

# KOBRU

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## Pa4X | New Features 3.1

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# KORG Pa4X

## NEW FEATURES

### OS VERSION 3.1

## Installation and new features

### Installing the new operating system

If new, your instrument might already include the new operating system. To check it, please go to the **Media > Utility** page, and read the version number in the lower area of the display.

To install the new operating system, please read the 'Pa-Series - Loading the OS' instructions supplied with the installation file in our web site ([www.korg.com](http://www.korg.com)).

**Note:** By loading the new operating system, you also load all the features added by the previous updates.

### OS v2.0 needed before installing OS v3.1

Before installing this update, be sure your Pa4X already includes OS v2.0.0 or a later version (you can check it in the **Media > Utility** page). If it still includes a previous version (v1.x.x), please download and install v2.0.0 before installing this update. You can find v2.0.0 at our [web site](#).

### Be sure to save all your custom data

This OS update could overwrite all the Factory and User data. Please follow the 'Pa-Series - Loading the OS' instructions, and save all your custom data into a new SET folder before upgrading the operating system.

## Clean the User Sample memory

If you still have OS v2.x installed, before installing the operating system be sure to clean the User Sample Memory. Failing to do so will prevent the new system from loading. Please follow the 'Pa-Series - Loading the OS' instructions to do it.

## After loading the new OS, execute a Factory Restore

If you update from OS v2.x, after having loaded the operating system please use the **Media > Utility > Factory Restore** command to update the musical resources. Musical resources are loaded with the operating system, but must be updated using this command.

## Reload the Add-On data

After you install the new operating system and make a Factory Restore to install the updated musical resources, reload the Add-On data (if you have an Add-On installed). Please follow the instructions coming with the separate package.

## Reload your custom data

After the **Factory Restore** operation, if you have saved your custom data before updating the operating system, reload them by using the **Media > Load operations**. See the chapter dedicated to the file management in the User's Manual for more information.

## Separate User resources

Together with the operating system, we supply a separate file (Pa4X NEXT Musical Resources.SET) containing the new musical resources installed with the v3/NEXT update. In case you want to mix your own User data and our original content, you are free to load single banks or resources from this file.

## Going back to OS v2.2

If needed, you can install OS v2.2 again. First, download and install v2.0.0. Then, download and install v2.2. You can find the older OS versions at our web site.

## New functions of OS Version 3.1

The following functions are added by upgrading to the new version of the operating system.

Where	New functions	Page
User Interface	Proportional progress bar	11
Protected Resources	Information about protected resources have been made more detailed	14
Sound Sets	Keyboard Sets can now be copied to multiple SongBook Entries	20
Chord Sequencer	Chord Sequences can now drive the Harmony voices	31
SongBook	Active Entries are now shown with a vertical red line	37
	Multiple selection of SongBook Entries	38
Master Transpose	Master Transpose indicator now shown in the Score page	32
	Master Transpose now applied to the Lyrics and Score pages	33
Sampling	Sample Select window modified	59
	Accelerated scrolling in the Sample Select window	60
	MultiSample Select window modified	60
	New 'Delete MultiSample > Not assigned to any Sound (+Sample/ DrumSamples)' option	61
File Management	Automatic memory cleaning when a Load operations including User Samples is interrupted	93
	Automatic file deletion when a Save operations is interrupted	93
	Removing 'ghost' samples	93

## Functions added by previous OS versions

The following functions are added by upgrading to version 3.0 of the operating system.

Where	New functions	Page
User Interface	NEXT graphical user interface	9
	Color indicator for empty User and Direct banks	11
Local Resources	Extended support to the Local resources	13
	More room for the Local Samples and Drum Kits	13
Protected Resources	Protection keys have to be inserted before loading the protected samples	14

Where	New functions	Page
Sound Sets	Added Solo status icon	17
	Added User Sounds and Drum Kit locations	17
	Copying Keyboard Sets between Styles and/or SongBook Entries	18
	Keyboard Sets Lock added	22
Drawbars	Revised Digital Drawbars	23
Song Play	Added total length/time and position indicator	32
Record	Consolidated Record/Edit menu to access any Record mode	42
	Revised Quick Record page	46
Sound Edit	Modified Mono Legato	49
	Portamento now featuring Rate and Time parameters	50
Sampling	Direct reading, for increased User Sample memory	53
	Compression, short loops, low volume	55
	Sample Info page added	56
	Memory Info page added	56
	'Play from preload buffer' option added to the Write Sample dialog	58
Clock	Low battery warning at startup	65
MIDI	Added MIDI Presets to connect external devices	83
	Remote control of the Synchro Start/Stop commands	86
Audio Out	Different MAXX EQ curves can now be selected	89
Shortcuts	New shortcut to quickly select Samples and Multisamples	96
Musical Resources	New Styles, Keyboard Sets, Sounds	98

The following functions are added by upgrading to version 2.2 of the operating system.

Where	New functions	Page
Sampling	Increased maximum number of User Samples	53

The following functions are added by upgrading to version 2.1 of the operating system.

Where	New functions	Page
Controllers	Added compatibility with the VOX V860 volume pedal	66
	Curve presets for the volume/expression pedal	66

The following functions are added by upgrading to version 2.0 of the operating system.

Where	New functions	Page
User Interface	Some page names have been changed	10
	Parameter and command names changed	10
Split Point	Split Point saved with each Keyboard Set	26
Style Controls	Style to Kbd Set programming	27
Chord Sequencer	Revised Record and Play procedures	29
SongBook	Selected song indicator in a Set List blinking	40
	Direct SongBook	37
	Saving different Styles or Songs	41
Style Record	Added pages to the Style Record mode	43
	New ways of listening to the recorded Style	43
	Empty Chord Variations shown by an asterisk	44
	Checking the available Chord Variations	44
	Style Creator Bot importing Chord Sequences	45
Song Record	Backing Sequence recording the KAOSS effects	47
	Converting MIDI Song's notes to chords	47
Audio In	Accurate microphone input metering	62
Effects	Noise Gate added to some guitar effects	63
KAOSS FX	The KAOSS FX feature has been added	64
Song Preferences	Saving the Song Preferences is now a page menu command	65
MIDI	The USB HOST port can be used to connect other musical instruments to be used as controllers	83
	Fixed Note Off Velocity on received notes	87
Video Out	Video Mode saved in the Global	88
File management	Direct folder selection procedure revised	90
	Renaming the Favorite/User/Direct banks	91
	Importing from older instruments procedure revised	92
Musical Resources	New Styles, Keyboard Sets, Sounds, Drum Kits, Multisamples	100

The following functions are added by upgrading to version 1.2 of the operating system.

Where	New functions	Page
Search	The Search function now also works for Pads, Voice Presets, Samples and Multisamples.	10
Main page	The Style and Keyboard Set areas now show the type of bank.	12
Metronome and Tempo	The maximum Tempo value is now 300 BPM.	28
	The lowest metronome volume value is now 10.	28
Voice Processor	Voice Preset no longer saved with Keyboard Sets and Styles.	17
Tuning	Master Transpose no longer saved with Keyboard Sets and Styles.	17
	There are now 15 SC Presets (Quarter Tone Scale Presets). The presets can be renamed.	79
Fill	The Fill Mode parameter allows for automatically selecting a Variation when pressing a FILL/BREAK button.	26
MP3 recording	MP3 files are now compressed using CBR encoding (instead of VBR).	48
Sampling	User Samples can now be compressed.	54
	Edit Sample button added to the Multisample > Edit page.	59
Assignable sliders	New functions can be assigned to the assignable sliders. Some names have been revised.	67
Assignable switches	New functions can be assigned to the assignable switches. Some names have been revised.	68
Expression pedal	Revised names for some functions assignable to the expression pedal.	73
EC5 multiswitch	New functions can be assigned to the EC5 switches. Some names have been revised.	75
Locks	The Fill Mode lock has been added to the Global > General Controls > Lock page.	65
MIDI	Styles and Keyboard Sets can be selected via MIDI.	86
	Master Transpose values are now sent and received via MIDI.	87
	Quarter Tone Scale settings are now sent and received via MIDI.	87
Data protect	(Pa4X Oriental only) Factory and Favorite Protect option added.	92

The following functions are added by upgrading to version 1.1 of the operating system.

Where	New functions	Page
Sequencer	MIDI Songs can be imported without initializing the current settings.	48
Sound / Drum Kit editing	When editing a Sound or Drum Kit, volume levels are expressed in decibels (dB), with a resolution of 0.1 dB.	51
	A new Dry+Amb menu has been added to all the Sound Edit > DrumKit section pages.	51
	A Level parameter has been added to the Sound > DrumKit > Voice Mixer page.	51
	A new Velocity Switch Levels page has been added to the Drum Kit Edit mode, to help you mix the Drum Kit layers.	52
Effects	The Early Reflections Hi Dens FX can now only be assigned to the MFX A2/3 or B2 effect processors.	63
Locks	The Slider Mode lock has been added to the Global > General Controls > Lock page.	65
Style Element Scale	The Style Element's Scale can now only be a User scale.	80
	The Retune Style / Chord Follow function has been added, to let you automatically or manually retune the Style Element's Scale.	80
Date and Time	Date and time are now assigned to each single musical resource (a single Sound, a single Style...).	90
Other	New shortcuts have been added.	96



# User Interface

## NEXT graphical user interface

[3.0]

Pa4X now features the NEXT dark-glimmering look for its graphical user interface, becoming even more attractive and easy to use.

This new user interface offers the same arrangement of the on-screen elements, letting you find them where you expect. At the same time, it focuses on the use of color contrast, to let the most relevant components come to the foreground, while the static elements sit back unobtrusively.

Color coding is more evident than ever, helping you navigate the infinite features of the instrument in a world full of colors. For example, note as in the main page the Keyboard Set (code-colored green) clearly zooms into the Keyboard Sounds in it is based on:



## Page names changed

[2.0]

Some page names have been changed.

Mode	Section	Old name	New name
Style/Song Play	Keyboard/Ensemble	Key/Velocity Range	Range/Velocity
Style/Pad Record	Import/Export	Import > SMF	Import SMF
		Export > SMF	Export SMF
		Import > Groove	Groove
	Record Mode Selection	Create Style from Midi File	Style Creator Bot
Pad Record	Pad Track Controls	Expression	Settings
Sequencer	Song Edit	RX Convert	Utility
SongBook	-	Book Edit 1	Write
		Book Edit 2	Tags
		Book Edit 3	Controls/Lyrics
Global	Mode Preferences	Style	Style 1, Style 2

## Parameter and command names changed

[2.0]

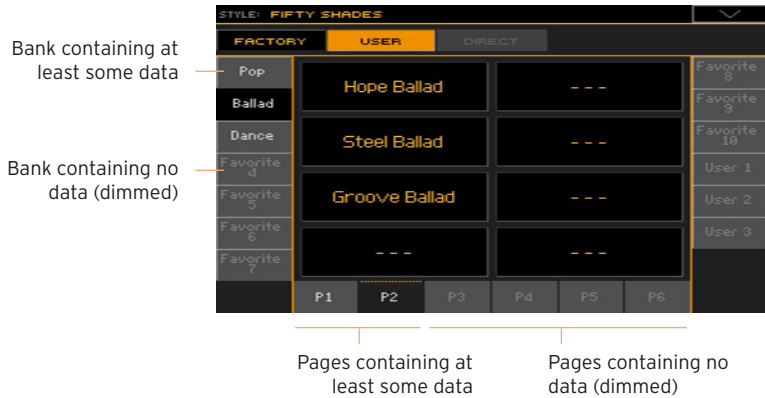
Some parameter and command names have been changed, to make them easier to understand.

## Searching Pads, Voice Presets, Samples and Multisamples [1.2]

The SEARCH button now also works for Pads, Voice Presets, Samples and Multisamples.

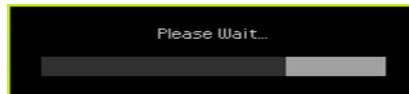
## Color indicator for empty User and Direct banks [3.0]

When Favorite/User and Direct banks or pages are empty, the corresponding side tabs or tabs in the Select windows are dimmed.



## Proportional progress bar [3.1]

When an operation requires some time to complete, a progress bar now shows the approximate completion time. Please note that this is not an exact indication, but just an approximate forecast.



## Main page

### Style and Keyboard Set type shown in the Main page [1.2]

The Style and Keyboard Set areas in the Main page show the type of bank containing the resource.



Label	Meaning
Fty	Factory
Usr	Internal User/Favorite
Dir	Direct User/Favorite
Kbd Set Library	Keyboard Set from the Library (Factory/User/Direct)
Style Kbd1...4	Keyboard Set from the selected Style
SBook [song name] Kbd1...4	Keyboard Set from the selected SongBook Entry

## Local Resources

### Extended support to the Local resources [3.0]

Local banks are now available for all types of musical resources.

### More room for the Local Samples [3.0]

Local Samples and Drum Kits gain more room, so your KORGE Distributor will be able to offer you an increased content for any Localized Add-Ons.

# Protected Resources

## Protection keys have to be inserted before loading or using the protected samples [3.0/3.1]

You may have purchased third-party Sounds, coming on a USB memory stick or a microSD card. This storage device also works as a protection key for the data.

### Loading the protected samples

Before loading the protected data, the protection key has to be connected to the instrument, or inserted in the dedicated slot.

- 1 Before loading the protected Samples, or a group of data including protected Samples, insert the original protection key in one of the USB HOST ports or the microSD slot.
- 2 If the protection key is an USB memory stick, leave it inserted for at least 15 seconds. Then, you are free to leave it connected, or remove it.
- 3 If you have more than a single protection key, insert the other protection keys one after the other, as seen above. Since Pa4X has two USB HOST ports and a microSD slot, you can connect three protection keys at the same time.
- 4 Load the protected data.

### If you have started loading without the protection key inserted...

You may have loaded some data, before an error message has warned you that you are trying to load protected data without the protection key inserted. In this case, the instrument's memory may contain incomplete data, that can prevent the instrument from playing as expected.

If this happens, insert the protection key(s) as seen above, then do a Media >Load All operation to overwrite all the incomplete data already loaded.

### Using the protected samples after loading

If you want to use protected data, the protection key has to be connected to the instrument, or inserted in the dedicated slot, when turning the instrument on.

When turning the instrument on without a protection key inserted, you are asked to insert it and touch Retry.



If you forget to insert the protection key when turning the instrument on, and you want to use protected data, please insert the key and restart the instrument.

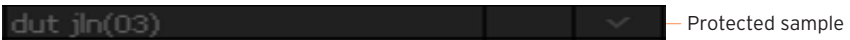
If the protection key is an USB memory stick, leave it inserted for at least 15 seconds after the instrument has completed startup. Then, you are free to leave it connected, or remove it.

### If you don't have the protection key with you...

In case you don't have the protection key with you, you will not be able to choose protected Sounds, Styles, and/or other protected data.

If you are trying to load data at startup, and you don't have the protection key with you, just touch Cancel to confirm you want to proceed when the warning message appears; protected data will not play, but you will be able to load and use any other data.

While in Sampling mode, protected Samples will be shown dimmed, and cannot be selected for editing. A Prot(ected) flag will appear next to their name in the Sample Select window. Waveforms will not be seen.



### Mixing ordinary and protected data

You can mix ordinary and protected Samples. For example, you can build Sounds, Multisamples or Drum Kits making use of both internal Samples, and protected Samples originally contained in one or more protection keys. If the protection key is missing, only non-protected Samples will play.

### Managing protected data

Protected data can be managed as any other data; only, be sure to keep the original protection key safe.

Protected Samples cannot be exported. When exporting mixed data, a message will warn you that protected Samples will not be exported.

While in Sampling mode, you can delete protected Samples, to make room for other Samples. In case you want to save the resulting SET folder over the original SET folder, be sure you have a backup copy of your original protected data.



## Sound Sets

### Added Solo status icon

[3.0]

When a Sound is soloed, the Solo icon (  ) will flash in the mixer channel.

### Added User Sounds and Drum Kit locations

[3.0]

More User Sound and Drum Kit locations have been added. Now you can have up to 768 User Sounds and 384 User Drum Kits.

### Voice Preset no longer saved with Keyboard Sets and Styles [1.2]

The selected Voice Preset is no longer saved with the Keyboard Sets and Styles. This means that choosing a different Keyboard Set or Style will no longer change the Voice Preset.

If you want to save the selected Voice Preset together with the Keyboard Sets, Styles or Songs, you can create a new SongBook Entry based on them. Choose the Voice Preset, together with the desired Keyboard Sets, Style or Song, then keep the SONGBOOK button pressed for about one second to create a new SongBook Entry.

### Master Transpose no longer saved with Keyboard Sets and Styles [1.2]

The Master Transpose value (set with the TRANSPOSE buttons on the control panel) is no longer saved with the Keyboard Sets and Styles. This means that choosing a different Keyboard Set or Style will no longer change the Master Transpose.

If you want to save the Master Transpose value together with the Keyboard Sets, Styles or Songs, you can create a new SongBook Entry based on them. Choose them, then keep the SONGBOOK button pressed for about one second to create a new SongBook Entry.

To let the SongBook Entry change the Master Transpose value when selected, be sure the Master Transpose lock is deselected in the Global > General Controls > Lock > Tuning page.

