

FANTOM Version 3.00 Supplementary Manual

This manual explains the new features that were added in FANTOM version 3.00.

Read this along with the FANTOM Owner's Manual, Reference Manual (PDF) and the previous FANTOM Supplementary Manuals through version 2.50.

Adding n/zyme to the Model Tones

"n/zyme" has been added to the tone type: Model tone (MODEL) model bank. n/zyme offers the following advantages, letting you create new kinds of tones that differ from the previous model banks.

The OSC section includes two wave types, "Wavetable OSC" and "Drawing OSC."

A Shape section has been added, which lets you dynamically change the waveform. With this, you can control two types of modulation, phase modulation and shaping modulation at the same time; and use motion control to create complex tonal changes over time.

The Step Modulator section features two step modulators that let you make cyclical tonal changes in time with the beat.

The Effects section now features an independent Spread function that adds breadth and depth to the sound, in addition to the existing EQ and MFX.

NOTE

To use the n/zyme model bank, you'll need to update the instrument to version 3.00 and install expansion "EXM007:n/zyme Model Expansion," available on Roland Cloud (**requires a Lifetime Key to purchase**).

What is the Wavetable OSC?

The Wavetable OSC features a varied collection of single-cycle waveforms called a "table." Different waveforms are arranged in continuous order inside the table, and you can specify the position from which to begin playback to play unique sounds whose waveforms change in various ways over time.

What is the Drawing OSC?

This is an oscillator for drawing and playing single-cycle waveforms. The waveform is divided up into a maximum of 32 ranges, and you can specify the value for each range. When the waveform is played back, each range is connected together in a continuous way to let you freely create and play the waveform.

What is phase modulation?

Phase modulation is used to alter the output waveform by modulating the phase of the input waveform. By increasing the phase of even a simple input waveform, you can make dramatic changes to the waveform to get a distinctive tone.

What is shaping modulation?

With shaping modulation, you can modulate the input waveform signal using a waveform table called a "shaper." The more complex the shaper is, the greater the change you can make, even to simple input waveforms. This lets you make tones that are rich in high-frequency components.

Downloading the n/zyme Model Expansion

Installing Roland Cloud Manager

Use Roland Cloud Manager to download the n/zyme Model Expansion.

Follow the steps below to install Roland Cloud Manager on your computer.

1. On your computer, download Roland Cloud Manager from the Roland Cloud website.

Access the website shown below to download the installer appropriate for your computer.

https://www.roland.com/us/categories/roland_cloud/

2. Double-click the installer you downloaded to begin the installation.

Proceed with the installation as directed by the installation screens.

When you see the message "Installation has been completed", click the [Close] button.

3. Launch the Roland Cloud Manager that you installed, and register your account.

Follow the onscreen instructions to register.

Downloading the n/zyme Model Expansion

1. Launch the Roland Cloud Manager.

2. Click "Hardware" on the menu tab.

A list of hardware appears.

3. Click the "FANTOM" button.

The contents list appears.

4. Click the n/zyme Model Expansion button.

The download page for the n/zyme Model Expansion is displayed.

5. Click "Get Lifetime Key" and proceed to purchase a Lifetime Key.

6. Once you've made the purchase, click "Library" from the menu tab.

A list of purchased contents appears.

7. Select "n/zyme Model Expansion" for download.

Installing the n/zyme Model Expansion

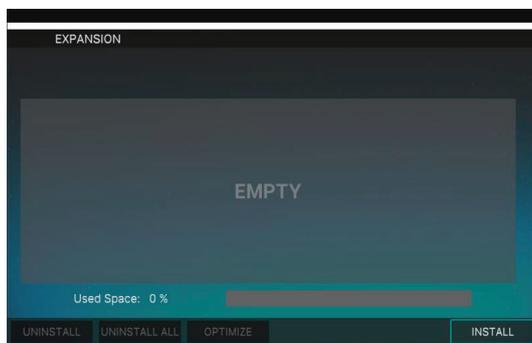
Install the n/zyme Model Expansion that you downloaded from Roland Cloud.

MEMO

You may see a prompt on the display to confirm your license when installing the expansion.

1. Use Roland Cloud Manager to download the n/zyme Model Expansion.
2. Save the file you downloaded (EXM007_n_zyme.exz) to the root directory (the topmost level) of your USB flash drive.
3. Turn off the FANTOM, and connect the USB flash drive to the USB MEMORY port.
4. Turn the power on while holding down the [TEMPO] button.

The EXPANSION screen appears.



5. Press the [E6] (INSTALL) knob. The expansions saved on the USB flash drive are shown.
6. Use the cursor [▼] [▲] buttons or the [E1] knob to select "EMX007_n_zyme.exz".
7. Press the [E6] (INSTALL) knob. A confirmation message appears. To cancel, touch [E6] CANCEL.
8. Select [E5] OK.

Once the installation finishes, the expansion title is shown in the onscreen list. (EXM007:n_zyme)

NOTE

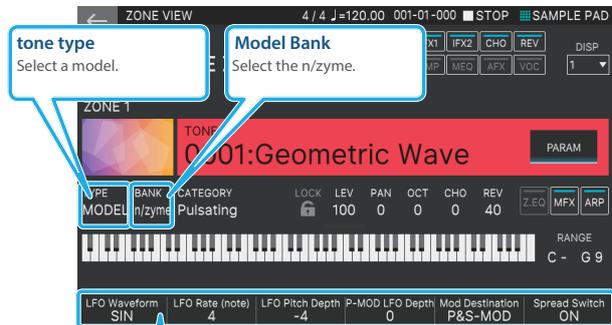
Never turn off the power or remove the USB flash drives while the screen indicates "working."

