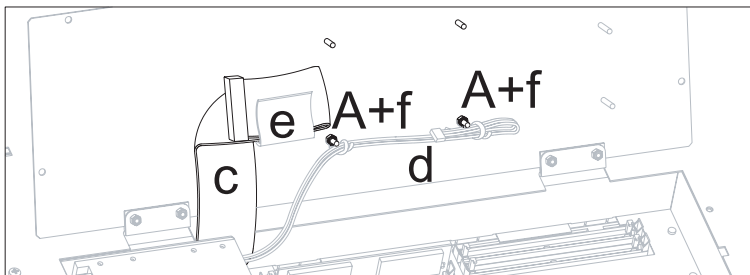
### Pa1X Pro

1. Turn the instrument upside down, and remove the seven screws (a), to open the cover (b) and gain access to the option compartment.

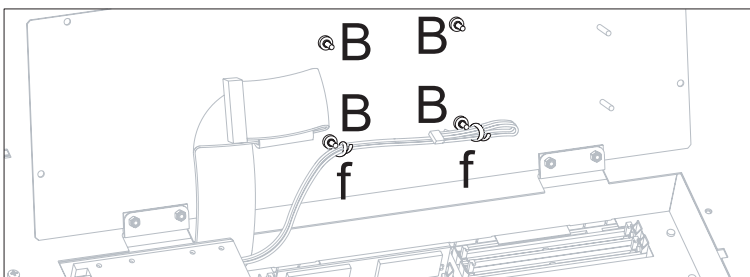
**Note:** Block any possible access to the inside of the instrument during installation to prevent any items from falling inside. In the event something does fall into the instrument, please immediately contact your nearest Service Center.



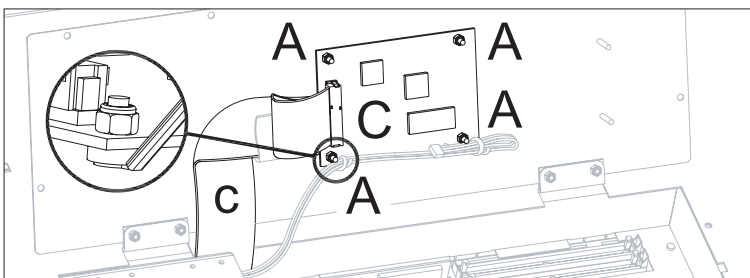
2. As you face the option compartment opening, locate the area reserved for the MP3 board, i.e., the one with the four small vertical columns, the MP3 audio cable (c) and the video cable (d). Please note how the video cable (d) is fastened by two clamps (f) to two columns, by means of two self-locking nuts (A). Remove both nuts (A), taking care not to remove the two clamps from their position, and unfasten the audio cable (c) from the clamp (e).



3. Insert the four plastic spacers (B) into the corresponding columns on the option compartment cover, as shown in the diagram. Please be sure to lay the flat size of the spacers onto the option compartment cover, and to keep both clamps (f) under the spacers (B), as shown in the following diagram.



4. Insert the MP3 board (C) over the four spacers, with the components on the upper side (as shown in the diagram). Secure it to the spacers by using the four self-locking nuts (A). Connect the terminal lug of the cable (c) to the corresponding connector on the MP3 board, by folding the cable as shown in the diagram.



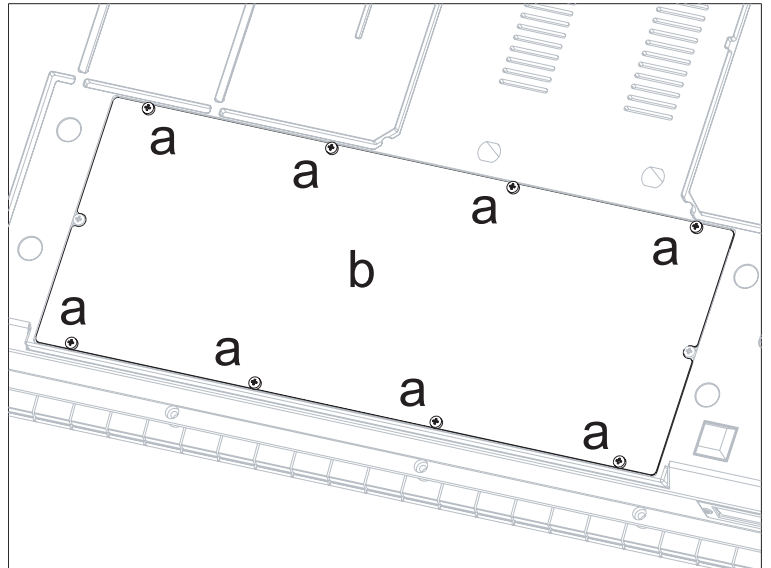
5. Close and secure the compartment cover by reversing the procedure described in step 1.