## Copying Keyboard Sets between Styles and/or SongBook Entries

[3.0]

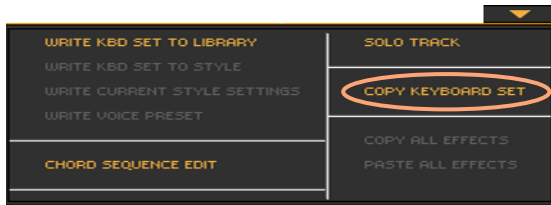
You can copy Keyboard Sets between Styles and SongBook Entries.

### Select the source

- 1 Select the Style or SongBook Entry from which to copy the Keyboard Set(s).

### Access the Copy dialog

- 2 While in the main page of the Style Play or Song Play mode, or in any page of the SongBook, choose the source Style or SongBook Entry from which to copy the Keyboard Set(s).
- 3 Choose the Copy Keyboard Set command from the page menu.



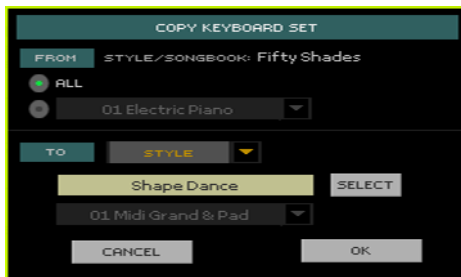
The Copy Keyboard Set dialog will appear.



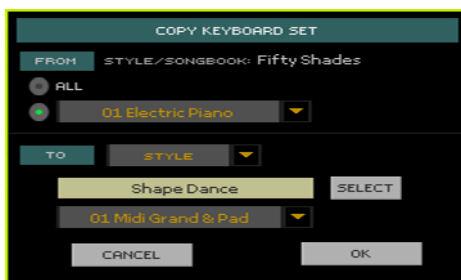
### Copy all, or only a single Keyboard Set

- 4 Decide if you want to copy all the Keyboard Sets contained in the source Style or SongBook Entry, or just one of them.

- Select the All option to copy all four the Keyboard Sets.

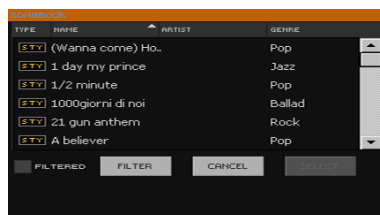


- Select a single Keyboard Set to copy only that one.



Choose the target(s)

- 5 Use the To pop-up menu to choose whether the target of the copy will be a Style or a SongBook Entry.
- 6 Touch the Select button to choose the target Style or SongBook Entry.



Please note that you can only copy to non-protected Styles (of the User and Direct type, or of the Factory type when the Factory protection is removed).

When in this page, touch the target Style or SongBook Entry name to select it. If you are choosing a Style, you may also have to press the EXIT button on the control panel to close the Style Select window.

If you want to select multiple Styles as the targets, select a first item, then press and keep the SHIFT button pressed while selecting the other items. When the last item has been selected, release the SHIFT button.

If you prefer to cancel the operation and close the **Select** window, don't select anything, and either press the **EXIT** button on the control panel, or touch the **Cancel** button on the display.

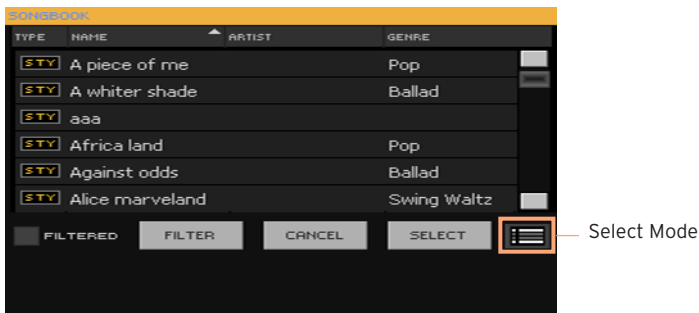
### Confirm the copy

- When back to the **Copy Keyboard Set** dialog, touch the **OK** button to confirm the copy.

## Keyboard Sets can now be copied to multiple SongBook Entries [3.1]

When copying Keyboard Sets from a Style or SongBook Entry to a SongBook Entry, you can now select multiple Entries as the target.

The target page now includes a **Select Mode** button.



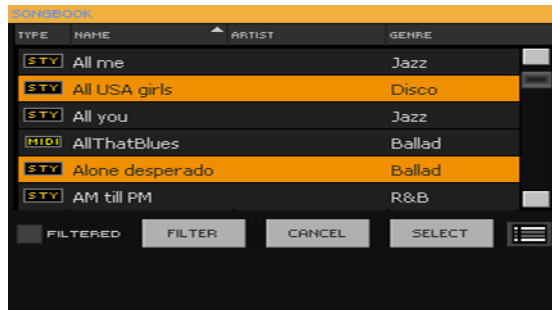
When selecting multiple items by keeping the **SHIFT** button pressed, you can select either a set of adjacent items, or separate items. To decide how selection will work, use the **Select Mode** button that appears on the right of the page command buttons.

Select Mode	Meaning
	Choose this option to select the target Entries consecutively (i.e., in a row).
	Choose this option to select the target Entries separately (i.e., with other Entries in the middle).

### Select multiple Entries separately

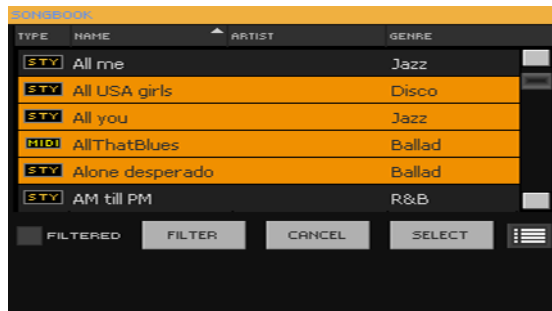
- Touch the **Select Mode** button to choose the **SHIFT** function.
- Select the first Entry to be selected.

- 3 Press and keep the SHIFT button pressed.
- 4 Select a second Entry to be selected.
- 5 While keeping the SHIFT button pressed, continue selecting the other Entries to be selected.
- 6 Release the SHIFT button.



### Select multiple Entries consecutively

- 1 Touch the Select Mode button to choose the SHIFT function.
- 2 Select the first Entry to be selected.
- 3 Press and keep the SHIFT button pressed.
- 4 Select the last Entry to be selected.
- 5 Release the SHIFT button.



### Deselect the Entries

- To deselect one or more Entries, without deselecting everything, keep SHIFT pressed and touch the item to be deselected.
- To deselect everything, select any other Entry. All selected Entries will be deselected.

## Keyboard Sets Lock added

[3.0]

A Keyboard Set 1-4 lock has been added to the Global > General Controls > Lock Control page.



When this lock is closed, the four currently selected Keyboard Sets are preserved, when choosing a different Style or SongBook Entry.

With this lock open, selecting a Style or SongBook Entry will select the four Keyboard Sets they contain.

## Revised Digital Drawbars

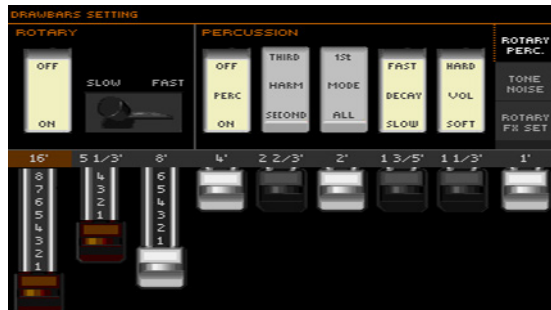
[3.0]

The Digital Drawbars pages has been revised, to feel more like the classic organ console and being easier to use. The sound quality of the Digital Drawbars has also been refined to be even more realistic.

As in the previous version, access the Digital Drawbars page by choosing a DRAWBARS sound from the Organ group.

### The Rotary/Percussion page

The Percussion/Rotary page has been renamed as Rotary/Percussion, and deeply redesigned. The parameters can now be controlled via big switches and sliders.



- The Foot parameter has been renamed as Harmonic, and its parameters are now the Second or Third harmonic.
- The Length parameter has been renamed as Decay, and its parameters are now Fast or Slow.

### The Tone/Noise page

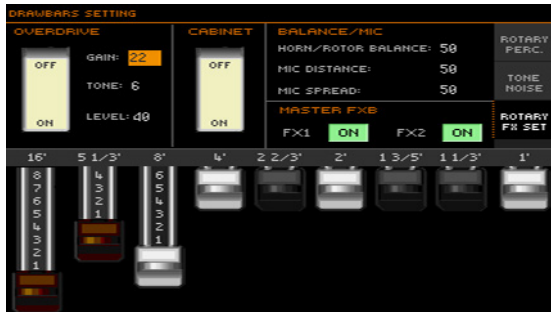
The Tone/Noise page has the same parameters as in the previous version, but has been deeply redesigned. The parameters can now be controlled via big switches and knobs.



## The Rotary FX Set page

A new Rotary FX Set page has been added. This page lets you separately program the rotor and horn's volume, effects, miking and cabinet simulation.

Please note the individual parameters can only be accessed if one of the insert effects (IFX) or master effects MFX has the Rotary SpeakerOD effect assigned. In case there isn't some or all of the parameters in this page might not be accessible.



### Program the Overdrive parameters

The overdrive simulator recreates the amp distortion, increasing realism.

Overdrive	Meaning	Value
Overdrive On/Off	Use this switch to turn overdrive on or off.	On, Off
Gain	Determines the degree of distortion.	0...100
Tone	Sets the tonal quality of the overdrive.	0...15
Level	Sets the overdrive output level.	0...100

### Turn the Cabinet on/off

You can use the Cabinet switch to turn the cabinet simulator on or off. Simulating the cabinet resonance would greatly increase realism, but you can decide to turn it off for greater flexibility.



## Program the Rotary Speaker's miking

You can balance the rotor (low range) and the horn (high range). Miking contributes to the volume and presence of the separate speakers.

Balance/Mic	Meaning	Value
Horn/Rotor Balance	Level balance between the high-frequency horn and low-frequency rotor.	Rotor, 1...99, Horn
Mic Distance	Distance between the microphone and rotary speaker.	0...100
Mic Spread	Angle between the left and right microphone axis.	0...100

## Turning Master FXs on or off

You can use the FX1 and FX2 buttons in the Master FXB section to turn the master effects on/off.

## Style Play

### Split Point saved with each Keyboard Set

[2.0]

The local split point can be memorized into a Keyboard Set. Each Keyboard Set associated to a Style or SongBook Entry can have a different split point (instead of a single one).

### Fill Mode

[1.2]

The Fill Mode parameters have been added to the Style Play > Style Controls > Drum/Fill page:



The Fill Mode parameters allow for automatically choosing a Variation at the end of each Fill, after having pressed one of the FILL or BREAK buttons. These settings can be saved to the Style Settings or a SongBook Entry, so you can have a different Fill Mode configuration for each Style or SongBook Entry.

Fill Mode	Meaning
Off	The same Variation, playing before selecting a Fill, will be selected again.
V1&V2 ... V3&V4	The specified Variations will be alternatively selected, when one of them is selected. For example, with the V1&V2 option, if Variation 1 is selected, 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 4 again. When Variation 1 is reached, a Dec command will select Variation 1 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.

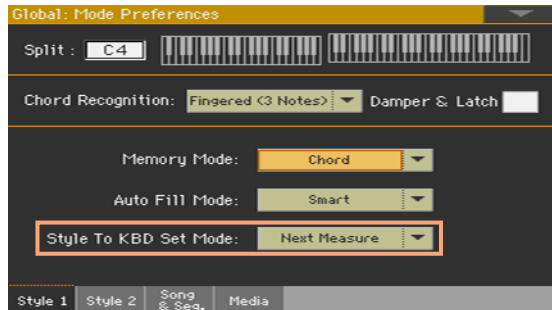
## Style to Keyboard Set programming

[2.0]

You can program how the Style to Keyboard Set function works.

- 1 Go to the Global > Mode Preferences > Style 1 page.

As an alternative, keep the SHIFT button pressed and press the STYLE PLAY button to open the Style page.



- 2 Use the Style to Kbd Set Mode menu to choose the way the function works.

Style to Kbd Set	Meaning
Next Measure	When you choose a Style, the new Keyboard Set will not be automatically selected until the first beat of the next measure is reached.
Immediate	When you choose a Style, the new Keyboard Set will be immediately selected.

- 3 Press the EXIT button to return to the previous page.

## Tempo and Metronome

### Maximum Tempo value

[1.2]

The maximum Tempo value is now 300 BPM.

### Lowest Metronome Volume

[1.2]

The lowest metronome volume value is now 10.

# Chord Sequencer

## Revised Chord Sequencer Record and Play procedures [2.0]

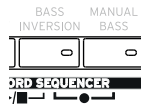
Chord Sequencer playback and recording has been improved. It is now much easier using it, and a small symbol next to the name of the Style (**CS**) now shows if a sequence is currently available.

### Recording a Chord Sequence while the Accompaniment is playing

(This procedure remains mostly the same as in the previous OS).

You can start recording while the Arranger is playing.

- 1 Press the **START/STOP** button to start the automatic accompaniment.
- 2 Press the **CHORD SEQUENCER > RECORD (●)** buttons to start recording.



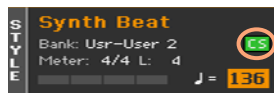
While in record, you will see the red Chord Record icon flashing in the display.



- 3 At the beginning of the next measure, start recording your Chord Sequence.
- 4 When the Chord Sequence is done, press the **CHORD SEQUENCER > RECORD (●)** buttons together again to stop recording.

The red Chord Record icon will disappear from the display.

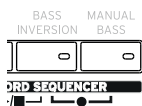
The **CS** icon will appear next to the name of the Style, to show a Chord Sequence is available.



The Chord Sequence will remain in memory until you record a new Chord Sequence, choose a different Style or SongBook Entry, or turn the instrument off. If the sequence is locked, it will not change when choosing a different Style or SongBook Entry.

## Recording a Chord Sequence while the Accompaniment is not playing

- 1 Press the **CHORD SEQUENCER > RECORD (●)** buttons to enter record-pending mode.



While in this mode, you will see the red **Chord Record** icon flashing in the display.



- 2 Play a chord, then start the automatic accompaniment in one of these ways:
  - Press the **START/STOP** button.
  - Press one of the **INTRO** buttons. With **INTRO 1**, recording will start at the end of the Intro.
  - If the **SYNCHRO START** indicator is turned on, the accompaniment will start as soon as you play a chord.

The red **Chord Record** icon will continue flashing in the display.

- 3 Record your Chord Sequence.
- 4 When the Chord Sequence is done, press the **CHORD SEQUENCER > RECORD (●)** buttons together again to stop recording.

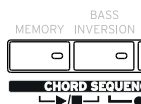
The red **Chord Record** icon will disappear from the display.

The Chord Sequence will remain in memory until you record a new Chord Sequence, choose a different Style or SongBook Entry, or you turn the instrument off. If the sequence is locked, it will not change when choosing a different Style or SongBook Entry.

## Starting the Chord Sequence while the Accompaniment is playing

(This procedure remains mostly the same as in the previous OS).

- 1 While the accompaniment is playing, press the **CHORD SEQUENCER > PLAY/STOP (▶/■)** buttons together to start the Chord Sequence.

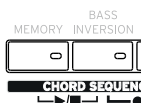


The indicators of the two buttons will start flashing. The Chord Sequence will be played back in loop starting from the next measure.

- 2 Play your solo part, while the Chord Sequence plays the chords for you.  
During Chord Sequence looping, you can freely select any Fill or Variation, as if you were playing chords with your hands.
- 3 Press the **CHORD SEQUENCER > PLAY/STOP (▶/■)** buttons together again to stop the Chord Sequence. The button indicators will stop flashing.  
If you stop the automatic accompaniment, the Chord Sequence is also stopped.

### Starting the Chord Sequence with the Accompaniment

- 1 While the accompaniment is not playing, press the **CHORD SEQUENCER > PLAY/STOP (▶/■)** buttons together to start the Chord Sequence.



The indicators of the two buttons will start flashing.

- 2 Start the accompaniment. The Chord Sequence will immediately start playing.
- 3 Play your solo part, while the Chord Sequence plays the chords for you.  
During Chord Sequence looping, you can freely select any Fill or Variation, as if you were playing chords with your hands.
- 4 Press the **CHORD SEQUENCER > PLAY/STOP (▶/■)** buttons together again to stop the Chord Sequence (or stop the accompaniment). The button's indicators will stop flashing.

### Chord Sequences can now drive the Harmony voices [3.1]

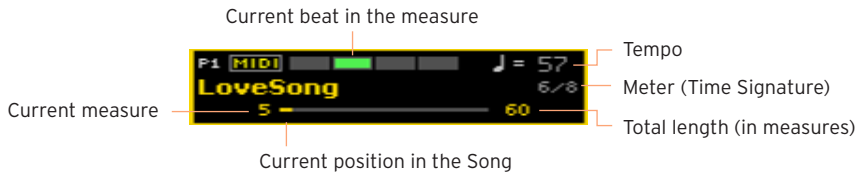
The Harmony module of the Voice Processor can receive chords from the Chord Sequence. Notes sent by the Chord Sequencer are like notes you play on the keyboard.