9. Turn the power back on once the n/zyme Model Expansion has been installed.

Selecting a Tone

1. Press the [ZONE VIEW] button.

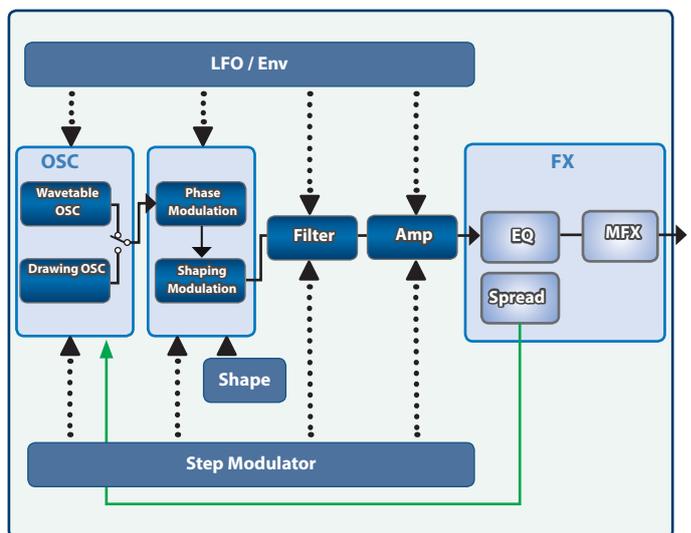
The ZONE VIEW screen appears.



[E1]–[E6] knobs

Parameters used exclusively by the n/zyme tone are assigned.

Editing a n/zyme Tone



1. Select an n/zyme tone, and touch the [MENU] button → <TONE EDIT>.

The TONE EDIT n/zyme ZOOM screen appears.



Menu	Explanation
[E1] knob	Scrolls the tab left-right.
[E2]–[E6] knobs	Used for editing the corresponding parameters and opening the edit windows.
<To PRO>	Displays the TONE EDIT PRO screen.
<UTILITY>	Displays the UTILITY window.

2. Move the cursor to the desired parameter, and edit the value.

ZOOM EDIT (Wavetable) screen

When the WAVE TYPE is "Wavetable," you can use two layers to stack together and play different wavetable sounds.

WAVE TYPE
Touch the [WAVE TYPE] icon to switch between "Wavetable" and "Drawing."
The WAVE TYPE does not change when you turn the [E1] knob.

Tab
Use the [E1] knob to scroll and switch between tabs. You can also touch the icons in the tabs to switch to a different page within the same tab.

<UTILITY>
Touch this to show the tone initialization menu.

Position
Drag the Position slider to switch between waveforms within the wavetable. You can also use Position Mod to control the waveform via envelope, LFO or other source.

Layer Mix
Adjusts the volume balance of each layer. You can also adjust this from the [VALUE] knob in the OSC section on the right side of the panel.

[E2]–[E6] knobs
Use [E2] and [E5] to select the wavetables used by the respective layers. Use [E3] to open the Position modulation window, and [E4] to open the Layer Mix modulation window. Press or turn the knobs to edit a parameter.

MEMO
When you turn layer 1 off (by selecting wavetable "000:OFF"), layer 2 turns off at the same time. You can't use layer 2 by itself.

Layer Mix Mod
LFO: 0 C.ENV: 0 RND: 17 VELO: 0

Position Mod/Layer Mix Mod
Open the respective windows and use [E3]–[E6] to edit the parameters.

MEMO
When you select "STRUCTURE" from the UTILITY window menu, you can check the current connections for each section in graphical form.

The overlaying windows such as the Structure window and each Mod window can be closed by tapping outside of the window area.

ZOOM EDIT (Drawing) screen

When WAVE TYPE is "Drawing," you can freely draw the waveform to be used by the oscillator.

* The waveform you draw plays as a single-cycle waveform.

WAVE TYPE
Touch the [WAVE TYPE] icon to switch between "Wavetable" and "Drawing."
The WAVE TYPE does not change when you turn the [E1] knob.

Tab
Use the [E1] knob to scroll and switch between tabs. You can also touch the icons in the tabs to switch to a different page within the same tab.

<UTILITY>
Touch this to show the tone initialization menu.

Draw area
You can drag on the screen to freely draw a waveform.

Drawing Tool

[E6] knob
Press [E6] to open the Drawing Tool window.

Draw Tool

You can use Drawing Tool to render a waveform by entering its numerical values.

Current waveform
The original waveform.

Preview
The waveform you're drawing with the Drawing Tool. Your edits are not applied to the actual sound until you confirm it.

Drawing Tool
Form 1: 0 Form 2: 0 Sync: 13 Width: 0 AM Depth: 0 EXECUTE

[E1]–[E6] knobs
[E1]–[E5] are Drawing Tool parameters. You can use the knobs to draw a wide range of waveforms. When you're finished with the Drawing Tool, press [E6] to confirm the waveform.

Menu	Explanation
[E1] Form (Form 1)	Morphs between the waveforms as follows: Sine (0)–Triangle (42)–Saw (84)–Square (127).
[E2] Mod (Form 2)	Morphs between a sine wave (0) and a metallic sound (127).
[E3] Sync	Narrows the width of the waveform that's currently set, and repeats it.
[E4] Width	Narrows the width of the waveform that's currently set.
[E5] AM Depth	Deforms the currently set waveform by applying a comb filter to thin out the data.
[E6] EXECUTE	Applies the changes you made using the Drawing Tool to the waveform.
OSC [Value] knob Morph Rough	Sets how rough the sound quality is. When you change this parameter, the results are immediately applied to the waveform.