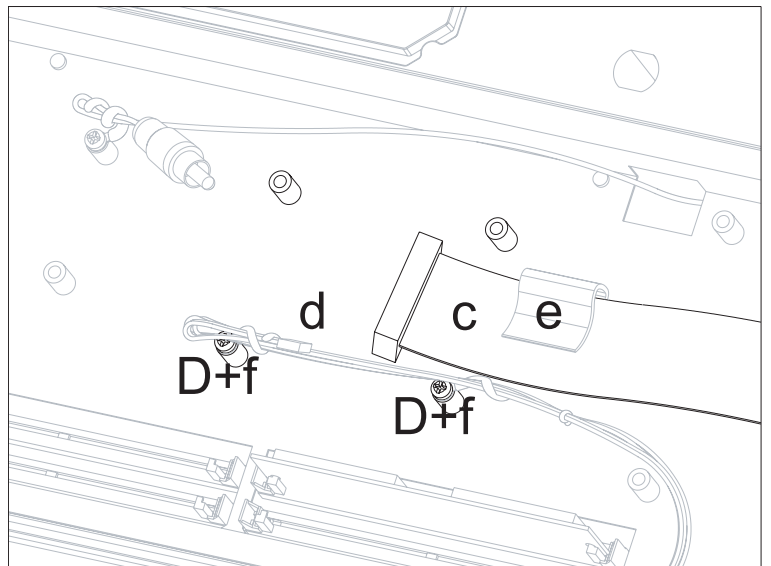
## Pa1X

1. Turn the instrument upside down, and remove the eight screws (a), to open the cover (b) and gain access to the option compartment.

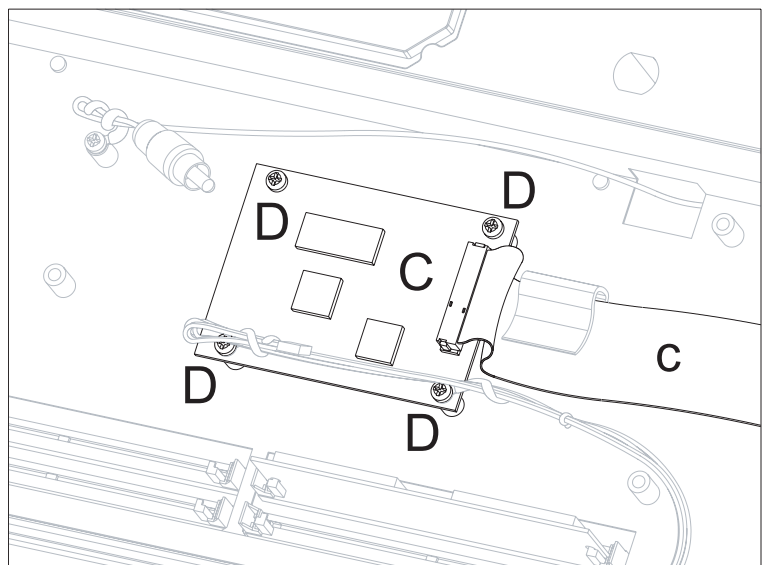
**Note:** Block any possible access to the inside of the instrument (for example, the openings of the nearby RAM expansion slots) during installation to prevent any items from falling inside. In the event something does fall into the instrument, please immediately contact your nearest Service Center.



2. As you face the option compartment opening, locate the area reserved for the MP3 board, i.e., the one with the four small vertical spacers, the MP3 audio cable (c) and the video cable (d). Please note how the video cable (d) is fastened by two clamps (f) to two of the spacers, by means of two M3 screws (D). Remove both screws (D), taking care not to remove the two clamps from their position, and unfasten the audio cable (c) from the clamp (e).