## Song Play

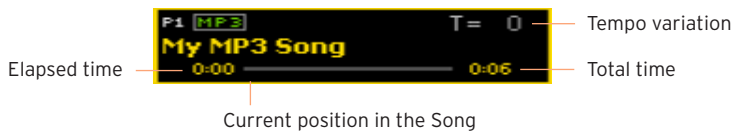
### Added total length/time and position indicator [3.0]

In Style Play mode, a total length/time and a current position indicators have been added. As a consequence, the Song area elements have been rearranged.

- MIDI Song selected:



- MP3 Song selected:



### Master Transpose indicator now shown in the Score page [3.1]

The Score page now includes a Master Transpose indicator in the title bar.

The screenshot shows the Score page for 'LoveSong'. The title bar at the top displays 'LoveSong' on the left, a Master Transpose indicator 'b/# +2' in a red circle in the center, and '♩ = 240' on the right. Below the title bar, the score is displayed for two players, PLAYER 1 and PLAYER 2. The score includes two staves of music with chord diagrams and chord names: A, E/G#, F#m, D, G(add9), Bm7, A/C#, D, E, A, G. At the bottom, there is a navigation bar with buttons for LYRICS, CHORD, NOTE, TABLE, PLAY, and TRK 4.



## Master Transpose now applied to the Lyrics and Score pages [3.1]

The Master Transpose value can be applied to the Lyrics and Score pages. You can combine the Master Transpose options in the following three ways.

	Transpose options	Score and Chord symbols
A	Keyboard: Immediate/Next Measure Player: On	Not transposed. Read by the keyboard player.
B	Keyboard: Off Player: On	Transposed. Read by the keyboard player and a musician partner.
C	Keyboard: Immediate/Next Measure Player: Off	Transposed. Read by the keyboard player.

When no transposition is applied, the score and chord symbols always appear as in the original file.

The top screenshot shows the score page for "My Floating Song". The key signature is  $b/\#: 0$  (three sharps). The tempo is  $J = 120$ . The chord symbols  $Db$ ,  $Db7$ , and  $Bb7$  are displayed above the staff. The bottom screenshot shows the chord display page for the same song. The key signature is  $b/\#: 0$ . The chord symbols  $C\#$ ,  $C\#7$ ,  $Bb7$ , and  $Em$  are displayed. Both screenshots have red circles highlighting the key signature  $b/\#: 0$  and red boxes highlighting the chord symbols.

Score and chord symbols can be read in the internal display and/or an external monitor. They can be useful for you - the keyboard player - and/or your musician partner (a guitar player, a sax player...).

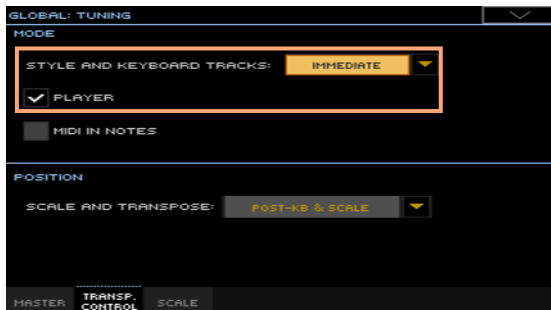
## A) Transposing the Keyboard and Songs, but not the Score and the Chord symbols

Choose this option to let Pa4X transpose what you play live, together with the songs, to a key that is more comfortable for your musician partner. You will be the one to read the (non-transposed) score and chord symbols.

For example you may want to play a song in the original C# Maj key, because you learned it in that key. Your musician partner, on the contrary, prefers to play it in D Maj, that might be more comfortable for her/him. By choosing a transpose value of +1, the songs will be transposed to D Maj. You will play in C# Maj, but your notes will be transposed to D Maj. When playing the keyboard, a C will be transposed to sound as a C#.

The score and chord symbols will not change, so you will still be able to read and play the score in the original key of C#.

- 1 Go to the Global > Tuning > Transpose Control page.
- 2 Set the Style and Keyboard Tracks option to Immediate (or Next Measure), and select the Player checkbox.



When changing the Master Transpose value, the keyboard and the songs will be transposed. The score and chord symbols will NOT be transposed.

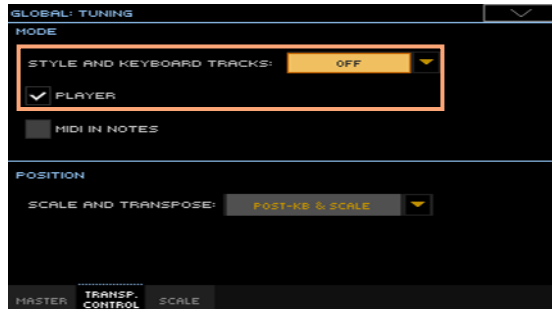
## B) Transposing the Songs, Score and Chord symbols, but not the Keyboard

Choose this option when you want to let Pa4X transpose the songs to a key that is more comfortable for your musician partner. You will play in the transposed key. You and your musician partner will be able to read the (transposed) score and chord symbols.

For example, both you and your musician partner want to play a song, originally in the key of C# Maj, in D Maj, because it is easier for both of you. By choosing a transpose value of +1, the songs will be transposed to D Maj. The keyboard will not be transposed, so you will play right in D Maj. When playing the keyboard, a C will still be a C.

The score and chords symbols will change, so you will be able to read and play the score in the transposed key of D Maj.

- 1 Go to the Global > Tuning > Transpose Control page.
- 2 Set the Style and Keyboard Tracks option to Off, and select the Player checkbox.



When changing the Master Transpose value, the keyboard will NOT be transposed, while the songs, score and chord symbols will be transposed.

### C) Transposing the Keyboard, Score and Chord symbols, but not the Songs

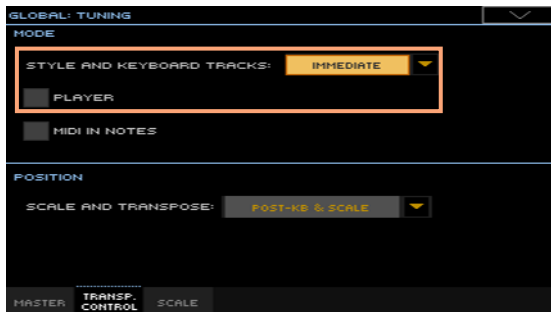
Choose this option to transpose what you play live to a more comfortable key, and let your musician partner play in the original key. You will be the one to read the (transposed) score and chord symbols.

For example, if you find a song in C# Maj too difficult to play, you can play it in C Maj. By choosing a transpose value of +1, what you play on the keyboard will be transposed to C# Maj. When playing the keyboard, a C will be transposed to sound as a C#.

The score and chord symbols will be transposed accordingly, so that you can read them in the altered key.

The songs will not be transposed, so your musician partner will be in tune with them.

- 1 Go to the Global > Tuning > Transpose Control page.
- 2 Set the Style and Keyboard Tracks option to Immediate (or Next Measure), and deselect the Player checkbox.



When changing the Master Transpose value, the keyboard, score and chord symbols will be transposed. The songs will NOT be transposed.

# SongBook

## Direct SongBook

[2.0]

In addition to the internal SongBook, residing in your Pa4X, you can also choose Entries and Set Lists from an external, Direct SongBook, that will extend your internal database on the fly.

## Active Entries are now shown with a vertical red line

[3.1]

In the SongBook > Book and Set List pages (List View mode), Entries that are selected in the list and active are shown with a vertical red line next to their name.



If you select a different Style, the Entry remains selected in the list, but it is no longer active, since its content has been replaced by a different Style. The red line disappears.



If the Entry is still active, but you have deselected it in the Book page (by keeping the SHIFT button pressed and touching the Entry's name), the red line is still shown, but the Entry's name is no longer highlighted. Any list operation you do will have no effect on this Entry.



## Multiple selection of SongBook Entries

[3.1]

The Book page now includes a Select Mode button.

While in the Book page of the SongBook, you can select several Entries at the same time before executing an operation.



To decide either to select target Entries in a consecutive or separate way, use the Select Mode button on the right of the page command buttons, and choose how pressing the SHIFT button will work.

Select Mode	Meaning
	Choose this option to select the target Entries consecutively (i.e., in a row).
	Choose this option to select the target Entries separately (i.e., with other Entries in the middle).

### Select multiple Entries separately

- 1 Touch the Select Mode button to choose the SHIFT function.
- 2 Select the first Entry to be selected.
- 3 Press and keep the SHIFT button pressed.
- 4 Select a second Entry to be selected.
- 5 While keeping the SHIFT button pressed, continue selecting the other Entries to be selected.

## 6 Release the SHIFT button.



### Select multiple Entries consecutively

- 1 Touch the Select Mode button to choose the SHIFT function.
- 2 Select the first Entry to be selected.
- 3 Press and keep the SHIFT button pressed.
- 4 Select the last Entry to be selected.
- 5 Release the SHIFT button.



### Deselect the Entries

- To deselect one or more Entries, without deselecting everything, keep SHIFT pressed and touch the items to be deselected.
- To deselect everything, select any other Entry. All selected Entries will be deselected.

## Selected song indicator in a Set List blinking

[2.0]

Songs are assigned to the buttons whose indicator is turned on. Each row of tiles corresponds to a group of three buttons. The indicator on the selected song blinks.



Indicator status	Meaning
Off	No song assigned.
On	Song assigned.
Blinking	Song selected.



## Saving different Styles or Songs

[2.0]

With each SongBook Entry, a reference to a Style or Song is saved. When editing an Entry, you can change it with a different Style or Song.

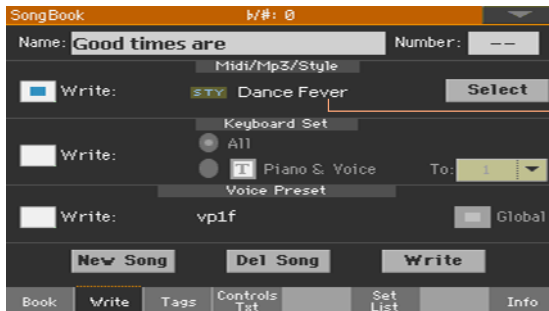
- 1 Choose the SongBook Entry to be edited.
- 2 Go to the SongBook > Write page, and touch the Style/Song > Select button to open the Style Select or Song Select window.



Touch to choose a different Style or Song

- 3 Choose a different Style or Song.

The Style/Song area will show the Style or Song you just selected.



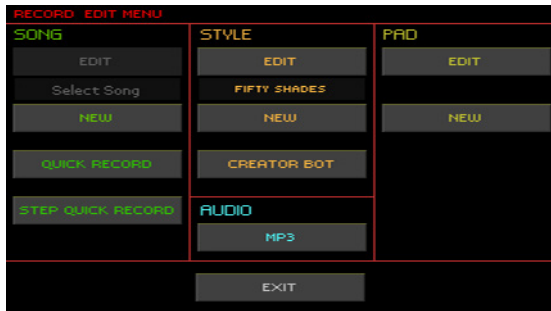
Replaced Style or Song

- 4 Be sure the Style/Song > Write checkbox is selected, to save the new Style or Song and replace the older one.
- 5 If you don't want to replace the Keyboard Sets or Voice Preset, be sure the other Write checkboxes are not selected.
- 6 Touch the Write button to save over the exiting SongBook Entry.

## Record/Edit

### Consolidated Record/Edit menu to access any Record mode [3.0]

You no longer have to first select an operative mode to gain access to the corresponding Record mode. Just press the RECORD button from any mode, and the Record/Edit Menu will appear, letting you choose the item to record (or edit) and the preferred Record mode.



# Style Record

## Added pages to the Style Record mode

[2.0]

To make Style editing faster, the following pages have been added to the Style Record mode. These pages are the same you can find in the Song Play mode.

Mode	Section	Page
Style Record	Style Track Controls	Mode
		Drum Edit
		Sound Edit
		Drum Map
		Range/Wrap
	Mixer/Tuning	Volume/Pan
		Insert FX
		FX Send
		EQ Gain
		EQ Control
		Tuning
	Master Effects	FX A

## New ways of listening to the recorded Style

[2.0]

The procedure for listening to the recorded Styles has been revised.

### Testing chords

While in Style/Pad Record, the keyboard can play chords to drive the recorded musical patterns, and a piano sound to help you test the patterns. How chords are recognized depends on the status of the SPLIT indicator.

SPLIT indicator	Lower	Upper
On	Lower chord scan	Piano sound
Off	Full chord scan, piano sound	
Blinking	Full chord scan, no sound	

## Listening to the results

- 1 Press the **START/STOP** button to check how the musical pattern works.
- 2 Play a chord, and test the patterns.
- 3 Press **START/STOP** again to stop playback.

## Empty Chord Variations shown by an asterisk

[2.0]

While in Style Record, when an asterisk (\*) appears next to a CV abbreviation (CV1\* ... CV6\*), the Chord Variation is empty. Abbreviations are no longer shown in lower cases.

## Checking the available Chord Variations

[2.0]

You can see which Chord Variations contain data (having been recorded or imported) in the current Style.

- Go to the **Style Record > Chord Table & Variation > Chord Variation** page.



Dimmed Chord Variations are empty.

While in the **Chord Table** page you can see which Chord Variations have been used in the current Style Element, this page lets you see which Chord Variations are contained in the whole Style. If there are unused Chord Variations, you may choose to delete them to make the Style file lighter, or to assign them to a chord.

## Style Creator Bot importing Chord Sequences

[2.0]

The Style Creator Bot (formerly, MIDI to Style Converter) now also imports chords into a Chord Sequence. After conversion, you will get a Style including all the Style Elements, the four Pads, the four Keyboard Sets and a Chord Sequence containing the chords recognized in the source MIDI Song.

# Sequencer

## Revised Quick Record page

[3.0]

The Quick Record mode has been deeply revised. After you press the RECORD button and choose the Quick Record option, you are presented with a page looking very similar to the main page of the Style Play mode.



When in this page, you can do everything you would do while in play. The only difference being the Record parameters under the header of the page, and the top-right part of the display.

- The name of the Song and the current M(easure) will appear on top of the page.
- Use the Kbd Set/Pad and Chord/Acc pop-up menus to choose the status of the two Quick Record tracks.
- Use the Resolution pop-up menu to choose the recording grid quantize resolution.
- Check the remaining recording memory with the Free Memory indicator.

## Backing Sequence recording the KAOSS effects

[2.0]

While recording, you can use the KAOSS effects as if you were using them live.

- 1 While in the Backing Sequence Record page, touch the KAOSS button to access the KAOSS page.



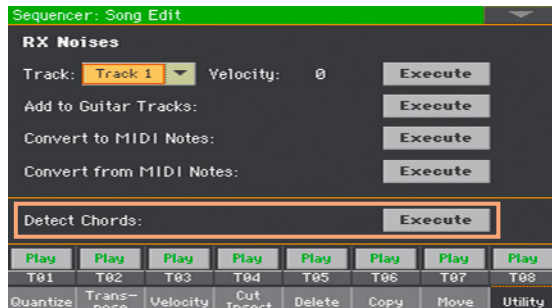
- 2 Choose one of the KAOSS Preset by using the Preset menu or the Favorite buttons.
- 3 Start recording.
- 4 If you want to return to the Backing Sequence Record page, while continuing to record, press the EXIT button.
- 5 End recording.

## Converting MIDI Song's notes to chords

[2.0]

The Detect Chord function scans the MIDI Song's tracks to detect chords, and then saves them as Chords events, to be seen in the Lyrics or Score page.

- 1 Go to the Sequencer > Song Edit > Utility page.



- 2 Touch the **Execute** button next to the **Detect Chords** parameter to automatically analyze the Standard MIDI File, and find chords.

This command scans the whole Standard MIDI File, looking for chords. After scanning, chords will be automatically saved in the file as Chords events.

## Importing a MIDI Song without initializing the current settings [1.1]

While in the Sequencer mode, you can import a MIDI Song without initializing the current Sequencer settings. This is useful when you are, for example, programming a Song on an external sequencer, and at the same time editing the Sounds, Effects, EQ, Volume Levels, Pan values, Drum Family parameters, etc., right on the Pa4X. Importing the MID file will not reset these settings.

- 1 Press the **SEQUENCER** button to go to the main page of the Sequencer mode.
- 2 Choose the **Import** command from the page menu, and open the **Song Selection** window.
- 3 Browse through the files and folders. When you see the MIDI Song (.mid) you want to import, touch it, then touch the **Select** button to import it.

## MP3 encoding [1.2]

When recording MP3 Songs, the resulting MP3 files are now encoded as CBR files, instead of VBR. While VBR (Variable Bit Rate) could be more efficient in reducing the file size, CBR (Constant Bit Rate) will always result in a predictable audio quality, but will produce a slightly larger file.

Quality	Meaning
Highest	256 kbps
High	192 kbps
Medium	128 kbps



# Sound Edit

## Modified Mono Legato

[3.0]

The Mono Legato now includes the new Legato Offset option. The On/Off checkbox of the previous version is now replaced by a pop-up menu.

