

ROBO

Pa4X | OS version 1.2

MAN0010107

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PA4X OPERATING SYSTEM VERSION 1.2

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 instructions supplied with the installation file in our web site (www.korg.com).

After having loaded the operating system, please use the **Media > Utility > Factory Restore** command to load the new global settings. To avoid overwriting the other resources, you may only leave the **Global** option selected when the **Restore** dialog appears.

New functions of OS Version 1.2

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

Where	New functions	Page
Main page	The Style and Keyboard Set areas now show the type of bank.	5
Search	The Search function now also works for Pads, Voice Presets, Samples and Multisamples.	5
Metronome and Tempo	The maximum Tempo value is now 300 BPM.	5
	The lowest metronome volume value is now 10.	5
Voice Processor	Voice Preset no longer saved with Keyboard Sets and Styles.	6
Tuning	Master Transpose no longer saved with Keyboard Sets and Styles.	6
	There are now 15 SC Presets (Quarter Tone Scale Presets). The presets can be renamed.	6
Fill	The Fill Mode parameter allows for automatically selecting a Variation when pressing a FILL/BREAK button.	8
MP3 recording	MP3 files are now compressed using CBR encoding (instead of VBR).	13
Sampling	User Samples can now be compressed.	16
	Edit Sample button added to the Multisample > Edit page.	17
Assignable sliders	New functions can be assigned to the assignable sliders. Some names have been revised.	18
Assignable switches	New functions can be assigned to the assignable switches. Some names have been revised.	19
Expression pedal	Revised names for some functions assignable to the expression pedal.	24
EC5 multiswitch	New functions can be assigned to the EC5 switches. Some names have been revised.	26
Locks	The Fill Mode lock has been added to the Global > General Controls > Lock page.	30
MIDI	Styles and Keyboard Sets can be selected via MIDI.	31
	Master Transpose values are now sent and received via MIDI.	32
	Quarter Tone Scale settings are now sent and received via MIDI.	32
Data protect	(Pa4X Oriental only) Factory and Favorite Protect option added.	32

Functions added by previous OS versions

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

Where	New functions	Page
Style Element Scale	The Style Element's Scale can now only be a User scale.	10
	The Retune Style / Chord Follow function has been added, to let you automatically or manually retune the Style Element's Scale.	10
Sequencer	MIDI Songs can be imported without initializing the current settings.	13
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.	13
	A new Dry+Amb menu has been added to all the Sound Edit > DrumKit section pages.	14
	A Level parameter has been added to the Sound > DrumKit > Voice Mixer page.	14
	A new Velocity Switch Levels page has been added to the Drum Kit Edit mode, to help you mix the Drum Kit layers.	15
Effects	The Early Reflections Hi Dens FX can now only be assigned to the MFX A2/3 or B2 effect processors.	17
Locks	The Slider Mode lock has been added to the Global > General Controls > Lock page.	30
Date and Time	Date and time are now assigned to each single musical resource (a single Sound, a single Style...).	30
Other	New shortcuts have been added.	33

Style and Keyboard Set type shown in the Main page

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

Searching Pads, Voice Presets, Samples and Multisamples

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

Maximum Tempo value

The maximum Tempo value is now 300 BPM.

Lowest Metronome Volume

The lowest metronome volume value is now 10.

Voice Preset no longer saved with Keyboard Sets and Styles

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

The Master Transpose value (set with the **TRANPOSE** 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.