3. Insert the MP3 board (C) over the four spacers, with the components on the upper side (as shown in the diagram). Secure it to the spacers by using the four M3 screws (D). Connect the terminal lug of the cable (c) to the corresponding connector on the MP3 board, by folding the cable as shown in the diagram.
4. Close and secure the compartment cover by reversing the procedure described in step 1.



## Recording an MP3

If your Pa1X is fitted with the optional MP3 Board (EXBP-MP3) and a hard disk (*optional on the Pa1X with speakers*), you can record your performance as an MP3 file.

**Note:** You cannot enter MP3 Record mode while in Sequencer or Disk mode.

- All you play on the keyboard, the Styles and the Standard MIDI Files performed by the sequencer will be recorded. Audio entering the Audio Input 1 (microphone input, or mono line-level input), and harmony voices generated by the Voice Processor will be recorded as well.

- Playback of MP3 files and Audio CD tracks will not be recorded.

To enter recording, keep the SHIFT button pressed, and press the REC button. The following dialog box will appear.



Select the preferred MP3 audio quality option, by means of the Quality pop-up menu. The higher the sound quality, the larger the MP3 file that will be generated.

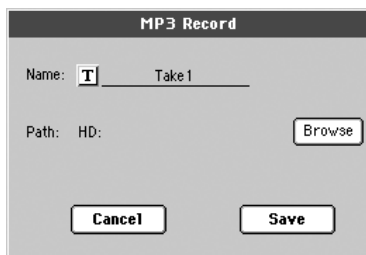
When done, press the Rec button in the display to start recording. The Rec button changes to Stop, and can be pressed again to stop recording. During recording, a big red 'R' will flash in the display.



If you like, you can press the EXIT button to exit this dialog box. To enter it again, and see the file length or stop recording, press SHIFT+REC again.

During recording, you can use this dialog box to see the Recording time, file length, and the remaining space on disk. Maximum recording time depends on the available space on the hard disk.

After pressing Stop, recording will stop, and the following dialog box will appear:



Press the **T** (Text Edit) button to assign a name to the MP3 File. Press the Browse button to select a device and directory where to save the file. Press the Save button to save the file.

After saving, you can listen to the MP3 file in Song Play mode, as you did with any other Song.

The MP3 file can also be moved to a personal computer for further editing, via the USB interface.

## Notes

### Operating system version

- To use the EXBP-MP3, your Pa1X must be fitted with Operating System 1.51 or higher.

### Audio outputs

- After installing the EXBP-MP3 board, the audio output level (both on the OUTPUT connectors and the internal speakers) is increased of about 3dB. Readjust the master volume accordingly.
- Audio generated by the MP3 board is only output on the Left+Right analog outputs. It cannot be routed to the digital output.

### Playback

- MP3 files recorded with lower sampling rates may not sound very good. This is an unavoidable problem with MP3 files.
- You can assign an MP3 file to both sequencers, but starting one stops the other (if it is playing).
- When reading MP3 files from a data CD, and the CD has been automatically paused for having been inactive for some time, starting playback may require some seconds, because the CD has to start spinning again.

### Recording

- You can record as an MP3 file everything you play with the Pa1X, including your vocals (in other words, you can record your whole performance). However, you cannot record MP3 files or convert Audio CD Tracks.
- You can listen to Audio CD tracks during MP3 recording, but they will not be recorded.

### Hard disk

- To record MP3 files, your Pa1X must be fitted with a hard disk.
- It is not advisable to fill the hard disk too much during recording. Filling the hard disk may cause troubles with the recorded file.
- Regular care is recommended with your hard disk. Defragmenting and repairing can be made with any PC utility, while the Pa1X is connected via USB.

# Shortcuts

You can keep the SHIFT button pressed, and press another button on the control panel to directly jump to an edit page. Here is the list of “shortcuts”.