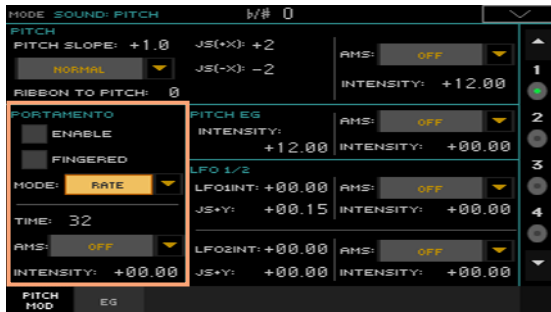


While in the Sound > Basic > Sound page, with the Legato checkbox selected, you can now choose one of the following options.

Legato	Meaning
Legato Off	Legato phrasing will produce the same sound as detached playing.
Legato	Legato will make the second note's attack smoother. Envelope and LFO will not be retriggered. This is particularly effective analog synth-type sounds.
Legato Offset	When you play legato, the second and subsequent notes will restart without playing the attack part of the sample. This is particularly effective with real sounds, like wind instruments.  The resulting effect depends on the selected multisample.

## Portamento now featuring Rate and Time parameters [3.0]

Portamento can now operate in one of two different modes: by Rate or by Time.



While in the Sound > Pitch > Pitch Mod page, you can now choose one of the following options.

Mode	Meaning
Rate	Portamento will take a particular time to glide a given distance in pitch - for instance, one second per octave. Put another way, gliding several octaves will take much longer than gliding a half-step.
Time	Portamento will always take the same amount of time to glide from one note to another, regardless of the difference in pitch. This is especially useful when playing chords, since it ensures that each note in the chord will end its glide at the same time.

The Time parameter can also be modulated by an AMS (Alternate Modulation Source).

- Use the AMS and Intensity parameters to choose the AMS modulation source and its intensity.

The Intensity parameter controls the depth and direction of the Portamento Time AMS modulation.

## Volume levels expressed in dB

[1.1]

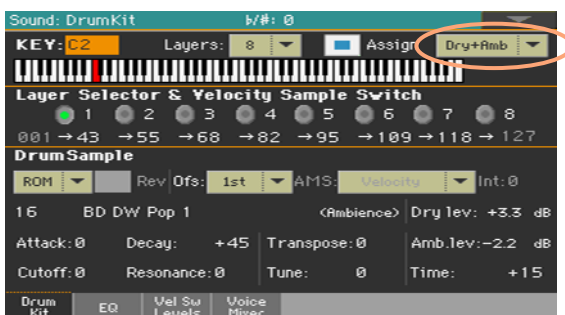
When editing a Sound or Drum Kit, volume levels are expressed in decibels (dB), with a resolution of 0.1 dB.

Sound/DK	Value
Sound	-Inf, -50...+00 dB
Drum Kit	-Inf, -50...+00...+6 dB. Depending on the sound, the maximum level could be automatically limited.

## Dry+Amb menu

[1.1]

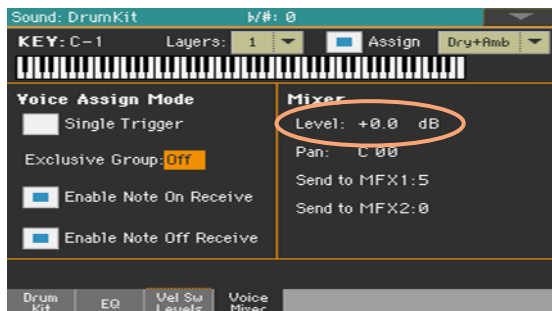
A new Dry+Amb menu has been added to all the Sound Edit > DrumKit section pages, where you can choose the dry and/or ambient portion of the sound. This menu is useful to separately listen to the dry or ambient sound while editing.



## Level parameter

[1.1]

A Level parameter has been added to the Sound > DrumKit > Voice Mixer page.



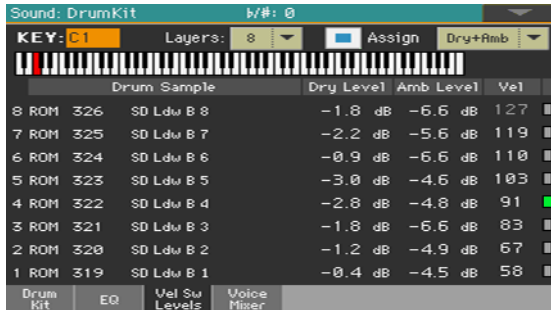
- Use the Level parameter to set the level of the selected key.

## Mixing the Drum Kit layers

[1.1]

When editing Drum Kits, you can access the **Velocity Switch Levels** page, where you can see all the Drum Samples, dry/ambient levels, and velocity switches of the available layers. While in this page, you can see which layer is playing.

- Go to the Sound > DrumKit > Velocity Switch Levels page.



### View which layer is playing

- Play a note on the keyboard. Depending on the velocity, an indicator will turn on on the extreme right of the page, next to the layer that is playing.

### Choose the drum sample

- Use the ROM/RAM parameter to choose the bank (ROM or RAM).
- Use the drum sample name parameter to assign a different drum sample to each layer.

### Adjust the dry/ambient level

- Use the Dry Level and Amb Level parameters to adjust the level of the dry and ambient portion of the sound.

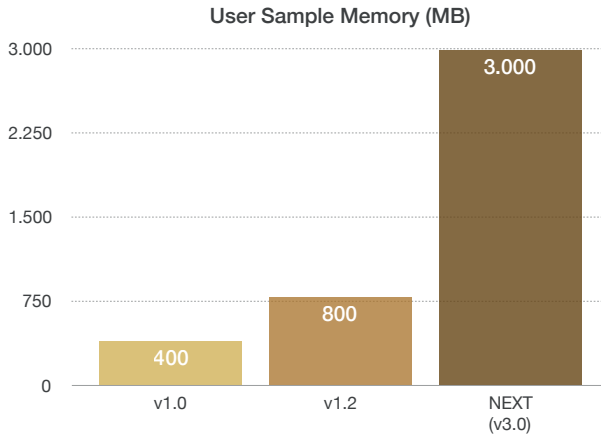
### Adjust the velocity switch

- Use the Vel parameter to adjust the velocity switch between the layers.

# Sampling

## Direct reading, for increased User Sample memory [3.0]

User Samples can now be read directly from disk. As a consequence, the User Sample memory is more than three times larger than before. You can now read 1.5 GB of User Samples, which becomes 3.0 GB after compression.



## Increased maximum number of User Samples [2.2]

The maximum number of User Samples you can load has been increased.

## Compressed User Samples

[1.2]

Pa4X can read and play compressed User Samples. It can compress User Samples when saving them, or in batch. Sample compression allows for doubling the available User Sample memory. Compressed Samples from Pa3X can also be read and played back.

Compressed Samples can no longer be decompressed. If you want to keep the original Samples, please save a copy before compressing them.

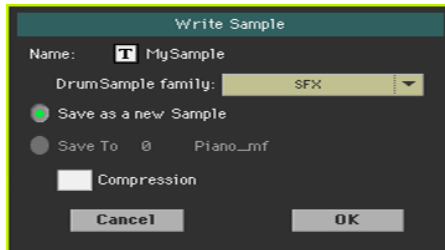
### Loading compressed User Samples

Load compressed User Samples exactly as you load the other Samples.

### Compressing User Samples when writing them

You can compress a User Sample while writing it to the internal memory.

- 1 While in any page of Sample editing section, choose the Write command from the page menu to open the Write Sample dialog.



- 2 While in this dialog, select the Compression checkbox, to reduce the size of the sample up to a half of its original size. Please note that compression may require a long time.

Compressed Samples will have an asterisk (\*) added to their name.

### Compressing all User Samples in memory

You can compress all the User Samples contained in the User Sample memory.

### Turn off the Auto Power Off function

If you have more than a few Samples to compress, deactivating the automatic power off function is strongly suggested.

- 1 Go to the Global > General Controls > Clock & Power page.
- 2 Deselect the Auto Power Off checkbox.

## Compress the Samples

- 1 While in any page of Sample editing section, choose the **Compress all samples** command from the page menu to run compression.
- 2 A message appears, warning about the long times needed to compress all the Samples. Touch OK to confirm.

Please do not turn the instrument off while compression is going on.

When finished, compressed Samples will appear with an asterisk (\*) added to their name.

## Turn on the Auto Power Off function

- 1 Go to the **Global > General Controls > Clock & Power** page.
- 2 Select the **Auto Power Off** checkbox.

## Compression, short loops, low volume

[3.0]

Loops shorter than 16 samples, and samples with volume too low (often resulting from sample slicing) can't be compressed. If you can't write a sample while in the Write Sample dialog, disable the Compression option, then retry writing.



## Sample Info page added

[3.0]

The Sampling > Info page has been divided into two separate pages. Sample Info gives information on the number of Samples, Drum Samples and Multisamples in the User Sample memory.

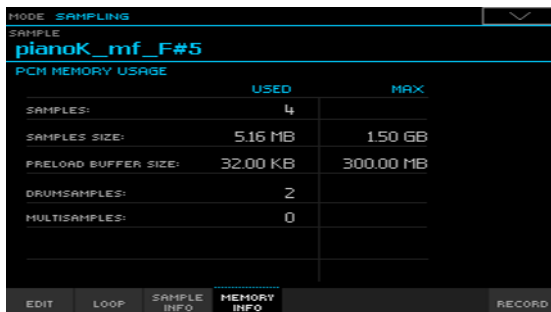


Sample Edit Info	Meaning
Selected Samples	Size of the selected sample (in samples).
Samples	Total size of the samples in memory (in samples).
Sampling Frequency	Sampling frequency of the selected sample (in Hertz).

## Memory Info page added

[3.0]

The Sampling > Info page has been divided into two separate pages. Memory Info gives information on the total and used space in the User Sample memory.



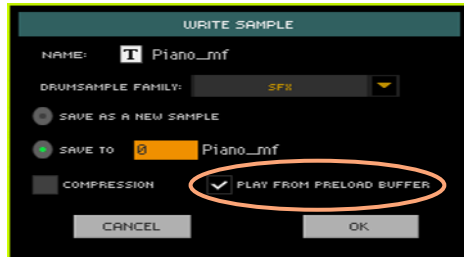


Pa4X can use up to 1.5 GB of User Sample Memory without compression. This is the maximum amount of non-compressed Samples that can be loaded or recorded. In case you need more User Sample memory, you can compress the Samples and then load up to 3.0 GB of Samples.

PCM Memory Usage	Meaning
Samples	Number of Samples in memory.
Samples Size	Size of the Samples in memory.
Preload Buffer Size	Amount of memory buffer reserved to preload Samples from the virtual memory (on disk) to the RAM memory.
DrumSamples	Number of Drum Samples in memory.
MultiSamples	Number of Multisamples in memory.

## 'Play from preload buffer' option added to the Write Sample dialog [3.0]

The Play from preload buffer option has been added to the Write Sample dialog. When this option is selected, the sample will be entirely loaded to the RAM memory the next time it is selected.



This option is normally not needed. You can however select it when you need the sample to play over the full pitch range, or if you plan to use the sample in reverse.

With some Samples, you may not be able to transpose up enough, and higher-pitched notes may sound at the wrong pitch. Since Samples entirely read from RAM can be transposed higher than Samples read direct-from-disk, if there are issues with higher-pitched notes, you may want to try with this option checked.

Also, reversing User Samples is only allowed when the Samples are fully loaded into the RAM memory.

### Preload buffer and compression

Since compression can't be applied to Samples loaded to RAM, when the Compression parameter is checked you can't select the Play from preload buffer parameter.

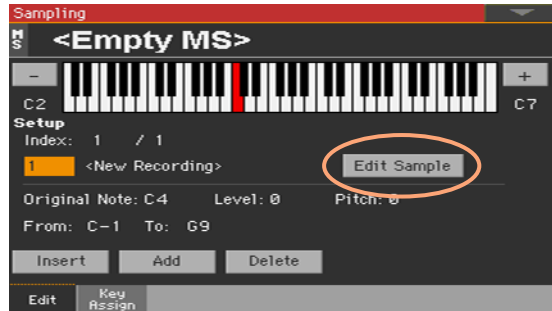
Compressed Samples can be transposed more than non-compressed Samples read direct-from-disk. They can be transposed less than non-compressed Samples entirely read from RAM.

Type of sample	Transposition
Non-compressed direct-from-disk	Less
Compressed direct-from-disk	Average
Non-compressed from RAM	More

## Edit Sample button

[1.2]

The Edit Sample button has been added to the Sampling > Multisample > Edit page. By touching it, you will go to the Sampling > Sample > Edit page with the selected sample.



## Sample Select window modified

[3.1]

The Sample Select window, that opens when touching the name of a sample in the Sampling > Sample pages, has been modified.

NUMBER	NAME	COMP	PROT	PREL
39	Talk Music (16R)			
40	Talk Music (17R)			
41	Talk Music (18R)			
42	pianoK_mf_F#5L			
43	pianoK_mf_F#5R			
44	pianoK_mf_G5L	<input checked="" type="checkbox"/>		
45	pianoK_mf_G5R			
46	pianoK_mf_G5L		<input checked="" type="checkbox"/>	
47	pianoK_mf_G5R		<input checked="" type="checkbox"/>	
48	pianoK_mf_G5L		<input checked="" type="checkbox"/>	
49	pianoK_mf_G5R		<input checked="" type="checkbox"/>	
50	pianoK_mf_G5bL			<input checked="" type="checkbox"/>
51	pianoK_mf_G5bR			<input checked="" type="checkbox"/>

Compressed sample

Protected sample

'Play from Preload Buffer' enabled

Sample number

Sample name

The Sample Select window contains various information about the samples in memory.

Parameter	Meaning
Sample number	Progressive number of the sample.
Sample name	Name of the sample.
Compressed sample	When the checkmark appears, the sample is compressed. You can enable/disable compression when writing the sample (in the Write Sample dialog). Compressed samples can't be entirely loaded into memory, and are always read directly from disk.

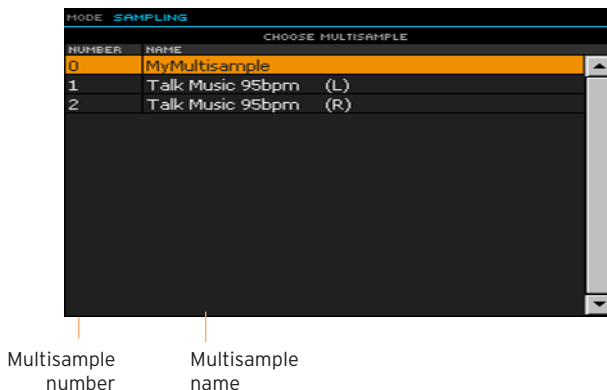
Parameter	Meaning
Protected sample	When the checkmark appears, the sample is copy protected. Be sure the protection key was inserted when turning the instrument on, or you will not be able to use the protected data. If you forgot to do it, insert the protection key and restart the instrument.
'Play from Preload Buffer' enabled	When the checkmark appears, the sample contains the 'Play from Preload Buffer' flag, and will be entirely loaded into memory. You can enable/disable this flag when writing the sample (in the Write Sample dialog). This type of sample can't be compressed.

## Accelerated scrolling in the Sample Select window [3.1]

While in the Sample Select window of the Sampling mode, you can scroll the list of samples by rotating the VALUE dial. When rotating it faster, the scrolling speed increases exponentially.

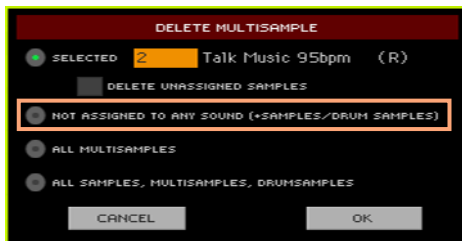
## MultiSample Select window modified [3.1]

The MultiSample Select window, that opens when touching the name of a multisample in the Sampling > MultiSample pages, has been slightly modified.



## New 'Delete MultiSample > Not assigned to any Sound (+Samples/Drum Samples)' option [3.1]

A new option has been added to the Delete MultiSample dialog, that can be recalled from the page menu of the Sampling > MultiSample pages.



### Deleting all the multisamples, samples and drum samples not assigned to any Sound or Drum Kit

- Select the Not assigned to any Sound (+Samples/Drum Samples), and touch OK to confirm.

Select this command to delete from the User Sample memory all the multisamples, samples and drum samples that are not used by any Sound or Drum Kit. This will clean up the memory from all 'unlinked' multisamples, samples and drum samples that have remained in memory after deleting some Sounds or Drum Kits.

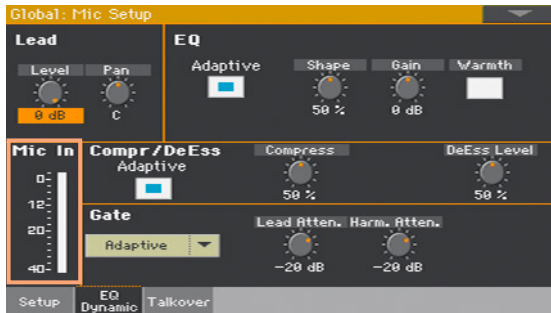
If you want to only delete all the 'unlinked' samples and drum samples, without deleting any multisample or drum kit, please use the Delete command that can be accessed from the page menu of the Sampling > Sample pages. Be sure to choose the Not assigned to any Multisample/DrumKit option in the Delete Sample dialog.