ZOOM EDIT(Shape) screen

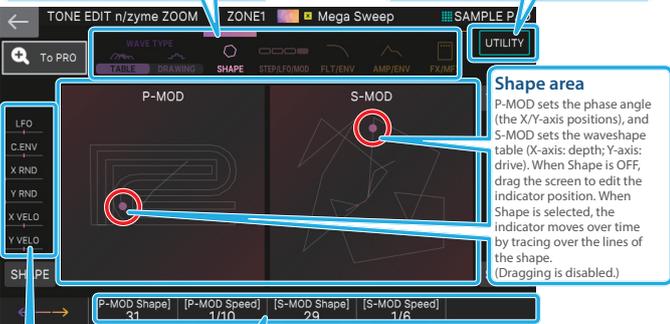
Two settings are available on the Shape screen, P-MOD (Phase Modulation) and S-MOD (Shaping Modulation).

Tab
Use the [E1] knob to scroll and switch between tabs. You can also touch the icons in the tabs to switch to a different page within the same tab.

<UTILITY>
Touch this to show the tone initialization menu.

Shape area
P-MOD sets the phase angle (the X/Y-axis positions), and S-MOD sets the waveshape table (X-axis: depth; Y-axis: drive). When Shape is OFF, drag the screen to edit the indicator position. When Shape is selected, the indicator moves over time by tracing over the lines of the shape. (Dragging is disabled.)

[E2]-[E5] knobs
Use the [E2]-[E5] knobs to edit the Shape parameters. Press a knob to switch to the settings for another parameter.

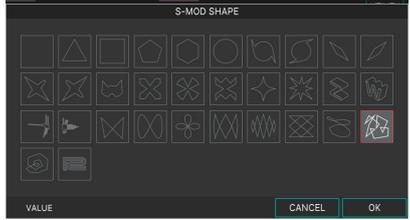


P-MOD Modulation/S-MOD Modulation
Tap here to open the P-MOD and S-MOD modulation windows. Open the respective windows and use [E1]-[E6] to edit the parameters.

P-MOD SHAPE/S-MOD SHAPE
Touch <SHAPE> to open the SHAPE window for P-MOD and S-MOD respectively. Here you can check the available shapes and select SHAPE.

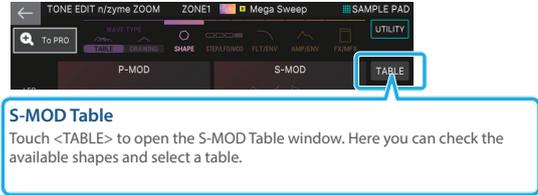


S-MOD SHAPE



VALUE CANCEL OK

S-MOD Table
Touch <TABLE> to open the S-MOD Table window. Here you can check the available shapes and select a table.

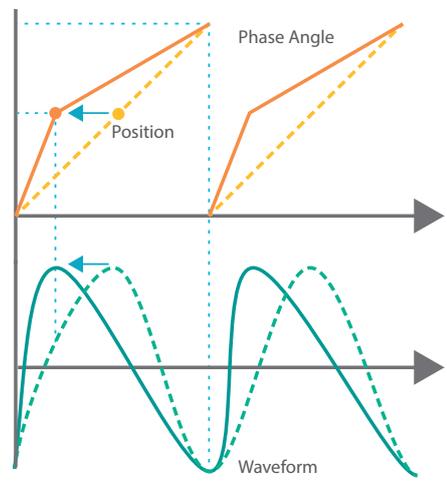


S-MOD Table Number

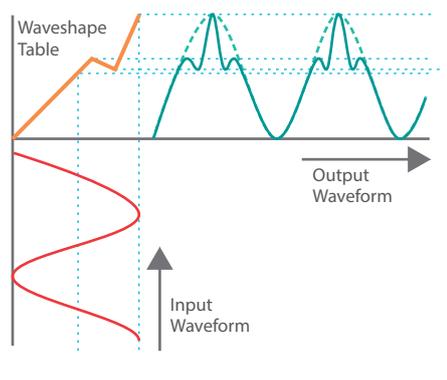


VALUE CANCEL OK

Relationship between phase angles and waveforms

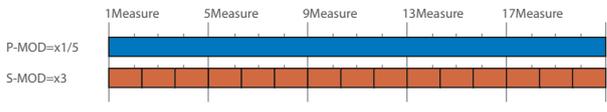


Relationship between waveshape tables and waveforms



Motion control

You can control the X/Y-axis parameters via motion control, by using the shapes you selected in P-MOD SHAPE and S-MOD SHAPE. By setting the P-MOD Tempo Sync and S-MOD Tempo Sync switches to "ON," you can synchronize the motion with the tempo of the sequencer. When P-MOD Speed and S-MOD Speed are set to "x1", their indicators trace a full cycle over approximately four measures of time.



ZOOM EDIT (Step Modulator) screen

The Step Modulator screen has two Step MODs and settings for the Step Kick Switch.

Tab
Use the [E1] knob to scroll and switch between tabs. You can also touch the icons in the tabs to switch to a different page within the same tab.

<UTILITY>
Touch this to show the tone initialization menu.

Step MOD
Features two Step MODs. The top row is for the OSC and Shape, and the bottom row is for the Filter and Amp. You can drag these freely to set the values of each step. You can also set the curves, point by point.