Shift +	Functions
<b>Any operating modes</b>	
Dial	Tempo Change
Scroll Arrows, or Up/Down	<i>When a list of Songs or SongBook entries is shown: Next/Previous alphabetical section. It also works in Disk mode, when the Name sorting is selected.</i>
Sound	Sends the Sound assigned to the selected track to the Sound mode
Global	Selects the Setup/General Controls page, MIDI section, of the Global mode. This is a quick way to jump to MIDI editing pages.
Disk	Selects the Preferences page of the Disk mode
Start/Stop	Panic
Slider Mode	Selects the Assignable Sliders page, Controllers section, of the Global mode
Fade In/Out	Selects the Fade In/Out parameter in the Basic page, Preferences section, of the Global mode
Single Touch	Changes the status of the Variation/STS Link parameter in the Style Setup page, Preferences section, of the Style Play mode. The page containing the parameter is not selected
Synchro (either)	Selects the MIDI Setup parameter in the Setup/General Controls page, MIDI section, of the Global mode
Tempo Lock	Selects the Lock page, General Controls section, of the Global mode
Display Hold	Selects the Interface page, General Controls section, of the Global mode
Transpose (either)	Selects the Transpose Control page, General Controls section, of the Global mode
<b>Style Play mode</b>	
Style Play	Selects the Style Setup page (Preferences section)
Memory	Selects the Style Preferences page (Preferences section)
Var or Fill	Selects the corresponding Style Element in the Drum/Fill page (Style Controls section)
Chord Scanning (either)	Selects the Chord Recognition parameter in the Split panel, Main Page

Shift +	Functions
Keyboard Mode (either)	Selects the Key Velocity page (Keyboard/Ensemble section)
Ensemble	Selects the Ensemble Type parameter in the Ensemble page, (Keyboard/Ensemble section)
Pad (any)	Selects the Pad page (Pad/Assignable Switches section)
Assignable Switch (any)	Selects the Switch page (Pad/Assignable Switches section)
Upper Octave (either)	Selects the Tuning page (Mixer/Tuning section)
<b>Song Play mode</b>	
Song Play	Selects the General Control page (Preferences section)
Play/Stop–Seq 1 or 2	Sync Start of either sequencers
>>	Play the next Audio CD track
<<	Play the previous Audio CD track
Upper Octave (either)	Selects the Tuning page (Mixer/Tuning section)
Keyboard Mode (either)	Selects the Key Velocity page (Keyboard/Ensemble section)
Pad (any)	Selects the Pad page (Pad/Assignable Switches section)
Assignable Switch (any)	Selects the Switch page (Pad/Assignable Switches section)
<b>JukeBox mode</b>	
>>	Play the next Song in the JukeBox list
<<	Play the previous Song in the JukeBox list
<b>Sequencer mode</b>	
Sequencer	Selects the Sequencer Setup page (Preferences section)
Upper Octave (either)	Selects the Tuning page (Mixer/Tuning section)

Another available shortcut is the following one, not requiring the SHIFT button being pressed.