# Audio Inputs

## Accurate microphone input metering

[2.0]

When adjusting the microphone input gain, you have more accurate control by checking the input level in the Global > Mic Setup > EQ/Dynamics page.



## Effects

### Early Reflections Hi Dens FX assignment

**[1.1]**

The Early Reflections Hi Dens FX can now only be assigned to the MFX A2/3 or B2 effect processors. This will ensure it always has the needed processing power.

### Noise Gate added to some guitar effects

**[2.0]**

A Noise Gate has been added to the following effects: GuitarAmp + Cabinet, Amp Clean Combo + Cab, Amp California + Cab, Amp Tweed + Cab, Amp Modded OD + Cab.

## KAOSS FX

### KAOSS FX feature added

[2.0]

KAOSS effects are a new, easy-to-use set of computer-assisted composition features.

Please, refer to the User Manual for detailed information on how to use them.



## Global and Preferences

### Locking the Slider Mode

[1.1]

A new lock has been added to the Global > General Controls > Lock > Control page.

Control lock	Meaning
Slider Mode	When locked, selecting a Keyboard Set, Style or SongBook Entry will not change the status of the SLIDER MODE indicator.

### Locking the Fill Mode

[1.2]

A new lock has been added to the Global > General Controls > Lock > Style page.

Control lock	Meaning
Fill Mode	When locked, the selected Fill Mode will not change when choosing a different Style or SongBook Entry.

### Low battery warning at startup

[3.0]

When the clock backup battery has a low charge, you are warned at startup. Please replace the battery with a new one, as explained in the Quick Guide or User Manual.

After replacing the battery, please set the date and clock, as explained in the User Manual.

### Saving the Song Preferences is now a menu command

[2.0]

The Write Song Play Track & FX command is now in the page menu.

- Go to the Global > Mode Preferences > Song & Seq. page, and choose the Write Song Play Track & FX command from the page menu.

## Controllers

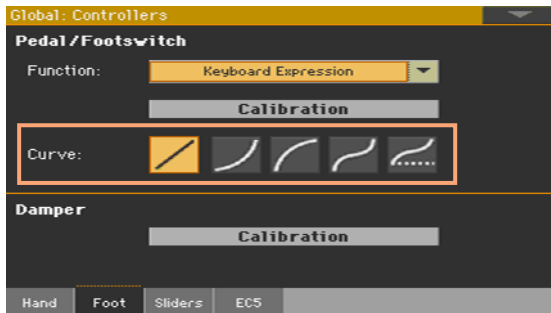
### Added compatibility with the VOX V860 volume pedal [2.1]

Pa4X is now compatible with the VOX V860 volume pedal.

### Curve presets for the volume/expression pedal [2.1]






**Note:** When installing OS v2.1, please recalibrate the volume/expression pedal and choose a curve. Older settings may no longer work.

With some functions assigned to a volume/expression pedal, you can choose a curve, shaping how the pedal will affect the function. When a curve can't be applied, the curve diagrams will appear dimmed.



### Choosing a curve preset

- 1 Be sure to have connected an expression pedal, calibrated it, and selected a function. Curve presets can only be selected with some functions.
- 2 Touch one of the Curve buttons to select a curve preset.

Curve	Meaning
	Linear response.
	Exponential response. The function value will change faster toward the top of the pedal range.
	Logarithmic response. The function value will change slower toward the top of the pedal range.
	S-shaped response. The function value will change faster toward the bottom and the top of the pedal range, and will be smoother in the middle.
	S-shaped with offset response. As the previous one, but starting from a value higher than zero.

## New functions assignable to the assignable sliders

[1.2]

New functions have been added to the assignable sliders. Some names have been revised. Please find following the updated list, with the new functions highlighted.

Slider function	Meaning
Off	No function assigned
Master Volume	Master Volume control
Keyboard Expression	Relative Volume of the Keyboard Sounds. All the other Sounds will not be varied.
Style Drum&Perc.Vol.(Gbl)	The same as the Style Volume sliders in the Global > Mode Preferences > Styles page.
Style Bass Vol.(Gbl)	
Style Accomp.Vol.(Gbl)	
Kbd Upper 1 Volume	Volume of the corresponding Keyboard Sound.
Kbd Upper 2 Volume	
Kbd Upper 3 Volume	
Kbd Lower Volume	
Pad Volume	Pads volume control
Pad 1...4 Volume	Volume of the corresponding Pad.
Style Drum Volume	Volume of the corresponding Style track.
Style Perc Volume	
Style Bass Volume	
Style Acc 1...5 Volume	
Song Track 1...16 Volume	Volume of the corresponding MIDI Song track.
SMF Melody Volume	Volume of the corresponding MIDI Song's special tracks (selected in the Global > Mode Preferences > Song & Seq page).
SMF Drum&Bass Mode Vol.	
Joystick X+	Replicates the joystick right movement
Joystick X-	Replicates the joystick left movement
Joystick Y+	Replicates the joystick forward movement
Joystick Y-	Replicates the joystick backward movement
Upper VDF Cutoff	Filter cutoff (for Sounds assigned to the Upper tracks)
Upper VDF Resonance	Filter resonance (for Sounds assigned to the Upper tracks)

Slider function	Meaning
Mic Lead Voice Level	Continuous controls assigned to the Voice Processor
Mic Harmony Level	
Mic Double Level	
Mic Filter Level	
Mic uMod Level	
Mic Delay Level	
Mic Reverb Level	
Mic EQ Gain Low	
Mic EQ Gain Mid	
Mic EQ Gain High	
FX CC12 Ctrl	Standard FX controllers, used as DMS modulations. How they work depends on the Effects programming.
FX CC13 Ctrl	

## New functions assignable to the assignable switches [1.2]

New functions have been added to the assignable switches. Some names have been revised. Please find following the updated lists, with the new functions highlighted.

Switch function	Meaning
Off	No function assigned
Ritardando	Slowing down or making the Tempo faster, according to the curves programmed in the Global > General Controls > Basic page.
Accelerando	
Style Up	Selects the next Style
Style Down	Selects the previous Style
Kbd Set Library Up	Selects the next Keyboard Set from the KEYBOARD SET LIBRARY
Kbd Set Library Down	Selects the previous Keyboard Set from the KEYBOARD SET LIBRARY
Sound Up	Selects the next Sound
Sound Down	Selects the previous Sound
Synchro Start	Same functions as the control panel buttons with the same name
Synchro Stop	

Switch function	Meaning
Style Drum Mute	Mute of the corresponding track
Style Perc Mute	
Style Bass Mute	
Style Acc1...5 Mute	
Style Acc 1-5 Mute	Mute/Unmute all the Acc tracks at once
Song Melody Mute	Mutes the MIDI Song track set as the Melody track (Global > Mode Preference > Song & Seq.)
Vocal Remover	Removes the lead voice from the MP3 Song
Song Drum&Bass Mode	Mute of all MIDI Song tracks, except the Bass and Drum tracks (as set in the Global > Mode Preference > Song & Seq. page). It doesn't work on MP3 Songs.
Solo Selected Track	Turns track solo on/off
Bass&Lower Backing	When the Style is not playing and the keyboard is in Split mode, you can play the Lower Sound with your left hand, while the Bass still plays the chord root.
QuarterTone	Turns Quarter Tone on/off
Retune Style	Makes the instrument wait for a chord. The root of the chord will be the new root of the scale used by some of the Style tracks.
Global-Scale	When the switch or footswitch is pressed, the Global > Tuning > Scale page is recalled
SubScale Preset 1...15 - SC1...15	Same functions as the SC Preset buttons in the display
Mic Talk	Switch controls assigned to the Voice Processor
Mic Lead On/Off	
Mic Filter On/Off	
Mic HardTune On/Off	
Mic uMod On/Off	
Mic Delay On/Off	
FX CC12 Switch	
FX CC13 Switch	
Rotary Spkr On/Off	Rotary Speaker effect controls
Rotary Spkr Fast/Slow	
Drawbar Perc On/Off	Turns Drawbar Percussion of/off
Text Page Next	These options let you move to the previous or next page, when reading a text file automatically loaded with a Song or SongBook Entry, or manually loaded from the Lyrics page.
Text Page Prev	
Set List Next	Moves to the next SongBook Entry in the selected Set List
Set List Prev	Moves to the previous SongBook Entry in the selected Set List

Switch function	Meaning
Sound Controller 1	DNC Sound Controllers (CC#80 and CC#81). They control the function assigned in Sound Edit in DNC Sounds.
Sound Controller 2	

## Functions assignable to a footswitch pedal

[1.1]

New functions have been added to the footswitch pedal. Some names have been revised. Please find following the updated list, with the new functions highlighted.

Footswitch function	Meaning	
Off	No function assigned	
Style Start/Stop	Same functions as the control panel buttons with the same name	
Play/Stop Player 1		
Play/Stop Player 2		
Go to Beginning Player 1		
Go to Beginning Player 2		
Chord Seq. Record		
Chord Seq. Play		
Synchro Start		
Synchro Stop		
Tap Tempo/Reset		
Tempo Lock		
Ritardando		Slowing down or making the Tempo faster, according to the curves programmed in the Global > General Controls > Basic page.
Accelerando		
Tempo Up		Same functions as the control panel buttons with the same name
Tempo Down		
Intro 1...3/Count In	Selects the corresponding Intro	
Ending 1..3	Selects the corresponding Ending	
Fill 1...4	Selects the corresponding Fill	
Break	Selects the Break	
Variation 1...4	Selects the corresponding Variation	
Variation Up	Selects the next Variation	
Variation Down	Selects the previous Variation	

Footswitch function	Meaning
Fade In/Out	Same functions as the control panel button with the same name
Memory	
Bass Inversion	
Manual Bass	
Split	
Style Up	Selects the next Style
Style Down	Selects the previous Style
Kbd Set Mode	Same function as the control panel button with the same name
Kbd Set 1...4	Selects the corresponding Keyboard Set from the KEYBOARD SET section under the display
Kbd Set Up	Selects the next Keyboard Set from the KEYBOARD SET section under the display
Kbd Set Down	Selects the previous Keyboard Set from the KEYBOARD SET section under the display
Kbd Set Library Up	Selects the next Keyboard Set from the KEYBOARD SET LIBRARY
Kbd Set Library Down	Selects the previous Keyboard Set from the KEYBOARD SET LIBRARY
Sound Up	Selects the next Sound
Sound Down	Selects the previous Sound
Transpose (b)	Same functions as the control panel buttons with the same name
Transpose (#)	
Upper Octave Up	
Upper Octave Down	
Punch In/Out	
Kbd Upper1...3 Mute	Mute of the corresponding Sound.
Kbd Lower Mute	
Style Drum Mute	
Style Perc Mute	
Style Bass Mute	
Style Acc1...5 Mute	
Style Acc1-5 Mute	Mute/Unmute all the Acc tracks at once
Song Melody Mute	Mutes the MIDI Song track set as the Melody track (Global > Mode Preference > Song & Seq.).
Vocal Remover	Removes the lead voice from the MP3 Song
Song Drum&Bass Mode	Mute of all MIDI Song tracks, except the Bass and Drum tracks (as set in the Global > Mode Preference > Song & Seq. page). It doesn't work on MP3 Songs.

Footswitch function	Meaning
Solo Selected Track	Turns track solo on/off
Damper Pedal	Damper function. Corresponds to the right pedal of an acoustic piano. It holds the notes played when the pedal is pressed down.
Soft Pedal	Soft function. Corresponds to the 'una corda' pedal of an acoustic piano. Makes the sound softer.
Sostenuto Pedal	Sostenuto function. Corresponds to the left pedal of a grand piano. It holds the notes already held when pressing the pedal down.
Bass&Lower Backing	When the Style is not playing and the keyboard is in Split mode, you can play the Lower Sound with your left hand, while the Bass still plays the chord root.
Ensemble	Turns Ensemble on/off
QuarterTone	Turns Quarter Tone on/off
Retune Style	Makes the instrument wait for a chord. The root of the chord will be the new root of the scale used by some of the Style tracks.
Global-Scale	When the switch or footswitch is pressed, the Global > Tuning > Scale page is recalled.
SubScale Preset 1...15 - SC1...15	Same functions as the SC Preset buttons in the display
Chord Latch	Holds the recognized chord until the pedal is released
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 in the Global > General Controls > Basic page.
Mic In Mute	Switch controls assigned to the Voice Processor
Mic Talk	
Mic Lead On/Off	
Mic Harmony On/Off	
Mic Double On/Off	
Mic Filter On/Off	
Mic Hard Tune On/Off	
Mic uMod On/Off	
Mic Delay On/Off	
Mic Reverb On/Off	
FX CC12 Switch	Standard FX switches. How they work depends on the Effects programming.
FX CC13 Switch	
Rotary Spkr On/Off	Rotary Speaker effect controls
Rotary Spkr Fast/Slow	



Footswitch function	Meaning
Drawbar Perc On/Off	Turns Drawbar Percussion of/off
Text Page Next	These options let you move to the previous or next page, when reading a text file automatically loaded with a Song or SongBook Entry, or manually loaded from the Lyrics page.
Text Page Prev	
Set List Next	Moves to the next SongBook Entry in the selected Set List.
Set List Prev	Moves to the previous SongBook Entry in the selected Set List.
Pad 1...4	Same functions as the control panel buttons with the same name
Pad Stop	
Sound Controller 1	DNC Sound Controllers (CC#80 and CC#81). They control the function assigned in Sound Edit in DNC Sounds.
Sound Controller 2	

## Functions assignable to an expression pedal

[1.2]

Some names of the functions assignable to the expression pedal have been revised. Some names have been revised. Please find following the updated list, with the revised functions highlighted.

Pedal function	Meaning
Master Volume	Master Volume control
Accompaniment Volume	Volume of the Accompaniment Sounds
Keyboard Expression	Relative Volume of the Keyboard Sounds. All the other Sounds will not be varied.
Pad Volume	Volume of the MP3 Songs
Joystick X+	Replicates the joystick right movement
Joystick X-	Replicates the joystick left movement
Joystick Y+	Replicates the joystick forward movement
Joystick Y-	Replicates the joystick backward movement
Upper VDF Cutoff	Filter cutoff (for Sounds assigned to the Upper tracks)
Upper VDF Resonance	Filter resonance (for Sounds assigned to the Upper tracks)

Pedal function	Meaning
Mic In Volume	Continuous controls assigned to the Voice Processor
Mic Lead Voice Level	
Mic Harmony/Double Level	
Mic Harmony Level	
Mic Double Level	
Mic Filter Level	
Mic uMod Level	
Mic Delay/Reverb Level	
Mic Delay Level	
Mic Reverb Level	
Mic EQ Gain Low	
Mic EQ Gain Mid	
Mic EQ Gain High	
FX CC12 Ctrl	Standard FX controllers, used as DMS modulations. How they work depends on the Effects programming.
FX CC13 Ctrl	

## Functions assignable to an EC5 switch

[1.2]

New functions have been added to the EC5 switches. Some names have been revised. Please find following the updated list, with the new functions highlighted.

EC5 function	Meaning	
Off	No function assigned	
Style Start/Stop	Same functions as the control panel buttons with the same name	
Play/Stop Player 1		
Play/Stop Player 2		
Go to Beginning Player 1		
Go to Beginning Player 2		
Chord Seq. Record		
Chord Seq. Play		
Synchro Start		
Synchro Stop		
Tap Tempo/Reset		
Tempo Lock		
Ritardando		Slowing down or making the Tempo faster, according to the curves programmed in the Global > General Controls > Basic page.
Accelerando		
Tempo Up	Same functions as the control panel buttons with the same name	
Tempo Down		
Intro 1...3/Count In	Selects the corresponding Intro	
Ending 1...3	Selects the corresponding Ending	
Fill 1...4	Selects the corresponding Fill	
Break	Selects the Break	
Variation 1..4	Selects the corresponding Variation	
Variation Up	Selects the next Variation	
Variation Down	Selects the previous Variation	
Fade In/Out	Same functions as the control panel button with the same name	
Memory		
Bass Inversion		
Manual Bass		
Split		
Style Up		Selects the next Style
Style Down		Selects the previous Style

EC5 function	Meaning
Kbd Set Mode	Same function as the control panel button with the same name
Kbd Set 1...4	Selects the corresponding Keyboard Set from the KEYBOARD SET section under the display
Kbd Set Up	Selects the next Keyboard Set from the KEYBOARD SET section under the display
Kbd Set Down	Selects the previous Keyboard Set from the KEYBOARD SET section under the display
Kbd Set Library Up	Selects the next Keyboard Set from the KEYBOARD SET LIBRARY
Kbd Set Library Down	Selects the previous Keyboard Set from the KEYBOARD SET LIBRARY
Sound Up	Selects the next Sound
Sound Down	Selects the previous Sound
Transpose (b)	Same functions as the control panel buttons with the same name
Transpose (#)	
Upper Octave Up	
Upper Octave Down	
Punch In/Out	
Kbd Upper1...3 Mute	Mute of the corresponding Sound.
Kbd Lower Mute	
Style Drum Mute	
Style Perc Mute	
Style Bass Mute	
Style Acc1...5 Mute	
Style Acc1-5 Mute	Mute/Unmute all the Acc tracks at once
Song Melody Mute	Mutes the MIDI Song track set as the Melody track (Global > Mode Preference > Song & Seq.).
Vocal Remover	Removes the lead voice from the MP3 Song
Song Drum&Bass Mode	Mute of all MIDI Song tracks, except the Bass and Drum tracks (as set in the Global > Mode Preference > Song & Seq. page). It doesn't work on MP3 Songs.
Solo Selected Track	Turns track solo on/off
Damper Pedal	Damper function. Corresponds to the right pedal of an acoustic piano. It holds the notes played when the pedal is pressed down.
Soft Pedal	Soft function. Corresponds to the 'una corda' pedal of an acoustic piano. Makes the sound softer.
Sostenuto Pedal	Sostenuto function. Corresponds to the left pedal of a grand piano. It holds the notes already held when pressing the pedal down.