[E2]–[E5] knobs
Use [E2] to zoom in on the selected portions within the respective areas of Step MOD1, Step MOD2, Step Switch and Step Kick Switch. Use [E3] to set the size of the steps to loop. Use [E4] to set the envelope trigger on/off. Use [E5] to set the step length as a note length.

Step Switch/Step Kick Switch
Step Switch sets whether each step is on or off. Steps that are off are disabled. The Step Kick Switch creates a kick (bass drum)-like effect at the timing of the "on" steps by applying a downward-sloping pitch envelope to the sound.

Curve selector
Double-tap at any step position to open the curve selector window. Select the curve you want to edit by touching it and press [E6] OK to confirm.

When Step MOD1 or Step MOD2 are zoomed in, "Target" is shown in [E6]. Press [E6] to open the Target window for editing the modulation parameters and other settings. Each time you press the knob, the setting toggles between the current value and "0".

Setup Tool
Touch <Setup Tool> to open the window. You can select the target with the [E1] and [E2] knobs, and use [E5] to reset the target parameter.

Target MOD1
PITCH Scale Table POS: 0 P-MOD: +27 S-MOD: +10

Step Tool
TARGET LFO1 DEST LFO1 DEPTH

ZOOM EDIT (LFO) screen

Use the LFO screen to configure the LFO-related settings.

Tab
Use the [E1] knob to scroll and switch between tabs. You can also touch the icons in the tabs to switch to a different page within the same tab.

<UTILITY>
Touch this to show the tone initialization menu.

[E1]–[E6] knobs
The [E2]–[E6] knobs correspond to each parameter in the same series. Use these knobs to directly edit the settings. Press the [E1] knob to move the cursor row.

ZOOM EDIT (MOD) screen

Use the MOD screen to configure the Control Env. (the OSC and shape envelopes) and the Bend Range.

Tab
Use the [E1] knob to scroll and switch between tabs. You can also touch the icons in the tabs to switch to a different page within the same tab.

<UTILITY>
Touch this to show the tone initialization menu.

[E1]–[E6] knobs
The [E2]–[E6] knobs correspond to each parameter in the same series. Use these knobs to directly edit the settings. Press the [E1] knob to move the cursor row.

ZOOM EDIT (Filter) screen

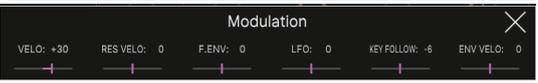
Tab
Use the [E1] knob to scroll and switch between tabs. You can also touch the icons in the tabs to switch to a different page within the same tab.

<UTILITY>
Touch this to show the tone initialization menu.



[E1]–[E6] knobs
The [E2]–[E6] knobs correspond to each parameter in the same series. Use these knobs to directly edit the settings. Press the [E1] knob to move the cursor row.

Touch here to show the modulation window.



FILTER ENVELOPE screen



This screen shows the current position of the envelope in real time when you play a key. When you play a chord, the current position of the envelope is shown for the last note you played.



ZOOM EDIT (Amp) screen

Tab
Use the [E1] knob to scroll and switch between tabs. You can also touch the icons in the tabs to switch to a different page within the same tab.

<UTILITY>
Touch this to show the tone initialization menu.



[E1]–[E6] knobs
The [E2]–[E6] knobs correspond to each parameter in the same series. Use these knobs to directly edit the settings. Press the [E1] knob to move the cursor row.

Touch here to show the modulation window.



Amp ENVELOPE screen



This screen shows the current position of the envelope in real time when you play a key. When you play a chord, the current position of the envelope is shown for the last note you played.



ZOOM EDIT (FX:SPREAD/EQ) screen

Tab
Use the [E1] knob to scroll and switch between tabs. You can also touch the icons in the tabs to switch to a different page within the same tab.

<UTILITY>
Touch this to show the tone initialization menu.

[E1]–[E6] knobs
The [E2]–[E6] knobs correspond to each parameter in the same series. Use these knobs to directly edit the settings.
Press the [E1] knob to move the cursor row.

MEMO

For the EQ, the values that were set are applied when a note sounds.

ZOOM EDIT (FX:MFX) screen

Tab
Use the [E1] knob to scroll and switch between tabs. You can also touch the icons in the tabs to switch to a different page within the same tab.

<UTILITY>
Touch this to show the tone initialization menu.

XY pad
The MFX parameter changes when you drag and move the onscreen indicator.

Touch here to open the category selector.

[E2]–[E6] knobs
The [E2]–[E6] knobs correspond to the parameters of the selected effect. Use these knobs to directly edit the settings.

Category selector

Use the [E3] knob to select the category, and the [E4] knob to select the type within the category.

Using the Edit Knobs

Use the knobs and buttons of the OSC, FILTER, ENV/AMP and EFFECT sections to make changes to the sound in real time.

Controller	Wavetable	Wave Drawing
[TYPE] knob	Wavetable/Wave Drawing switch	
[VALUE] knob (when lit)	Layer Mix	Morph Rough
[VALUE] knob (when blinking)	Mix Curve	–
[CUTOFF] knob	Cutoff Frequency	
[RESONANCE] knob	Resonance	
[FILTER TYPE] button	Filter Type	
[A] knob (PITCH ENV)	CTRL Env Attack	
[D] knob (PITCH ENV)	CTRL Env Decay	
[S] knob (PITCH ENV)	–	–
[R] knob (PITCH ENV)	–	–
[A] knob (FILTER ENV)	Filter Env Attack	
[D] knob (FILTER ENV)	Filter Env Decay	
[S] knob (FILTER ENV)	Filter Env Sustain	
[R] knob (FILTER ENV)	Filter Env Release	
[A] knob (AMP ENV)	Amp Env Attack	
[D] knob (AMP ENV)	Amp Env Decay	
[S] knob (AMP ENV)	Amp Env Sustain	
[R] knob (AMP ENV)	Amp Env Release	
[AMP LEVEL] knob	Amp Level	
[EFFECT TYPE] knob (when lit)	MFX Type	
[EFFECT TYPE] knob (when unlit)	MFX OFF	
[EFFECT DEPTH] knob	Changes according to the selected MFX TYPE	
[USB AUDIO] slider	Position	–
	* This operation works only while the n/zyme TONE EDIT screen is shown.	