<b>Style Play mode</b>	
Up/Down (together)	Original Tempo

# Troubleshooting

Problem	Solution	Page
<b>General problems</b>		
Power does not turn on	Make sure that (1) the power cable is plugged into the outlet, (2) the cable is plugged into the connector on the back of the instrument, (3) and is not damaged, (4) there are no problems with the mains.	
	Is the power switch turned ON?	
	If the power still does not turn on, contact your dealer or the nearest KORG Service Center.	
No sound	Is a jack connected to the HEADPHONES connector? This would disable the internal speakers.	17
	Check the connections to your amp or mixer.	17
	Make sure that all the components of the amplifying system are turned on.	
	Is the MASTER VOLUME slider of the Pa1X set to a position other than "0"?	17
	Is the Local parameter set to Off? Turn it On.	231
	Is the Speaker parameter set to Off? Turn it On.	235
	Is the Attack parameter value too high? Set it to a lower value, to let the sound start faster. Is the Volume parameter too low? Set it to a higher value.	82, 88
Lowest note are not played	When the SPLIT button is lit up, the keyboard will be divided into the Lower part (low notes, below the split point) and the Upper part (high notes, above the split point). Is the Lower track muted? Unmute it.	25
Wrong sounds	Do the USER banks contain modified data? Load the appropriate data for the Song or the Style you wish to playback.	255
	Has one of the USER Drum Kits been modified? Load the appropriate Drum Kits.	255
	Have the Styles or Performances been modified? Load the appropriate data (Styles or Performances).	255
Sound does not stop	Make sure that the damper switch polarity parameter is set correctly.	229
The selected Style or Song cannot start	Make sure that the Clock parameter is set to Int. If you are using the MIDI Clock of another device, you must set the MIDI Clock parameter to MIDI or PC TO HOST (depending on the port the Pa1X is hooked to the other device through) and make sure that the external device transmits MIDI Clock data.	230
Does not respond to MIDI messages	Make sure that all MIDI cables are connected correctly.	273
	Make sure that the external device is transmitting through MIDI channels enabled to receive in the Pa1X.	232
	Make sure that the MIDI IN Filters of the Pa1X do not prevent the reception of messages.	233
Percussive instruments are not played correctly	Make sure that the Drum track is set to Drum Mode and the external device has not transposition applied.	86, 176
Some "clicks" can be heard when playing a percussive instrument	This is part of the sound, and not a problem.	
A background noise can be heard after selecting a Performance, Style or STS	The selected Performance, Style or STS recalled the effect "15 Analog Record", simulating the noise of a old vinyl recording.	
The Voice Processor cannot be heard	The Vocoder effect has been assigned to the D FX processor. This deactivates the Voice processor.	370
	Voice processor effects can only be applied to the microphone (MIC) input	

Problem	Solution	Page
<b>Disk related problems</b>		
Cannot format a floppy disk	Are you using a 3.5 inch 2DD or 2HD floppy disk? You must use one of these types.	
	Is the disk inserted correctly?	271
	Is the write protect tab of the disk in the protect position?	271
Cannot save data to a floppy disk	Is the disk formatted?	263
	Is the disk inserted correctly?	271
	Is the write protect tab of the disk in the protect position?	271
Cannot load data from a floppy disk	Is the disk inserted correctly?	271
	Does the disk contain data compatible with the Pa1X?	253