EC5 function	Meaning
Bass&Lower Backing	When the Style is not playing and the keyboard is in Split mode, you can play the Lower Sound with your left hand, while the Bass still plays the chord root.
Ensemble	Turns Ensemble on/off
QuarterTone	Turns Quarter Tone on/off
Retune Style	Makes the instrument wait for a chord. The root of the chord will be the new root of the scale used by some of the Style tracks.
Global-Scale	When the switch or footswitch is pressed, the Global > Tuning > Scale page is recalled.
SubScale Preset 1...15 - SC1...15	Same functions as the SC Preset buttons in the display
Chord Latch	Holds the recognized chord until the pedal is released
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 in the Global > General Controls > Basic page.
Mic In Mute	Switch controls assigned to the Voice Processor
Mic Talk	
Mic Lead On/Off	
Mic Harmony On/Off	
Mic Double On/Off	
Mic Filter On/Off	
Mic Hard Tune On/Off	
Mic uMod On/Off	
Mic Delay On/Off	
Mic Reverb On/Off	
FX CC12 Switch	Standard FX switches. How they work depends on the Effects programming.
FX CC13 Switch	
Rotary Spkr On/Off	Rotary Speaker effect controls
Rotary Spkr Fast/Slow	
Drawbar Perc On/Off	Turns Drawbar Percussion of/off
Text Page Next	These options let you move to the previous or next page, when reading a text file automatically loaded with a Song or SongBook Entry, or manually loaded from the Lyrics page.
Text Page Prev	
Set List Next	Moves to the next SongBook Entry in the selected Set List.
Set List Prev	Moves to the previous SongBook Entry in the selected Set List.
Pad 1...4	Same functions as the control panel buttons with the same name
Pad Stop	

EC5 function	Meaning
Sound Controller 1	DNC Sound Controllers (CC#80 and CC#81). They control the function assigned in Sound Edit in DNC Sounds.
Sound Controller 2	

## Tuning and scales

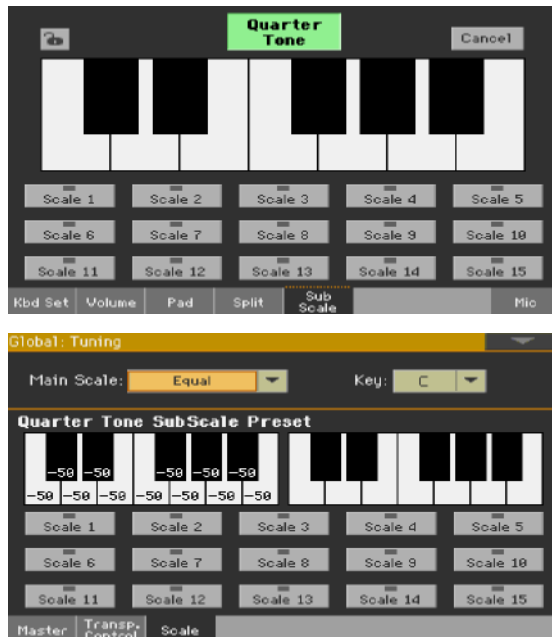
### More SC Presets (Quarter Tone Scales)

[1.2]

SC Presets, that let you instantly recall a Quarter Tone sub-scale, are now 15 and can be renamed.

#### More SC Presets

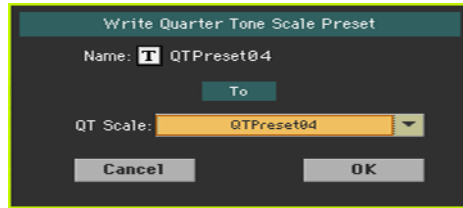
While in the Style Play/Song Play > main page > Sub-Scale pane, or in the Global > Tuning > Scale page, you can touch one of the 15 buttons to choose the corresponding SC Preset. The saved Quarter Tone sub-scale will be selected.



#### Renaming the SC Presets

When saving them, you can rename the SC Presets, to give them a meaningful name.

- 1 While in the Global > Tuning > Scale page, choose the Write Quarter Tone SC Preset command from the page menu to open the Write Quarter Tone Scale Preset dialog.



- 2 Touch the Text Edit ( **T** ) button if you want to assign the SC Preset a new name.
- 3 Choose one of the SC Preset locations to save the new scale, then confirm by touching the OK button.

## Style Element's Scale

[1.1]

To make programming easier, the Style Element's Scale can only be a User scale. The Style Record > Style Element Track Controls > Scale page has been modified to include this change.



## Retuning the Style while playing

[1.1]

While in the Style Record > Style Element Track Controls > Scale page, you can choose a sub-scale for each Style Element, and enable the sub-scale on each track of the Style Element.

This scale starts from a root key, that can change with each recognized chord, or after a deliberate command. Depending on your style of music, you will choose how to retune the Style.



How you choose the scale's root key will depend on two concurrent parameters: the **Chord Follow** option inside the **Style**, and the **Retune Style** parameter assigned to an assignable switch, footswitch or EC5 switch.

Retune Style	Chord Follow	Scale's Root Key
-	On	From each recognized chord.
	Off	From the chord recognized when the accompaniment is not playing.
Assigned	On	From the chord recognized while the accompaniment is not playing, or after pressing the assignable switch.
	Off	

## Enabling the Chord Follow option

- 1 Go to the **Style Record > Style Element Track Controls > Scale** page.



- 2 Use the **Chord Follow** checkbox to turn the option on or off. See the table above to see how it works.

While each **Style Element** can have its own scale, this option is common to all **Style Elements** in the **Style**.

## Assigning the Retune Style command to an assignable switch, footswitch or EC5 switch

Assign the **Retune Style** command to an assignable switch

- 1 Go to the **Style Play/Song Play > Pad/Switch > Switch** page.
- 2 Use one of the **Switch 1...3** menus to choose a command to be assigned to the corresponding switch. Since the first two switches are usually assigned to the **Sound Controllers**, we suggest you use **Switch #3**.
- 3 Write the changes to a **Keyboard Set**. Writing to the special **MY SETTING** **Keyboard Set** makes this setting available when turning the instrument on.

- 4 Be sure the lock is closed; this will leave the assignable switch functions unchanged when choosing different Keyboard Sets.

### Assign the Retune Style command to a footswitch or EC5 switch

- 1 Go to the Global > Controllers > Foot or EC5 page.
- 2 Use the Function or one of the A...E menus to choose a command to be assigned to the corresponding switch.

### Using the Retune Style command

When the Retune Style command is assigned to an assignable switch, footswitch or EC5 switch, use it to change the Style Element Scale's root key.

After choosing a Style, check the main page of the Style Play mode. If at least one of the Style Elements has a sub-scale assigned, and it is enabled on at least one of the tracks, the Key parameter will appear in the Style area.



### Retune with an assignable switch

- 1 Just before having to retune the Style, press the assignable switch. The indicator will start flashing.
- 2 Play a chord in the chord recognition area. The root of the chord will be the new root of the scale. The indicator will stop flashing.

### Retune with a footswitch or EC5 switch

- 1 Just before having to retune the Style, press the footswitch or EC5 switch.
- 2 Play a chord in the chord recognition area. The root of the chord will be the new root of the scale.

# MIDI

## USB HOST as a MIDI connection

[2.0]

You can use the USB HOST as a MIDI connection, to connect other musical instruments to be used as controllers.

## Added MIDI Presets to connect external devices

[3.0]

You can control Pa-Series instrument with an external controller, like a KORG synthesizer, a controller of the KORG nano series, a mute master keyboard, a digital piano, or a breath controller.

These devices allow to replace the internal keyboard with an external one. Also, they allow for adding new controls to play some of the sounds while still using the internal keyboard for the other sounds. Furthermore, they allow for easier mixing, or to play percussions and special effects.

A new set of MIDI Presets allow for quickly configuring the MIDI parameters to interface with this type of devices. The following table lists the new MIDI Presets.

MIDI Preset	Use
Key Control	To play the Upper 3 Sound with an external keyboard.
Mix Control	To control the Volume and Pan of each Sound with an external controller.
Pad Control	To play percussive sounds or special effects (on the Upper 3) from an external set of pads. You can also use it to send chords to the internal arranger.
X/Y Control	To control two sound parameters on the Upper 1 with an external X/Y controller.
Studio Ctrl	To connect various different controllers at the same time.
Breath Ctrl	To control one or more sound parameters on the Upper 1 with a breath controller.

The following tables show details on the MIDI parameters configured by the new MIDI Presets.

Parameter	Key Control	Mix Control	Pad Control	X/Y Control	
MIDI IN Channel	1	Upper 3	Pad 1	Upper 3	Upper 1
	2	-	Pad 2	-	-
	3	-	Pad 3	-	-
	4	-	Pad 4	-	-
	5	-	Lower	-	-
	6	-	Upper 3	-	-
	7	-	Upper 2	-	-
	8	-	Upper 1	-	-
	9	-	Drum	-	-
	10	-	Percussion	-	-
	11	-	Bass	-	-
	12	-	Acc 1	-	-
	13	-	Acc 2	-	-
	14	-	Acc 3	-	-
	15	-	Acc 4	-	-
	16	-	Acc 5	Chord 1	-
MIDI OUT Channel	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	-
	4	-	-	-	-
	5	-	-	-	-
	6	-	-	-	-
	7	-	-	-	-
	8	-	-	-	-
	9	-	-	-	-
	10	-	-	-	-
	11	-	-	-	-
	12	-	-	-	-
	13	-	-	-	-
	14	-	-	-	-
	15	-	-	-	-
	16	-	-	-	-
MIDI IN Oct. Trp.	On	On	On	On	
MIDI IN Track Mute Active	-	-	-	-	

Parameter		Studio Ctrl	Breath Ctrl
MIDI IN Channel	1	Upper 1	Upper 1
	2	Upper 2	-
	3	Upper 3	-
	4	Lower	-
	5	Pad 1	-
	6	Pad 2	-
	7	Pad 3	-
	8	Pad 4	-
	9	Drum	-
	10	Percussion	-
	11	Bass	-
	12	Acc 1	-
	13	Acc 2	-
	14	Acc 3	-
	15	Acc 4	-
	16	Acc 5	-
MIDI OUT Channel	1	-	-
	2	-	-
	3	-	-
	4	-	-
	5	-	-
	6	-	-
	7	-	-
	8	-	-
	9	-	-
	10	-	-
	11	-	-
	12	-	-
	13	-	-
	14	-	-
	15	-	-
	16	-	-
MIDI IN Oct. Trp.		On	On
MIDI IN Track Mute Active		-	-

## Choosing the Styles and Keyboard Sets via MIDI

[1.2]

Styles and Keyboard Sets (from the Library) can be remotely selected via MIDI. To select them, send a sequence of Control Change #00, Control Change #32 and Program Change messages on the special Control channel.

### Configuring the Control channel

- 1 Go to the Global > MIDI > General Controls page and choose a MIDI Preset to be used as a starting point.
- 2 Go to the Global > MIDI > Midi In Channel page, and assign the Control option to one of the sixteen available MIDI channels (usually one of the higher-numbered ones, for example #16).
- 3 When done, save these settings to a new or existing MIDI Preset, by choosing the Write Midi Preset command from the page menu. Blank locations are shown as a series of dashes ('---').

### Selecting the Styles and Keyboard Sets

The Control Change/Program Change values corresponding to each Style and Keyboard Set is shown in the relevant lists in the Appendix of the User Manual.

In general, these are the values of Control Change #00.

Styles	CC00	Keyboard Sets (Library)	CC00
Factory	0	Factory	16
Favorite	1	User	17
User	2	Direct User	18
Direct Favorite	3		
Direct User	4		

## Remote control of the Synchro Start/Stop commands

[3.0]

The Synchro Start and Synchro Stop commands can now be turned on/off via MIDI. You can remotely control them, by sending the Program Change #106 (Synchro Start) and #107 (Synchro Stop) messages on the Control channel.

## Fixed Note Off Velocity on received notes

[2.0]

Received notes can now have a fixed Note Off velocity value. This is useful when playing Pa4X with a controller sending a too high Note Off velocity value (usually 64).

- 1 Go to the Global > MIDI > MIDI IN Controls page.
- 2 Use the Fixed Note Off Velocity parameter to set a fixed Note Off velocity value for all the notes received via MIDI.

## Master Transpose and Quarter Tone Scales sent and received via MIDI

[1.2]

Master Transpose and Quarter Tone Scale settings are now sent and received via MIDI.

- Master Transpose is in a standard format, that can be received by all GM-compliant devices.
- Quarter Tone Scale settings are in a proprietary format, that can be understood by all Pa-Series instruments including this feature.

## Video Output

### Video Mode saved in the Global

[2.0]

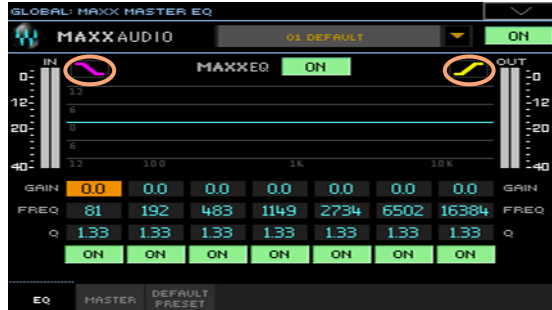
The Video Mode (Lyrics or Display Mirror) is no longer reset on startup.



## Master Effects

### Different MAXX EQ curves can now be selected [3.0]

While in the Global > MAXX/MasterEQ > EQ page, you can now select the type of EQ curve for the lowest and highest bands.



- Touch the curve shape on the top-left or top-right corner of the EQ diagram, and choose between a bell-shaped and a low-shelf or high-shelf type of curve.

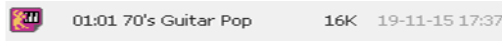
Bell-shape curves (📏) allow for detailed correction of a specific range of frequencies. Shelving curves (📏 📏) allow for smoothly cutting out or emphasizing the lowest or highest frequencies.

# File management

## Date and time assigned to each musical resource [1.1]

Date and time are now assigned to each single musical resource (a single Sound, a single Style...), instead of a whole bank. When saving a musical resource, the current date and time are updated. Older, unsaved resources in the same bank take the same date and time of the saved resource.

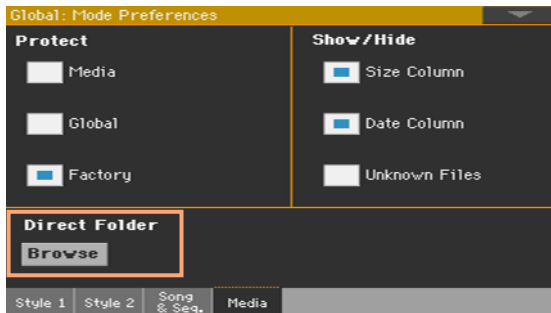
Since the date and time of the older, unsaved resources are not the real date and time they were last modified, they will appear dimmed in a file list.



## Direct folder selection procedure revised [2.0]

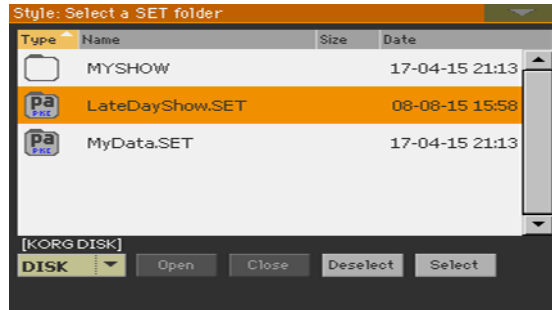
The Direct folder, containing Direct Styles, Keyboard Sets and SongBook, is now selected in the Global.

- 1 Connect the external storage device containing the Direct data.
- 2 Go to the Global > Mode Preferences > Media page.



- 3 Touch the Direct Folder > Browse button to open the file selector.

- Browse through the drives and folders, and select the SET folder to be used as the Direct set of banks.



- Touch the Select button to confirm.

Please note that you can only have a single Direct folder of Keyboard Sets, Styles, SongBook.

- If you select a folder from a different Pa-Series model, you are asked if you want to convert the data to the Pa4X own format. If you confirm, you are prompted to choose a name and position for the new SET folder. (If you touch Cancel, no Direct folder is selected).
- When done, go to a Select window, and see how the Direct type of data can be selected from the tabs on top of the list.