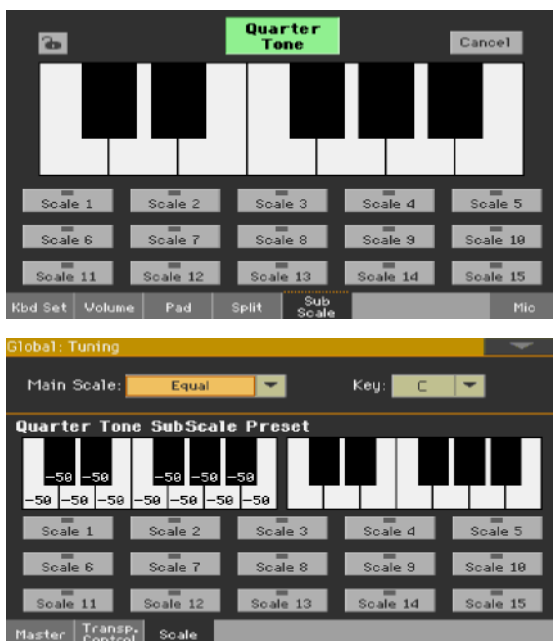
To let the SongBook Entry change the Master Transpose value when selected, be sure the Master Transpose lock is deselected in the **Global > General Controls > Lock > Tuning** page.

More SC Presets (Quarter Tone Scales)

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

More SC Presets

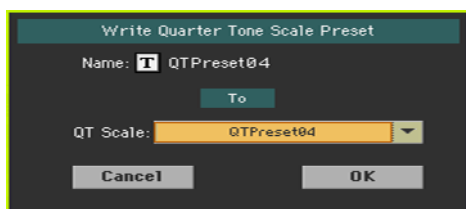
While in the **Style Play/Song Play > main page > Sub-Scale** pane, or in the **Global > Tuning > Scale** page, you can touch one of the 15 buttons to choose the corresponding SC Preset. The saved Quarter Tone sub-scale will be selected.



Renaming the SC Presets

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

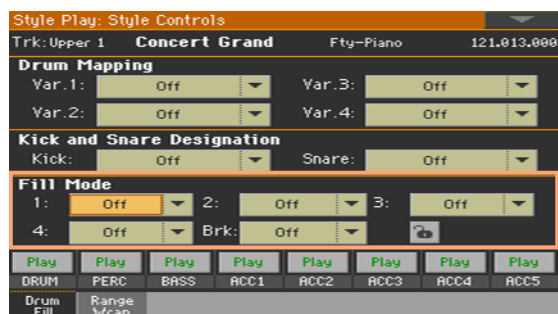
- 1 While in the Global > Tuning > Scale page, choose the Write Quarter Tone SC Preset command from the page menu to open the Write Quarter Tone Scale Preset dialog.



- 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.

Fill Mode

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.

Auto Fill and Fill Mode

Auto Fill and Fill Mode can interact, by doing strictly related things:

- When the **Auto Fill** is enabled (**AUTO FILL** indicator on), you can choose a Variation by pressing one of the **VARIATION** buttons. This will automatically select a Fill, then the chosen Variation. This is the easiest way to select the Variation best fitting the next song section, and let the instrument automatically choose a Fill for you.
- When the **Fill Mode** is programmed in a Style or SongBook Entry, you can choose a Fill or Break by pressing one of the **FILL** or **BREAK** buttons. The chosen Fill or Break will be played back, then the programmed Variation will be automatically selected. This is a sophisticated way of creating complex sequences of Fills and Variations.

Please note that, while **Auto Fill** is a Global setting, **Fill Mode** is tied to a Style or SongBook Entry.

Style Element's Scale

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

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.

Importing a MIDI Song without initializing the current settings

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

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

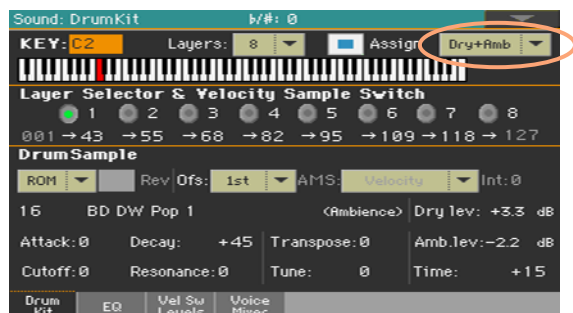
Volume levels expressed in dB

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.