# Technical specifications

Model	Pa1X Pro	Pa1X
Keyboard	76 keys, semi-weighted, with velocity and mono aftertouch.	61 keys, semi-weighted, with velocity and mono aftertouch.
Operating System	KORG OPOS (Objective Portable Operating System) and RX (Real eXperience) Technology. Multitasking, Load-While-Play feature. SSD (Solid State Disk)-resident. Upgradable from floppy disk.	
Display	320 × 240 pixels, Color TouchView™ graphic touch screen	
Help	Hypertextual, context-sensitive help system. Multilingual starting from OS Rel. 1.5.	
Data storage	1.44MB Floppy Disk Drive (MS-DOS® compatible), Optional CD-RW (KORG CDRW-1), Standard 2.5" ATA Hard Disk Drive	1.44MB Floppy Disk Drive (MS-DOS® compatible), Optional CD-RW (KORG CDRW-1), Optional 2.5" ATA Hard Disk Drive
Sound generation system	KORG HI - Hyper Integrated.	
Polyphony	62 voices, 62 oscillators. Filters with resonance.	
Multitimbricity	40 tracks (2 x 16 Sequencer, 4 Keyboard, 4 Pads)	
Sounds	Factory: >870, including a Stereo Piano and GM Level 2-compatible Programs, 48 Drum Kits User: 256 Sounds, 64 Drum Kits.	
Digital Drawbars	8 Footages. Realtime control, using the Assignable Sliders	
Sound Edit	Onboard full editing for Sounds and Drum Kits	
Sampling	Record, Edit, Time Slice (compatible with Korg, Wav, Aiff and Akai files)	
PCM RAM Memory	16MB standard, expandable up to 32MB with an optional 16MB SIMM module	
PCM ROM Expansion	2 slots available, for up to 32MB of additional samples (up to 512 extra Sounds and 128 Drum Kits)	
Effects	4 stereo digital multi-effect processors (with 89 effect types each, plus Vocoder). Voice Processor by TC•Helicon™.	
Voice Processor	Voice technology by TC•Helicon™. Four-parts harmonizer, Reverb, Delay, Compressor, EQ. Pitch Correction and Voice Modeling available as options.	
Realtime Tracks	Four Keyboard tracks (Upper 1, 2, 3, Lower), 4 Pad tracks	
Performances	320 Realtime Performance locations.	
Single Touch Settings (STS)	Memorize Realtime tracks and Voice Processor settings. Up to 4 × 608 Styles. Up to 4 × each SongBook entry.	
Styles	More than 450 preloaded Styles, SSD-resident, freely reconfigurable. Up to 608 available Style locations. Eight Style tracks, 4 Single Touch Settings and one Style Performance per-Style. Direct Disk (up to 96 Styles) and Direct Hard Disk (up to 288 Styles) functions. Compatible with old i-Series and Pa80/60-series Styles. Style Record with Edit functions, Step Edit, Event Edit. Up to 96 User Style locations.	
Style controls	4 Variations, 2 Fills, 2 Intros, 2 Endings, Intro 3/Count In, Fill 3/Break, Synchro Start/Stop, Tap Tempo/Reset, Fade In/Out, Bass Inversion, Manual Bass, Tempo Lock, Memory, Accompaniment Volume, Accompaniment Mute, Drum Mapping, Snare & Kick Designation, Single Touch.	
General controls	Master Volume, Ensemble, Octave Transpose, Master Transpose, Split Point, Style Change, Tracks Volume, Quarter Tone (pedal function), Assignable Sliders, Assignable Switches, Joystick, Dial.	
Pads	4 Assignable Pads + Stop button	
Song Play	Patented XDS Crossfade Dual Sequencer player - 2 Sequencers with separate Select, Start/Stop, Pause, << (Rewind) and >> (Fast Forward) controls. Balance control. Lyrics data can be displayed on-screen, or on an external video monitor. Jukebox function. SMF Direct Player (formats 0 and 1). Reads Audio CDs and MP3 files (both optional).	
Sequencer	Quick, Multitrack and Step Record functions. Full-featured sequencer. 16 tracks. Up to 200,000 events. SMF native format.	
MP3 Player/Recorder	MP3 Player/Recorder (optional). Requires a KORG EXBP-MP3 expansion board.	
CD Audio Player/Writer	Optional. Requires a KORG CDRW-1 drive. Reads audio and data, writes data (ISO 9660 disks).	
SongBook	Fully programmable music database, with automatic selection of Style Play and Song Play modes. Different custom lists can be created.	
Pedals	Damper, Assignable (continuous, footswitch), EC5	
Realtime controllers	Joystick (pitch + modulation), Assignable Sliders, Assignable Switches, Pads	
MIDI	2 × IN, 2 × OUT (toggle as THRU ports). Individual track assignment. Auto-setup functions (MIDI Setup)	
USB	USB 1.1 connector (Type B/Slave)	
Audio Inputs	2 × Line In, 1 × Mic In with Gain control	
Audio Outputs	2 Main (Left/Mono, Right), 2 Sub (1, 2), 1 48kHz S/PDIF digital coaxial (mirroring Main Outputs)	
Headphone	Front 6.3 mm 1/4" jack connection	
Amplification	–	Bi-amped 2 × 35 Watt (Woofer) + 2 × 12 Watt
Speakers	–	4 Speakers (13 cm Woofer + Dome Tweeter), 2-way, Bass Reflex Box
Power Supply	Universal 100 ~ 240V AC power supply	
Power Consumption	35 W	65 W
Dimensions	W: 1330 mm / 52.36", D: 366 mm / 14.40", H: 136 mm / 5.35" (without music stand)	W: 1123 mm / 44.21", D: 428 mm / 16.85", H: 189 mm / 7.44" (without music stand)
Weight	19.5 kg / 44.99 lbs	22 kg / 48.5 lbs
Accessories	User's Manual, AC Power Cable, Music Stand, CDRW installation kit	



Model	Pa1X Pro	Pa1X
Options	EC5 Multiswitch Controller EXP-2 Expression/Volume Pedal XVP-10 Expression/Volume Pedal PS-1 Footswitch DS-1H Damper Pedal	
	SUG-TC1 Pitch Correction/Voice Modeling Software Upgrade (by TC•Helicon)	
	CDRW-1 CD Player/Writer ( <i>user installable</i> ) EXBP-MP3 MP3 Player/Recorder Board ( <i>user installable</i> ) VIF3 NTSC/PAL Video Interface ( <i>user installable</i> )	
	1 × 16MB, 72-pin SIMM module ( <i>user installable</i> ) 2 × EXBP-series ROM expansions ( <i>user installable</i> )	
	–	2.5" ATA Hard disk ( <i>user installable</i> )