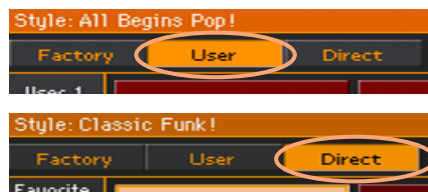
The Direct SongBook Entries and Set Lists will be automatically added to the internal Entries and Set Lists.

## Renaming the Favorite/User/Direct banks

[2.0]

You can rename the User/Favorite and Direct User/ Favorite banks, to create your own sets of Keyboard Sets, Styles, or Pads.

- Open the Keyboard Set, Style, or Pad Select window, and select the User or Direct type of data.



- 2 Choose the Rename User Banks command from the page menu to open the Rename User Banks dialog.



- 3 Assign the User/Favorite or Direct User/Favorite tabs any name you like.

Touch the Text Edit ( **T** ) icon next to the bank to be renamed, and use the virtual keyboard to edit the name. When done, touch OK to confirm.

The assigned name can be spanned over two lines, by separating them with the paragraph character (¶). For example, to write “World Music” on two lines, enter “World¶Music”.

Be careful not to write words exceeding the width of the side tabs of the Keyboard Set Library Select or Style Select window.

- 4 When back at the Rename User Banks dialog, confirm the operation by touching the OK button.

## Importing from older instruments procedure revised [2.0]

You can load most data from KORG Pa-Series instruments. Please keep in mind that, depending on the actual data, you could not be able to directly load SET folders; in this case, open the folder, and load each bank or individual item separately.

After loading, save the converted data as a new SET folder after loading all the needed data.

## Factory and Favorite Protect (Pa4X Oriental) [1.2]

A Factory and Favorite Protect checkbox has been added to the Global > Mode Preferences > Media page of the Pa4X Oriental. When selected, this option protects all the Factory data and the Favorite Styles from editing.

## Automatic memory cleaning when a Load operations including User Samples is interrupted [3.1]

When you load a single User Sound, or a bank of User Sounds, based on User Samples, you might reach the maximum size of sample data, or the maximum number of samples allowed in memory.

In this case, the Load operation is interrupted, and all the samples and multisamples just loaded are removed from the memory. All the samples and multisamples already contained in the memory before starting the Load operation are left untouched.

Sounds and Drum Kits are however left in memory. If you select them in the Sound Select window, you may end up with them not sounding, since the referring samples are missing. Please delete them, or repeat loading with selected Sounds or Sound banks.

## Automatic file deletion when a Save operations is interrupted [3.1]

If, when saving, there isn't enough free space in the target disk, the Save operation is interrupted. Any new SET folder you were creating is removed. If you were saving over an existing SET folder, this is restored. No data will be saved.

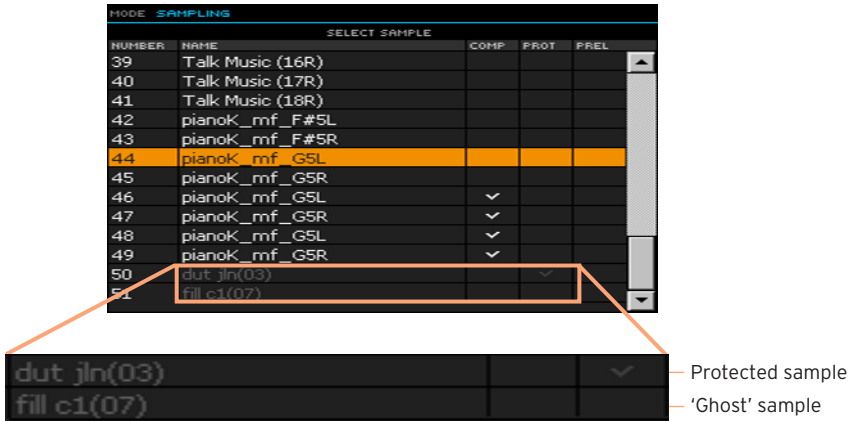
Please choose a different (and bigger) target device, and repeat the Save operation.

## Removing 'ghost' samples [3.1]

### How to identify 'ghost' samples in memory

'Ghost' samples are items that only exist as names and pointers, but not as actual sample data. They are usually the result of corrupt data, maybe created by importing of malformed data.

You can identify them by going to a **Sampling > Sample** page, and touching the name of the selected sample to open the **Sample Select** window.



- A dimmed name, with the Prot(ected) checkmark shown means that the sample is protected, and the protection key has not been inserted at startup.
- A dimmed name, without the Prot(edcted) checkmark shown means that this is a 'ghost' sample.

### How to remove 'ghost' samples

To remove the 'ghost' samples, you can do one of the following:

- Load a single User Sound, or a bank of User Sounds, based on User Samples. In this case, the samples you are loading are merged with the ones already in the internal memory.
- Load a SET folder containing User Sounds based on User Samples, or all the User Sounds from a SET folder. In this case, the samples you are loading will replace the existing ones in the internal memory.

When loading even a single User Sound or Drum Kit based on User Samples, Pa4X checks if there are 'ghost' samples in the instrument's memory. When these 'ghost' samples are found, they are automatically removed from the internal memory.

After loading, Pa4X also saves a as an **UnlinkedPCMs.csv** file in the root of the KORG DISK, listing all the data pointing to a 'ghost' sample. You can open this file with any spreadsheet program, and check which data is affected.

## How to delete Sounds and Drum Kits that were referring to 'ghost' samples

By opening the automatically generated `UnlinkedPCMs.csv` file, you can see the name of the Sounds and Drum Kits that contain references to the deleted 'ghost' samples.

At this point, you can go to the **main page**, open the **Sound Select** window and delete them. You can also find them by using the **Search** function.

## How to delete multisamples that were referring to 'ghost' samples

After having removed the 'ghost' samples and the Sounds and Drum Kit that were referring to them, you can automatically remove the 'orphaned' multisamples.

- 1 Go to a **Sampling > MultiSample** page.
- 2 Choose the **Delete** command from the **page menu** to open the **Delete Multisample** dialog, and select the **Not assigned to any Sound (+Samples/ Drum Samples)** option.
- 3 Confirm deleting the 'orphaned' multisamples from memory.

## Save the cleaned data

After the 'ghost' samples and all the referring data have been removed, go to the **Media > Save** page, and save the **User Sounds** into a **SET** folder, that will be cleaned of unwanted data. You can save the **User Sounds** alone, or do a **Save All** to entirely regenerate the **SET** folder.

## Shortcuts

### New shortcut to quickly select Samples and Multisamples [3.0]

A new shortcut has been added to the Sampling > Sample > Edit and Multisample > Edit pages.

Shift +	Functions
<b>Sampling</b>	
Dial, Up/Down	Scrolls through the list of Samples or Multisamples in memory

### New shortcuts

[1.1]

Some shortcuts have been added. Please find following the updated lists, with the new shortcuts highlighted.

### Shift functions

You can keep the SHIFT button pressed, and press another button on the control panel to directly jump to an edit page or dialog box.

Shift +	Functions
<b>Various modes</b>	
Dial, Up/Down	Tempo Change
Scroll Arrows	When a list is shown: Goes to Next/Previous alphabetical section of the currently selected column
Sound	Sends the Sound assigned to the selected track to the Sound mode
Global	Selects the Global > MIDI > General Controls page. This is a quick way to jump to MIDI editing pages.
Media	Selects the Global > Mode Preferences > Media page
Start/Stop	Panic; stops all notes playing, and resets all controllers
Fade In/Out	Selects the Fade In/Out Time parameter in the Global > General Controls > Basic page
Auto Fill	Selects the Global > Mode Preferences > Style page
Synchro Start/Stop	Selects the Global > Midi > General Controls page
Tempo Lock	Selects the Global > General Controls > Lock page
Upper Octave (either)	Selects the Style Play/Song Play > Mixer/Tuning > Tuning page



<b>Shift +</b>	<b>Functions</b>
Transpose (either)	Selects the Global > Tuning > Transpose Controls page
Slider Mode	Selects the Global > Controllers > Sliders page
Slider	Proportionally changes the volume level of the Sounds/tracks of the same type (all the Upper Sounds, all the Song tracks...)
<b>Style Play mode</b>	
Style Play	Selects the Global > Mode Preferences > Style page
Chord Scan buttons	
Memory	
Variation	Selects the corresponding Variation in the Style Play > Controls > Drum Map page
Ensemble	Selects the Ensemble Type parameter in the Style Play > Keyboard/Ensemble > Ensemble page
Pad (any)	Selects the Pad/Switches > Pad page
Assignable Switch (any)	Selects the Pad/Switches > Switch page
<b>Song Play mode</b>	
Song Play	Selects the Global > Mode Preferences > Song & Seq page
Play/Stop (Player 1 or 2)	Sync Start of either Players
<b>JukeBox</b>	
>>	Play the next Song in the JukeBox list
<<	Play the previous Song in the JukeBox list
<b>Lyrics</b>	
Display	Load a TXT file
<b>Sequencer mode</b>	
Sequencer	Selects the Global > Mode Preferences > Song & Seq page
<b>Microphone</b>	
Mic	Selects the Global > Mic Setup > Setup page
Harmony	Selects the Style Play/Song Play/Sequence > Voice Preset > Harmony page
Double	Selects the Style Play/Song Play/Sequence > Voice Preset > Double page

## Long keypress

You can keep a button pressed for about one second to directly jump to an edit page or dialog box.

Long keypress	Functions
<b>Any mode</b>	
Split	Opens the Split Point dialog box. Play a note to set the new Split Point.
<b>Style Play mode</b>	
Style buttons	Opens the Write Current Style Settings window
<b>Style Play and Song Play mode</b>	
Keyboard Set Library buttons	Opens the Write Keyboard Set to Library window
Keyboard Set buttons (under the display)	Opens the Write Keyboard Set to Style window
My Setting	Opens the Write My Setting window
Mic/Voice Preset	Opens the Write Voice Preset window
SongBook	Create a new SongBook Entry and opens the Write Song window (only if pressed outside the SongBook)
Record	Opens the MP3 Record dialog box
<b>Global mode</b>	
Global	Touch Panel Calibration

## Special functions

Other available shortcuts are the following ones.

<b>Style Play mode</b>	
Tempo +/- (together)	Original Tempo
Transpose #/b (together)	Set the Master Transpose to 0
Upper Octave +/- (together)	Set the Upper Octave to the original setting

## Musical Resources

[3.0]

### New Styles

There are new Styles in various musical genres. The Styles marked with the 'FS' suffix are Free-Style, that is, with no drums and percussion, leaving you free to create your own tempo.

Style	CC00	CC32	PC
<b>Favorite/Pop</b>			
Venus Pop	1	0	19
Wake Me Pop	1	0	20
Crazy Little Pop	1	0	21
We Are Champ	1	0	22
Croco Rock	1	0	23
6/8 Pop Rock	1	0	24
Hip Rock'n Roll	1	0	25
Lovely Pop	1	0	26
Ride Wind Pop	1	0	27
Because Nite Pop	1	0	28
Soul Family Pop	1	0	29
Meneater Pop	1	0	30
Eve In Sky Pop	1	0	31
<b>Favorite/Ballad</b>			
Groove Ballad	1	1	9
Steel Ballad	1	1	10
<b>Latin Dance</b>			
Latin Pop Bolero	0	8	32
<b>Movie &amp; Show</b>			
ActionMovie 12/8	0	10	29
Action Movie 4/4	0	10	30
Wizard Movie 3/4	0	10	31
KidsMovie Ballad	0	10	32
Abstract Orch.FS	0	10	33
80's Synth FS	0	10	34

Style	CC00	CC32	PC
BroadwayMovie FS	0	10	35
Angel Voice FS	0	10	36
Western Movie FS	0	10	37
Chillout FS	0	10	38
<b>Funk &amp; Blues</b>			
Blues Shuffle	0	11	46
Slow Blues	0	11	47

### New and enhanced Keyboard Sets

There are new and enhanced Electric Pianos and Drawbar Organs.

Electric Pianos now get advantage of the realistic vintage amps and stomp box effects (chorus, phaser...) we modeled on the originals from the Seventies.

Drawbar Organs are now based on the entirely revised organ simulator, with better balancing between drawbars, and more authentic amp simulation. Sounds with note names in their name correspond to the original presets of the most famous of all the electric organs.

### New Keyboard Sets

Keyboard Set	CC00	CC32	PC
<b>E.Piano</b>			
Pure Suitcase EP	16	1	32
Suitcase Chorus	16	1	33
Pure Stage EP	16	1	34
Stage EP Chorus	16	1	35
Pure Wurlly	16	1	36

Keyboard Set	CC00	CC32	PC
Wurly Chorus	16	1	37
Suitcase Atmosph	16	1	38
StageEP Atmosph	16	1	39
Suitcase Tremolo	16	1	40
Stage EP Tremolo	16	1	41
Wurly Tremolo	16	1	42
Suitcase Phaser	16	1	43
Stage EP Phaser	16	1	44
Stage EP Amp	16	1	45
Stage EP Amp/Cho	16	1	46
Stage EP DynoMy	16	1	47
Organ			
DWB Org. 2 Aft	16	2	40
DWB Full Org Y+	16	2	41
DWB Jazz Org2 Y+	16	2	42
DWB Clas.Perc2Y+	16	2	43
DWB Deep Perc.Y+	16	2	44
DWB Perc. 4' Y+	16	2	45
DWB Jazz Org3 Y+	16	2	46
DWB Overd. Y+	16	2	47
User/Drawbar Organ			
DWB Jazz C# Y+	17	6	0
DWB Jazz D Y+	17	6	1
DWB Jazz D# Y+	17	6	2
DWB AWSOP Y+	17	6	3
DWB Class. 1 Y+	17	6	4
DWB Class. 2 Y+	17	6	5
DWB Class. 3 Y+	17	6	6
DWB Class. 4Y+	17	6	7
DWB Upp C# Y+	17	6	8
DWB Upp D Y+	17	6	9
DWB Upp D# Y+	17	6	10
DWB Upp E Y+	17	6	11
DWB Upp F Y+	17	6	12

Keyboard Set	CC00	CC32	PC
DWB Upp F# Y+	17	6	13
DWB Upp G Y+	17	6	14
DWB Upp G# Y+	17	6	15

## Enhanced Keyboard Sets

Keyboard Set	CC00	CC32	PC
Organ			
DWB Org. 1 Aft	16	2	4
DWB Dark Org Y+	16	2	5
DWB Jazz Org1 Y+	16	2	6
DWB Clas.Perc1Y+	16	2	7
Full DWB1 Y+	16	2	12
Full DWB 2 Y+	16	2	13
DWB Perc.Org.1Y+	16	2	14
DWB Perc.Org.2Y+	16	2	15

## New Sounds

More realistic Electric Pianos have been added. Also, there are new Oriental Sounds, well suited to melody lines.