MEMO

To switch a knob between lit and blinking, press the knob in.

FANTOM n/zyme Tone Parameter List

GENERAL

Parameter	Value	Explanation
Category	0:No Assign-49:Zone	Tone category
Mono/Poly	MONO, POLY	Sets whether the tones play in polyphonic (POLY) or monophonic (MONO) mode. MONO: Only one sound at a time plays, and only the last key you played produces sound. POLY: More than one sound can play at the same time.
Octave Shift	-3--+3	Sets the pitch of the tone's sound in octaves (up to ±3 octaves).
Velocity Curve	FIXED, 1-7	You can select from one of seven curves, which change the intensity of the cutoff frequency, filter envelope and tone volume according to how hard you play the keys. If you don't want the intensity to change according to how hard you play the keys, set this to "FIXED." 
Portamento Switch	OFF, ON	Select "ON" to apply portamento, or "OFF" if you don't want to apply portamento. * Portamento is an glide effect that smoothly connects the pitches of the first and second notes that you play on the keyboard. When "MONO/POLY" is set to "MONO" and portamento is applied, you can obtain slide effects like the sound of playing a violin.
Portamento Mode	NORMAL, LEGATO	This sets the playing style for applying portamento. NORMAL: Portamento is always applied. LEGATO: Portamento is only applied when you play in legato style (playing one key and then playing the next while holding down the first one).
Portamento Curve Type	LINEAR, EXP	This sets the curve used by the portamento effect to change the pitch. LINEAR: A linear curve of change is applied. EXP: A non-linear curve of change is applied.
Portamento Time	0-1023	When portamento is used, this sets the time taken for the pitch to change. Higher settings cause the pitch to take longer when gliding to the next note.

OSC TYPE

Parameter	Value	Explanation
Waveform Type	TABLE, DRAWING	Selects the OSC type.

OSC TABLE

Parameter	Value	Explanation
Position	0-127	When Waveform Type is "TABLE," this sets the wavetable position for layers 1 and 2.
Wave Layer1 Number	000-063	When Waveform Type is "TABLE," this selects the wavetable no. for layer 1. If this is set to "000:OFF," no waveform is selected.
Wave Layer2 Number	000-063	When Waveform Type is "TABLE," this selects the wavetable no. for layer 2. If this is set to "000:OFF," no waveform is selected.
Layer2 Octave Down	0-2	When Waveform Type is "TABLE," this sets how much to lower the octave for layer 2.

Parameter	Value	Explanation
Layer Mix	0-127	When Waveform Type is "TABLE," this sets the mix ratio for layer 1 and 2.
Layer Mix Curve	0, 1	When Waveform Type is "TABLE," this sets the mix curve for layers 1 and 2. 0: linear; 1: tapered
Position LFO Depth	-63--+63	When Waveform Type is "TABLE," this sets how much the LFO affects Wavetable Position.
Position Env Depth	-63--+63	When Waveform Type is "TABLE," this sets how much OSC Envelope affects Wavetable Position.
Position Velocity Sens	-100--+100	When Waveform Type is "TABLE," this sets how much the key velocity affects Wavetable Position.
Position Random Sens	0-63	When Waveform Type is "TABLE," this sets the degree of randomness of the Wavetable Position when you press a key.
Layer Mix LFO Depth	-63--+63	When Waveform Type is "TABLE," this sets the intensity (depth) of the LFO applied to Layer Mix.
Layer Mix Env Depth	-63--+63	When Waveform Type is "TABLE," this sets the intensity (depth) of the OSC Envelope applied to Layer Mix.
Layer Mix Velocity Sens	-100--+100	When Waveform Type is "TABLE," this sets the depth of the mix for Layer Mix when you press a key.
Layer Mix Random Sens	0-63	When Waveform Type is "TABLE," this sets the degree of randomness for Layer Mix when you press a key.

OSC DRAWING

Parameter	Value	Explanation
Morph Rough	0-127	When Waveform Type is "DRAWING," this sets how rough the sound quality is.
Wave Data 1-32	-72--+72	When Waveform Type is "DRAWING," this sets the Wave Data 1-32 waveform data.
Drawing Tool Form 1 (*1)	0-127	When Waveform Type is "DRAWING," this morphs between the waveforms as follows: Sine (0)-Triangle (42)-Saw (84)-Square (127).
Drawing Tool Form 2 (*1)	0-127	When Waveform Type is "DRAWING," this morphs between a sine wave (0) and a metallic sound (127).
Drawing Tool Sync (*1)	0-127	When Waveform Type is "DRAWING," this narrows the width of the waveform that's currently set, and repeats it.
Drawing Tool Width (*1)	0-127	When Waveform Type is "DRAWING," this narrows the width of the waveform that's currently set.
Drawing Tool AM Depth (*1)	0-127	When Waveform Type is "DRAWING," this deforms the currently set waveform by applying a comb filter to thin out the data.
Drawing Tool Exec (*1)	-	When Waveform Type is "DRAWING," this applies the changes you made using the Drawing Tool to the waveform.