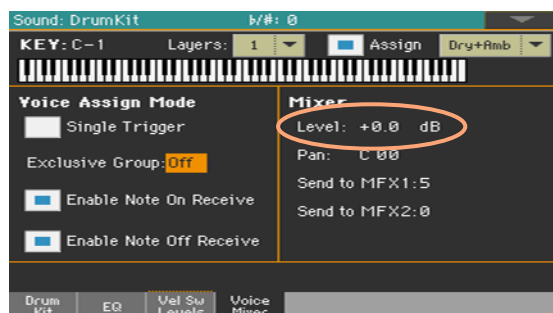
Dry+Amb menu

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

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

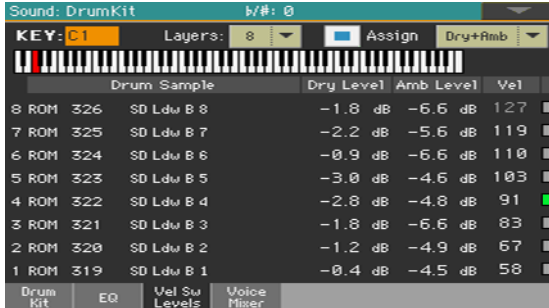


- Use the Level parameter to set the level of the selected key.

Mixing the Drum Kit layers

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.

Compressed User Samples

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 Sampling 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.

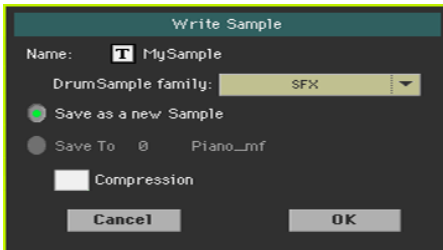
Loading compressed User Samples

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 Sampling 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.

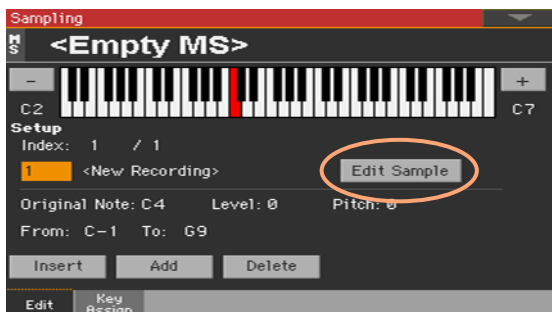
When finished, compressed samples will appear with an asterisk (*) added to their name.

Turn on the Auto Power Off function

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

Edit Sample button

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.



Early Reflections Hi Dens FX assignment

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.

New functions assignable to the assignable sliders

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	
Kbd Upper 2 Volume	Volume of the corresponding Keyboard Sound.
Kbd Upper 3 Volume	
Kbd Lower Volume	
Pad Volume	
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

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	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

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

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	Mute/Unmute all the Acc tracks at once
Style Acc1-5 Mute	
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

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

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	Turns Punch Recording on/off
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	

Locking the Slider Mode

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

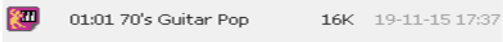
A new lock has been added to the Global > General Controls > Lock > Style page.

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

Date and time assigned to each musical resource

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.



Choosing the Styles and Keyboard Sets via MIDI

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.

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		

Master Transpose and Quarter Tone Scales sent and received via MIDI

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.

Factory and Favorite Protect (Pa4X Oriental)

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.

New shortcuts

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
Various modes	
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
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...)
Style Play mode	
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

Shift +	Functions
Song Play mode	
Song Play	Selects the Global > Mode Preferences > Song & Seq page
Play/Stop (Player 1 or 2)	Sync Start of either Players
JukeBox	
>>	Play the next Song in the JukeBox list
<<	Play the previous Song in the JukeBox list
Lyrics	
Display	Load a TXT file
Sequencer mode	
Sequencer	Selects the Global > Mode Preferences > Song & Seq page
Microphone	
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
Any mode	
Split	Opens the Split Point dialog box. Play a note to set the new Split Point.
Style Play mode	
Style buttons	Opens the Write Current Style Settings window
Style Play and Song Play mode	
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
Global mode	
Global	Touch Panel Calibration

Special functions

Other available shortcuts are the following ones.

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

IMPROVEMENTS AND BUG FIXES

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 where 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 where 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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