Sound	CC00	CC32	PC
Factory/E. Piano			
Pure Stage EP	121	46	4
Pure Suitcase EP	121	47	4
Pure Wurly	121	48	4
Factory/Ethnic			
Turk Fill Legato	121	4	111
Double Z Legato	121	5	111
Trpt Wave Legato	121	6	111
Syn Zurna Legato	121	7	111

## Musical Resources

[2.0]

## New Styles

Favorite/Pop			
Kiss Sky Pop	1	0	0
Corazon Pop	1	0	1
Tiger Pop	1	0	2
Mama Say Pop	1	0	3
Sactuary Pop	1	0	4
Coral Keys	1	0	5
Talk Anymore Pop	1	0	6
24000 Magic Pop	1	0	7
Love Inside Pop	1	0	8
B. Jean Pop	1	0	9
Trailer	1	0	10
Through the Pop	1	0	11
Moving Forward	1	0	12
Easy Beat	1	0	13
Stand Up	1	0	14
Pop Promises	1	0	15
Treat & Beat	1	0	16
Feel the Pop	1	0	17
Guitar Pop	1	0	18
Favorite/Ballad			
Paradise Ballad	1	1	0
Sweet Ballad	1	1	1
3/4 Jazz Ballad	1	1	2
Long Life Ballad	1	1	3
Color Ballad	1	1	4
Believe Ballad	1	1	5

True Colors	1	1	6
Analog Feel	1	1	7
Hope Ballad	1	1	8
Favorite/Dance			
Synth Beat	1	2	0
Dance To Trance	1	2	1
EDM Happy Hour	1	2	2
EDM Reggaeton	1	2	3
EDM Remix	1	2	4
NU Disco	1	2	5
Trap Dance 1	1	2	6
Trap Dance 2	1	2	7
Reggaeton DJ	1	2	8
House Class	1	2	9
Deep House	1	2	10
Deep Remix	1	2	11
Trance	1	2	12
Saturday Night	1	2	13
Hey Dance	1	2	14
Slowly L. Dance	1	2	15
Shape Dance	1	2	16
Falling Dance	1	2	17
Revelation Dance	1	2	18
Nuvola	1	2	19
Mind Dance	1	2	20
Rainbow Dance	1	2	21
Techno	1	2	22
HipHop	1	2	23

## New Keyboard Sets

<b>User/Piano</b>			
Italian GRAND	17	0	1
Italian Jazz P.	17	0	2
It.Grand Stack 1	17	0	3
It.Grand Stack 2	17	0	4
Grand & Ensemble	17	0	5
Grand & Orch.	17	0	6
It. Grand Atmo	17	0	7
Octave 2 Pianos	17	0	8
<b>User/Strings &amp; Orch.</b>			
Movie Action	17	1	1
Soft Strings	17	1	2
Strings & Vocal	17	1	3
Movie Orchestra	17	1	4
Vocal Brass	17	1	5
Marcato Strings	17	1	6
Flute & Strings	17	1	7
Soprano &Strings	17	1	8
Steel Gtr & Str.	17	1	9
Vocoder 1	17	1	10
Vocoder 2	17	1	11
Vocoder 3	17	1	12
Vocoder 4	17	1	13
<b>User/Wood &amp; Accord.</b>			
Tenor Jazz Sax 1	17	2	1
Tenor Jazz Sax 2	17	2	2
Robin Whistle	17	2	3
Bandoneon+Short	17	2	4
It. Accordion16'	17	2	5
It. Accordion 8'	17	2	6
It. Acc. 16'+8'	17	2	7
It. Acc. 16'+4'	17	2	8
It.Acc.16'+8'+4'	17	2	9
It. Accordion 4'	17	2	10

It. Acc. 8'+4'	17	2	11
It.Acc.& Strings	17	2	12
<b>User/Pipe Organ</b>			
Tutti A	17	3	1
Tutti B	17	3	2
Sesquialtera	17	3	3
Plenum A	17	3	4
Plenum B	17	3	5
Plenum C	17	3	6
Plenum D	17	3	7
Plenum E	17	3	8
Pipe Cornet	17	3	9
Viola+Cornet	17	3	10
Principal 8'	17	3	11
Pipe Flute 8'	17	3	12
Gamba 8'	17	3	13
Trumpet Pipes	17	3	14
Pipe Octave	17	3	15
Pipe Super Oct.	17	3	16
Pipe Fifth	17	3	17
Principal+Flute	17	3	18
Nazard A	17	3	19
Nazard B	17	3	20
Flute8'+Flute4'	17	3	21
Flute8'+Flute2'	17	3	22
Gamba+Flute	17	3	23
Celeste	17	3	24
Princ 1 - 2 man.	17	3	25
Princ 2 - 2 man.	17	3	26
Princ 3 - 2 man.	17	3	27
Princ 4 - 2 man.	17	3	28
Flute 1 - 2 man.	17	3	29
Flute 2 - 2 man.	17	3	30
Nazard - 2 man.	17	3	31
Terziana - 2 man.	17	3	32

Cornet - 2 man.	17	3	33
Larigot - 2 man.	17	3	34
Trumpet - 2 man.	17	3	35
Plenum1 - 2 man.	17	3	36
Plenum2 - 2 man.	17	3	37
Tutti - 2 man.	17	3	38
<b>User/Synth</b>			
Poly6 + JP8	17	4	1
JP8	17	4	2
80's Mellow	17	4	3
80's Super Pad	17	4	4
Analog Synth	17	4	5
Synth Yes	17	4	6
EDM Synth	17	4	7
Dance Basic	17	4	8
Thin PulSeq DNC	17	4	9
Noise Lead DNC	17	4	10
Synth Whoo	17	4	11
Mellow Perc. Pad	17	4	12
Dance Syn Perc	17	4	13
Lfo Sound bpm	17	4	14
Spire Synth	17	4	15
Leadscape	17	4	16
Fing.GlideSquare	17	4	17
Big Side Attack	17	4	18

Groove SynthGr.	17	4	19
Dubstep Synth	17	4	20
Caos Synth	17	4	21
Robert Bass	17	4	22
Fifth Bass	17	4	23
Widebass	17	4	24
Triangle Solo	17	4	25
Square Solo	17	4	26
Saw Solo	17	4	27
Square & Pulse	17	4	28
16-8-4 & Sub32	17	4	29
<b>User/Fantasy</b>			
Mixed Echoes	17	5	1
Runningbpm	17	5	2
Fisarmony	17	5	3
Pacific Sea	17	5	4
Nighthawk	17	5	5
Wave Echoes	17	5	6
Hans Sound	17	5	7
Landscape	17	5	8
Waterland	17	5	9
Meditation Stack	17	5	10
Layers Enjoy	17	5	11
Ipnotic bpm	17	5	12

## New Sounds

New Sounds v2			
Italian Piano	121	16	0
It. Piano	121	17	0
Italian Jazz P.	121	18	0
It. Grand & Stack	121	13	2
Marimba Syn Seq	121	8	12
Tutti A	121	11	19
Tutti B	121	12	19
Sesquialtera	121	13	19
Plenum A	121	14	19
Plenum B	121	15	19
Plenum C	121	16	19
Plenum D	121	17	19
Plenum E	121	18	19
Pipe Cornet	121	19	19
Viola+Cornet	121	20	19
Principal 8'	121	21	19
Pipe Flute 8'	121	22	19
Gamba 8'	121	23	19
Trumpet Pipes	121	24	19
Pipe Octave	121	25	19
Pipe Super Oct.	121	26	19
Pipe Fifth	121	27	19
Principal+Flute	121	28	19
Nazard A	121	29	19
Nazard B	121	30	19
Flute8'+Flute4'	121	31	19
Flute8'+Flute2'	121	32	19
Gamba+Flute	121	33	19
Celeste	121	34	19
Terziana	121	35	19
Larigot	121	36	19
It. Accordion 16'	121	31	21
It. Accordion 8'	121	32	21

It. Accordion 4'	121	33	21
It. Acc. 16'+Bass	121	34	21
Fisarmony	121	35	21
Bandoneon DNC	121	11	23
Bandoneon Sync	121	12	23
Bandoneon Short	121	13	23
CA Steel Gtr DNC	121	51	25
Groove Gtr Wah	121	30	28
Wide Bass	121	21	38
SimplePulse Bass	121	19	39
Fifth Bass	121	20	39
Robert Bass	121	21	39
Movie Action	121	29	48
Strings & Vocal	121	30	48
Soft Strings	121	20	49
Horns Swell3 DNC	121	45	61
JP8	121	6	62
Vocal Brass	121	6	63
Tenor Sax 2 DN1	121	19	66
Tenor Sax 2 DN2	121	20	66
Soft Tenor DN1	121	21	66
Soft Tenor DN2	121	22	66
Whistle Robin	121	7	78
Fing.GlideSquare	121	16	80
Square Solo	121	17	80
Square & Pulse	121	18	80
Thin PulSeq DNC	121	21	81
Spire Synth	121	22	81
Leadspace	121	23	81
EDM Synth	121	24	81
Dance Basic	121	25	81
Triangle Solo	121	26	81
Saw Solo	121	27	81
16-8-4 & Sub32	121	28	81
Landscape	121	1	82



Dubstep Synth	121	14	84
Caos Synth	121	15	84
Noised Lead DNC	121	20	87
Pacific Sea	121	6	88
Nighthawk	121	7	88
Mellow Perc. Pad	121	8	88
Waterland	121	9	88
Meditation Stack	121	10	88
Big Side Attack	121	18	89
80's Mellow	121	19	89
80's Super Pad	121	20	89
Synth Whooo	121	16	90
Analog Synth	121	17	90
Synth Yes	121	18	90
Poly6 + JP8	121	19	90
Mixed Echoes	121	16	91
Running	121	12	96
Hans Sound	121	13	96
Layers Enjoy	121	11	99
Ipnotic Stack	121	12	99
Lfo Sound bpm	121	5	101
Wave Echoes	121	6	102
Metallic Syn Seq	121	2	114
Dance Syn Perc	121	3	114
Wood&Metal Seq	121	4	114
Shape Sound	121	5	114

## New Drum Kits

New Drum Kits v2			
Trance Kit	120	0	63
Dance Kit Remix	120	0	29
Pop Kit 2 Amb	120	0	70
Pop Kit 3 Amb	120	0	71
Jazz Kit 2 Amb	120	0	83
Brush Kit 1 Amb	120	0	84

## New Multisamples

1427	IT G.Piano V1-L
1428	IT G.Piano V1-R
1429	IT G.Piano V2-L
1430	IT G.Piano V2-R
1431	IT G.Piano V3-L
1432	IT G.Piano V3-R
1433	IT G.Piano V4-L
1434	IT G.Piano V4-R
1435	IT G.Piano V5-L
1436	IT G.Piano V5-R
1437	IT G.Piano V6-L
1438	IT G.Piano V6-R
1439	IT G.Piano Res V1-L
1440	IT G.Piano Res V1-R
1441	IT G.Piano Res V2-L
1442	IT G.Piano Res V2-R
1443	IT G.Piano Res V3-L
1444	IT G.Piano Res V3 -R
1445	IT G.Piano Res V4-L
1446	IT G.Piano Res V4-R
1447	IT G.Piano Res V5-L
1448	IT G.Piano Res V5-R
1449	IT G.Piano Res V6-L
1450	IT G.Piano Res V6-R
1451	Posaune 32 OT-L
1452	Posaune 32 OT-R
1453	Principal OT-L
1454	Principal OT-R

1455	Cornet OT-L
1456	Cornet OT-R
1457	Coppel Flute OT-L
1458	Coppel Flute OT-R
1459	Harmonic Trumpet OT-L
1460	Harmonic Trumpet OT-R
1461	Viola da Gamba OT-L
1462	Viola da Gamba OT-R
1463	Mixture A OT-L
1464	Mixture A OT-R
1465	Mixture B OT-L
1466	Mixture B OT-R
1467	Pieno OT-L
1468	Pieno OT-R
1469	Recorder Vibrato
1470	Whistle Robin
1471	Tenor Sax J Soft
1472	Tenor Sax J mp
1473	Tenor Sax J mf
1474	Tenor Sax J f
1475	Tenor Sax J Growl
1476	Tenor Sax J R-Up
1477	Tenor Sax J R-Dw
1478	Tenor Sax J Falls
1479	IT Accordion Bass V1 OT
1480	IT Accordion Bass V2 OT
1481	IT Accordion Bass V3 OT
1482	IT Accordion Bass Key On
1483	IT Accordion 16 V1 OT

1484	IT Accordion 16 V2 OT
1485	IT Accordion 16 V3 OT
1486	IT Accordion 16 V4 OT
1487	IT Accordion 8 V1 OT
1488	IT Accordion 8 V2 OT
1489	IT Accordion 8 V3 OT
1490	IT Accordion 8 V4 OT
1491	IT Accordion 4 V1 OT
1492	IT Accordion 4 V2 OT
1493	IT Accordion 4 V3 OT
1494	IT Accordion 4 V4 OT
1495	IT Accordion Noise Floor
1496	Bandoneon
1497	Bandoneon Stop
1498	Bandoneon Short
1499	Bandoneon Valve
1500	Bandoneon RX
1501	Ac. Guitar T410
1502	Ac. Guitar T410 Muted
1503	Ac. Guitar T410 Harm
1504	Ac. Guitar T410 RX
1505	J8 Analog Brass L
1506	J8 Analog Brass R
1507	Dumpstep Wha
1508	Dumpstep Lp
1509	Dumpstep One Shot

\* IT Accordion courtesy by PSound.

# IMPROVEMENTS AND BUG FIXES

## Bug fixes in OS 3.1.0

Where	Bug fixes
Keyboard Sets	Switching from Split to Full keyboard mode could reset the Expression values.
Pads	Pads started at the same time could sometimes be out of sync.
Song Play	JukeBox playback could be interrupted when playing very large MIDI files.
	The wrong Style could be selected in Song Play mode, when the Pad Lock was activated.
Lyrics	When using linked TXT files, only seven lines of text were shown instead of eight.
Step Backing Sequence	The wrong Program Change could be selected after editing.
File Management	No operation could be done on a Direct SET folder, after having accessed to the internal drive (KORG DISK) from an external computer.

## Bug fixes in OS 3.0.1

Where	Bug fixes
Audio Inputs	In some cases, the phantom power could no longer be activated on the Microphone input.
Voice Presets	The unique Voice Preset bank can no longer be renamed.
Styles	In some cases, when choosing a different User Style, the wrong Sounds could be assigned to the Accompaniment tracks.
Pads	Pads could play out of sync.
MIDI Songs	With MIDI Songs using both A and B FX blocks, FX B could sometimes not work.

## Improvements and bug fixes in OS 3.0.0

Several minor bug fixes and improvements.

## Improvements and bug fixes in OS 2.2.0

General performance improvements.

## Improvements and bug fixes in OS 2.1.0

General performance improvements.

## Bug fixes in OS 2.0.1

Where	Bug fixes
Split	With the Keyboard Mode (Split/ Full) lock selected, when exiting Style Record mode the keyboard mode was blocked to Full.
SongBook	There were some issues with the Write command, when the filter was enabled in the Book page.
Sampling	The page menu could trigger the wrong commands.
CDG Lyrics	With CDG Lyrics associated to MP3 Songs, selecting a second MP3 Song wouldn't also select the corresponding CDG file. Lyrics were still those of the previous Song.

## Improvements and bug fixes in OS 2.0.0

Several minor bug fixes and improvements.

## Bug fixes in OS 1.2.4

Where	Bug fixes
Style Play	The Damper&Latch status (Global > Mode Preferences > Style page) was not always saved.
Style Record	When entering Style Record mode a second time on a track set to External mode (Style Play > Track Controls > Mode page), notes were not recorded.

Where	Bug fixes
Sequencer	Repeated transposing of all tracks in Song Edit (Sequencer > Song Edit > Transpose page) could crash the system.
Musical Resources	Factory Samples #379 and #380 contained a looping error.

## Improvements and bug fixes in OS 1.2.2, 1.2.3

Maintenance versions only.

### Bug fixes in OS 1.2.1

Where	Bug fixes
Keyboard Sounds	When the Upper Volume Link parameter was selected, the proportional volume change of the Upper Sounds didn't always behave correctly.
Style Play	Fill Mode settings were not saved in the Style Settings and SongBook Entries. When the Fill Mode Lock was selected, depending on the status of other Locks the system could freeze when choosing a Style.
Song Play	After having selected a Song by entering its ID number, the Select button in the Song Select window could no longer be accessed, and no Song could be selected.
SongBook	Depending on the selected Columns preferences, some information was not shown correctly, or some parameters could blink.
Sampling	When loading samples that had been compressed in Pa3X, then decompressed in Pa4X v1.1.3, the samples could play wrongly under Pa4X v1.2.0 if loaded under some circumstances (loading separate Sounds, or only the SOUND folder). Please note that samples saved again with Pa4X v1.1.3 or v1.2.0 were not damaged, and could play correctly after recompressing them; no data could be lost.
Effects for Sounds	When choosing a Style with an Acc track type set to Drum, the Send 2 FX level could appear as set to zero, but a Delay effect could still be heard.
MIDI	After booting, the Clock Send parameter could appear selected, but no clock message was actually sent.

## Bug fixes in OS 1.2.0

Where	Bug fixes
Style Play	When the Memory Mode parameter (Global > Mode Preferences > Style page) was set to Chord + Lower or Fixed Arrangement + Lower, and you selected the Intro 1 or Ending 1, the Lower Sound continued to play.
Keyboard Set (from SongBook or Style)	The name of Keyboard Sets (from the SongBook or Style), if written with a non-Latin alphabet, could be shown with the wrong characters.
Style Record	MIDI events were not recorded in Style Record Mode.
Song Play	If Fast Play was switched on, Player 2 could select the wrong Program Change on track #10.
Sound	After Touch did not work in Sound mode.
Sampling	Some User Samples could be too loud.
Effects for Sounds	The Phase parameter was missing from the St. MultiModeFilter effect.
MIDI	The Clock Send status was not automatically saved to memory.

## Bug fixes in OS 1.1.3

Where	Bug fixes
Boot	Some problems when booting have been solved.

## Bug fixes in OS 1.1.2

Where	Bug fixes
Boot	When routing the MP3 Player to the Out 1+2 audio outputs, the instrument could not boot.

## Improvements in OS 1.1.1

Where	Improvements
FX default parameters	Song Play and Sequencer mode FX default settings have been revised. To load the new parameters, be sure to do a Factory Restore (Global only) after loading the new OS.
Internal HD	To avoid delays in some operations, the internal HD never goes to sleep while the instrument is functioning.

## Bug fixes in OS 1.1.1

Where	Bug fixes
Boot	In some cases, due to some audio parameters not completing initialization, the instrument could not boot.
MP3 Record	Recording could be enabled before the recorder was actually ready. Now, you can only start recording when all preliminary operations have been completed.

## Improvements in OS 1.1.0

Where	Improvements
Various	General improvements in usability and performance.

## Bug fixes in OS 1.1.0

Where	Bug fixes
Lists	When scrolling a list, the list content was only updated when releasing the finger from the scroll control. Now scrolling is continuous.
Styles, Keyboard Sets	When writing a Keyboard Set on a Style containing a Chord Sequence, this latter was deleted.
SongBook	In some cases, Pa4X could freeze when creating a new SongBook Entry.
Sampling	Exporting a multisample could result in a damaged KMP file.
Audio Out	Audio output routing was not always correct.
USB	If switching the instrument off before completing disconnection from a PC's USB port, the internal disk (KORG DISK) could no longer be recognized when switching the instrument on again. While this bug has been fixed, we strongly suggest you disconnect Pa4X from a PC by carefully following the procedure described in the User Manual.







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