(*1) This is only shown on the ZOOM EDIT screen.

P-MOD

Parameter	Value	Explanation
P-MOD-X	-63–+63	Sets the depth of the X direction.
P-MOD-Y	-63–+63	Sets the depth of the Y direction.
P-MOD LFO Depth	-63–+63	When the LFO is applied in the Y direction, this sets the depth.
P-MOD Env Depth	-63–+63	When the OSC Envelope is applied in the X direction, this sets the depth.
P-MOD-X Random Sens	0–63	Sets the degree of randomness in the X direction when you press a key.
P-MOD-Y Random Sens	0–63	Sets the degree of randomness in the Y direction when you press a key.
P-MOD-X Velocity Sens	-100–+100	Sets how much the X direction changes according to how hard you play the keys.
P-MOD-Y Velocity Sens	-100–+100	Sets how much the Y direction changes according to how hard you play the keys.
P-MOD Limiter	OFF, ON	Restricts the depth of the X direction.
P-MOD Shape	OFF, 1–31	Sets the shape used by the shape function. The function is disabled when "OFF" is selected.
P-MOD Size	1–127	Sets the size of the shape.
P-MOD Speed	1/16–x16	Sets how fast the indicator moves along the shape when the P-MOD Tempo Sync switch is "ON." This sets the multiple of time (times four measures) that it takes for the indicator to trace the shape once.
P-MOD Rate	0–1023	Sets how fast the indicator moves along the shape when the P-MOD Tempo Sync switch is "OFF."
P-MOD Tempo Sync Sw	OFF, ON	Sets whether to synchronize the speed that the indicator moves around the shape with the scene's tempo.
P-MOD Direction	BWD, FWD	Sets the direction that the indicator moves around the shape.

S-MOD

Parameter	Value	Explanation
S-MOD Shaping Depth	0–127	Sets the shaping depth intensity.
S-MOD Drive	0–127	Sets the amount of Drive.
S-MOD LFO Depth	-63–+63	When the LFO is applied to Shaping Depth, this sets the depth.
S-MOD Env Depth	-63–+63	When OSC Envelope is applied to Shaping Depth, this sets the depth.
S-MOD Shaping Depth Velocity Sens	-100–+100	Sets how much Shaping Depth changes according to how hard you play the keys.
S-MOD Drive Velocity Sens	-100–+100	Set this to change the Drive according to how hard you play the keys.
S-MOD Shaping Depth Random Sens	0–63	Sets the degree of randomness for the Shaping Depth when you press a key.
S-MOD Drive Random Sens	0–63	Sets the degree of randomness for the Drive when you press a key.
S-MOD Table Number	1–15	Selects the table.
S-MOD Shape	OFF, 1–31	Sets the shape used by the shape function. The function is disabled when "OFF" is selected.
S-MOD Size	1–127	Sets the size of the shape.
S-MOD Speed	1/16–x16	Sets how fast the indicator moves along the shape when the S-MOD Tempo Sync switch is "ON." This sets the multiple of time (times four measures) that it takes for the indicator to trace the shape once.
S-MOD Rate	0–1023	Sets how fast the indicator moves along the shape when the S-MOD Tempo Sync switch is "OFF."
S-MOD Tempo Sync Sw	OFF, ON	Sets whether to synchronize the speed that the indicator moves around the shape with the scene's tempo.
S-MOD Direction	BWD, FWD	Sets the direction that the indicator moves around the shape.

STEP COMMON

Parameter	Value	Explanation
Step Size	1–16	Sets the step size for looping.
Envelope Trigger	OFF, ON	When using Step to trigger the OSC, Filter or Amp Envelope, set this to "ON."
Rate (note)	1/64T, 1/64, 1/32T, 1/32, 1/16T, 1/32., 1/16, 1/8T, 1/16., 1/8, 1/4T, 1/8., 1/4, 1/2T, 1/4., 1/2, 1T, 1/2., 1, 2T, 1., 2, 4	Sets the length per step as a note length.

STEP MOD1

Parameter	Value	Explanation
Step Mod Pitch Switch	OFF, ON	When using OSC Step Depth to operate the pitch, set this to "ON."
Step Mod P-MOD Switch	OFF, ON	When using OSC Step Depth to operate Phase Modulation Y, set this to "ON."
Step Mod S-MOD Switch	OFF, ON	When using OSC Step Depth to operate Shaping Modulation and Shaping Depth, set this to "ON."
Step Mod Position Switch	OFF, ON	When using OSC Step Depth to operate Wavetable Position, set this to "ON." * This works for tones for which the Wavetable Type is set to "Wavetable OSC."
Step Mod P-MOD Depth	-63--+63	Sets the depth of the Phase Modulation Y direction. * This is enabled when Step Mod P-MOD Switch is "ON."
Step Mod S-MOD Depth	-63--+63	Sets the depth of the Shaping Modulation and Shaping Depth. * This is enabled when Step Mod S-MOD Switch is "ON."
Step Mod Position Depth	-63--+63	Sets the intensity of the Wavetable Position movement. * This is enabled when Step Mod Position Switch is "ON."
Scale Switch	OFF, ON	To make the pitch set in Scale Depth follow the notes that make up the Scale Table that you selected in "Scale Table," set this to "ON." * This is enabled when Step Mod Pitch Switch is "ON."
Scale Table	Chromatic, Major, Major Pentatonic, Minor, Harmonic Minor, Melodic Minor, Whole Tone, Blue note, Japanese Minor, Ryukyu, Bari, Spanish, Gypsy, C, C G, C Eb G, C Eb G Bb, C D Eb G Bb, C D Eb F G Bb	Sets the Scale Table.
OSC Step Depth 1–16	-72--+72	Sets the depth of the Pitch, Phase Modulation, Shaping Modulation and Wavetable Position for each step.
OSC Step Curve 1–16	0–36	Sets the curve of the Pitch, Phase Modulation, Shaping Modulation and Wavetable Position for each step.