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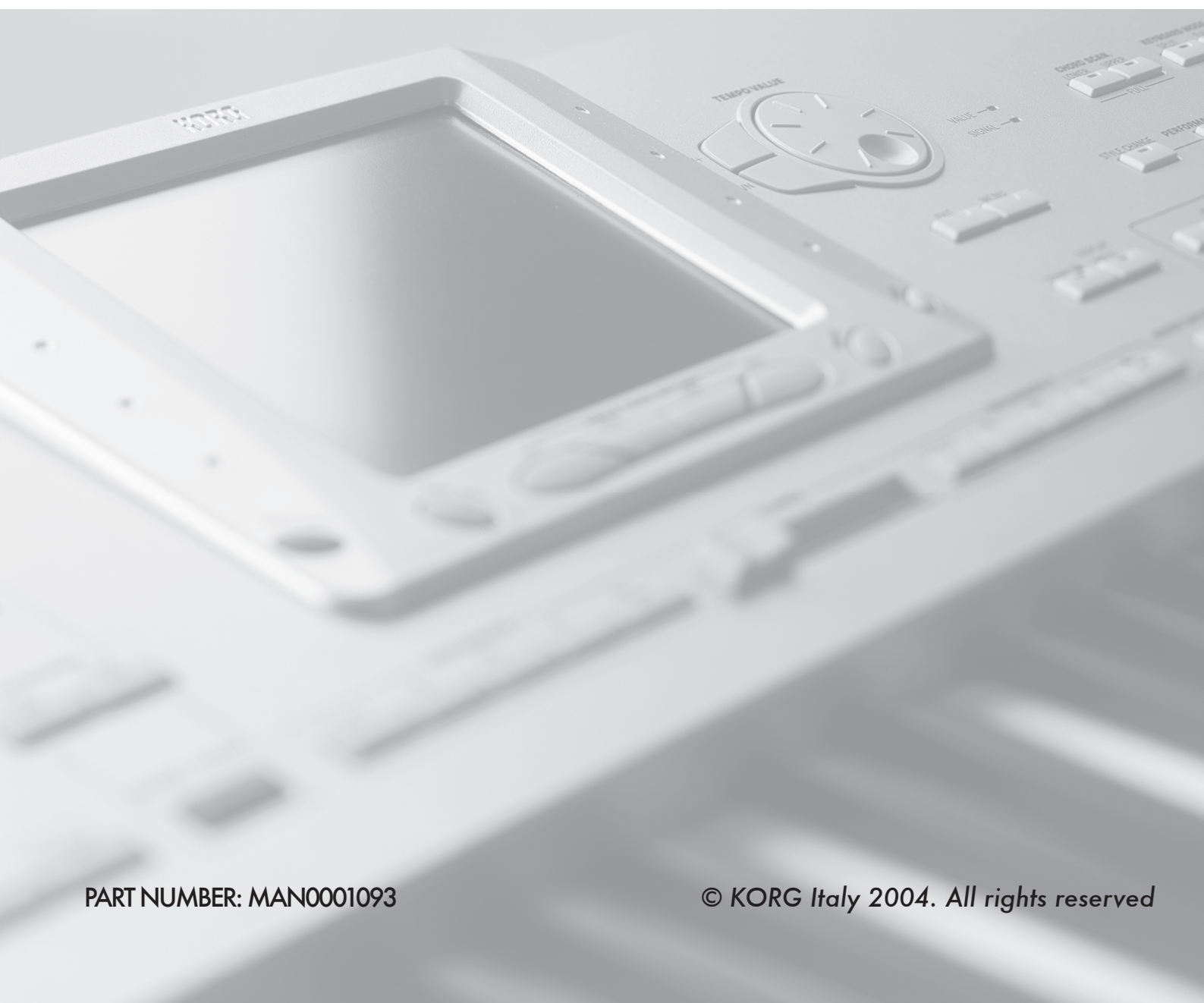
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