STEP MOD2

Parameter	Value	Explanation
Step Mod Filter Switch	OFF, ON	To control the depth of Filter-Amp Step Depth when it is used to control the Filter, set this to "ON."
Step Mod Amp Switch	OFF, ON	To control the depth of Filter-Amp Step Depth when it is used to control the Amp, set this to "ON."
Step Mod Filter Depth	-100--+100	Sets the depth of the Filter.
Filter-Amp Step Depth 1–16	-72--+72	Sets the depth of Filter and Amp for each step.
Filter-Amp Step Curve 1–16	0–36	Sets the curve of Filter and Amp for each step.

STEP SW

Parameter	Value	Explanation
Step Switch 1–16	OFF, ON	Sets whether each step plays or not (on/off).

STEP KICK

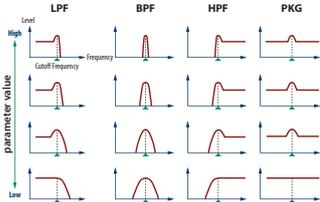
Parameter	Value	Explanation
Step Kick Switch 1–16	OFF, ON	When this is "ON" for a given step, a downward-sloping pitch envelope is applied to the step to create a kick (bass drum)-like effect. * This is enabled when Step Mod Pitch Switch is "ON."

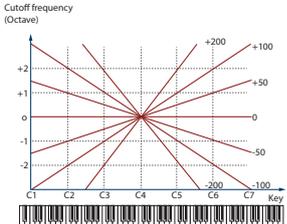
CTRL ENV

Parameter	Value	Explanation
CTRL Env Attack Time	0–1023	Sets the CTRL Envelope attack time.
CTRL Env Decay Time	0–1023	Sets the CTRL Envelope decay time.

FILTER

Parameter	Value	Explanation
Filter Type	TVF, VCF	These buttons select the filter type. * TVF stands for "Time Variant Filter." This is a filter that you can configure in detail to create time-based changes to the frequency of the sound. When VCF is selected, the polyphony of the instrument is less than when TVF is selected.
TVF Filter Type	LPF, BPF, HPF, PKG	These buttons select the TVF filter type. * When "VCF" is selected for Filter Type, this is "LPF." LPF Low-pass-filter. This cuts off frequencies above the cutoff frequency. Cutting off the high frequencies makes the sound more mellow. This is the most frequently-used type. BPF Band-pass filter. This cuts off frequencies except for those around the cutoff frequency. This filter type is useful for making sounds with a unique character. HPF High-pass filter. This cuts off frequencies below the cutoff frequency. This filter type is useful for creating percussion sounds and the like that have a distinctive high end. PKG Peaking filter. This emphasizes frequencies around the cutoff frequency. You can use the LFO to cyclically vary the cutoff frequency, creating a wah effect.

Parameter	Value	Explanation
VCF Type	VCF1, JP, MG, P5	This works when Filter Type is "VCF." All of these settings simulate how the LPF works on an analog synthesizer. In particular, the MG, JP and P5 types are suitable for recreating the synthesizer sounds of the past.
Filter Slope	-12, -24 [dB/Oct]	Selects the filter slope. * When this is set to -24dB, the polyphony of the instrument is less than when -12dB is selected.
HPF Cutoff	0-1023	Specifies the cutoff frequency of the -6dB high-pass filter. * This works when Filter Type is "VCF."
Cutoff Frequency	0-1023	Sets the frequency at which the filter that is applied to the frequency components of the waveform begins to take effect (the cutoff frequency). When TVF Filter Type is set to "LPF" or "VCF," a lower cutoff frequency produces less higher overtones, which results in a more mellow sound. Larger values make the sound brighter. When Filter Type is set to "BPF," the harmonic components that sound change depending on the cutoff frequency value. This filter type is useful for making sounds with a unique character. When Filter Type is set to "HPF," a higher cutoff frequency produces less lower overtones, which emphasizes the sound's brightness. When Filter Type is set to "PKG," the harmonic components that are emphasized change depending on the cutoff frequency value.
Resonance	0-1023	Emphasizes the portion of the sound around the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort. 
Cutoff Velocity Sens	-100-+100	Set this to change the cutoff frequency according to how hard you play the keys. Set this to a "+" value to increase the cutoff frequency when you play harder, and set this to a "-" value to decrease the cutoff frequency when you play harder.
Resonance Velocity Sens	-100-+100	Sets how much the resonance depth changes in response to how hard you play the keys. Set this to a "+" value to make the resonance increase when you play harder, and set this to a "-" value to make the resonance decrease when you play harder.
Filter Env Depth	-63-+63	This sets the intensity of the Filter envelope. Larger values produce a greater change in the filter envelope. Setting this to a negative value inverts the envelope's shape.
Filter Env Velocity Sens	-100-+100	Use this to set how much the Filter envelope changes in response to how hard you play the keys. Set this to a "+" value to make the filter envelope respond more when you play harder, and set this to a "-" value to make it respond less when you play harder.

Parameter	Value	Explanation
Cutoff Keyfollow	-200-+200	Set this to make the cutoff frequency change according to the keys you play. When you set this to a "+" value, playing higher notes raises the cutoff frequency (with the cutoff frequency as the base value); and when you set this to a "-" value, playing higher notes lowers the cutoff frequency. Larger values produce greater change. 

FILTER ENV

Parameter	Value	Explanation
Filter Env Attack Time	0-1023	Specifies the attack time of the Filter envelope. Higher settings lengthen the time it takes to reach the next cutoff frequency.
Filter Env Decay Time	0-1023	Specifies the decay time of the Filter envelope. Higher settings lengthen the time it takes to reach the next cutoff frequency.
Filter Env Sustain Level	0-1023	Specifies the sustain level of the Filter envelope.
Filter Env Release Time	0-1023	Specifies the release time of the Filter envelope. Higher settings lengthen the time it takes to reach the next cutoff frequency.
Filter Env Attack Time Velocity Sens	-100-+100	Sets how much the attack time of the Filter envelope changes in response to how hard you play the keys. Set this to a "+" value for a faster attack time when you play the keys harder, and set this to a "-" value for a slower attack time when you play the keys harder.
Filter Env Release Time Velocity Sens	-100-+100	Sets how much the release time of the Filter envelope changes in response to how quickly you release the keys. Set this to a "+" value for a faster release time when you release the keys quickly, and set this to a "-" value for a slower release time when you release the keys quickly.

AMP

Parameter	Value	Explanation
Amp Level	0-127	Adjusts the overall volume for all tones.
Amp Level Velocity Sens	-100-+100	Set this to change the volume according to how hard you play the keys. Set this to a "+" value to make the volume bigger when you play harder, and set this to a "-" value to make the volume smaller when you play harder.

AMP ENV

Parameter	Value	Explanation
Amp Env Attack Time	0–1023	Specifies the attack time of the Amp envelope. Higher settings make the pitch take longer when gliding to the next volume.
Amp Env Decay Time	0–1023	Specifies the decay time of the Amp envelope. Higher settings make the pitch take longer when gliding to the next volume.
Amp Env Sustain Level	0–1023	Specifies the sustain level of the Amp envelope.
Amp Env Release Time	0–1023	Specifies the release time of the envelope. Higher settings make the pitch take longer when gliding to the next volume.
Amp Env Attack Time Velocity Sens	-100–+100	Sets how much the attack time of the Amp envelope changes in response to how hard you play the keys. Set this to a "+" value for a faster attack time when you play the keys harder, and set this to a "-" value for a slower attack time when you play the keys harder.
Amp Env Release Time Velocity Sens	-100–+100	Sets how much the release time of the Amp envelope changes in response to how quickly you release the keys. Set this to a "+" value for a faster release time when you release the keys quickly, and set this to a "-" value for a slower release time when you release the keys quickly.

LFO

Parameter	Value	Explanation
LFO Waveform	SIN, TRI, SAW-UP, SAW-DW, SQR, RND	These buttons set the LFO waveform. SINE : sine wave TRI : triangle wave SAW-UP : sawtooth wave SAW-DOWN : sawtooth wave (negative polarity) SQR : square wave RND : random wave
LFO Rate Sync	OFF, ON	Turn this "ON" to sync the LFO cycle with the tempo.
LFO Rate <small>(note)</small>	1/64T, 1/64, 1/32T, 1/32, 1/16T, 1/32, 1/16, 1/8T, 1/16, 1/8, 1/4T, 1/8, 1/4, 1/2T, 1/4, 1/2, 1T, 1/2, 1, 2T, 1., 2, 4	This works when Rate Sync is "ON." Sets the LFO cycle as a note length.
LFO Rate	0–1023	This works when Rate Sync is "OFF." Sets the LFO cycle irrespective of the tempo. The larger the value, the shorter the LFO cycle.
LFO Delay Time	0–1023	Sets the time it takes before the LFO effect begins after you press a key. (Delay and Fade Time works in tandem with this.)
LFO Key Trigger	OFF, ON	Sets whether to synchronize the start of the LFO cycle with the timing you use to play the keys ("ON" to synchronize, "OFF" to disable).
LFO Pitch Depth	-63–+63	Sets the depth of the LFO when it is applied to the pitch.
LFO Filter Depth	-100–+100	Sets the depth of the LFO when it is applied to the cutoff frequency.
LFO Amp Depth	-100–+100	Sets the depth of the LFO when it is applied to the volume.

BEND/MOD

Parameter	Value	Explanation
Bend Range Up	0–48 [semitone]	Sets the amount of change (in semitones) made when the pitch bend lever is set to maximum. For example, when this is set to "48" and you push the pitch bend lever all the way up or to the right, the pitch goes up four octaves.
Bend Range Down	0–48 [semitone]	Sets the amount of change (in semitones) made when the pitch bend is set to minimum. For example, if you set this to "48" and push the pitch bend lever all the way down or to the left, the pitch goes down four octaves.
Mod Destination	PIT-LFO, FILTER-LFO, AMP-LFO, P-MOD, S-MOD, P&S-MOD, WT-POS, MIX/ROUGH, WT-POS&MIX	Selects what the modulation applies to.
Mod Pitch LFO Depth	-63–+63	Sets the depth of modulation when it is used to control the Pitch LFO Depth.
Mod Filter LFO Depth	-63–+63	Sets the depth of modulation when it is used to control the Filter LFO Depth.
Mod Amp LFO Depth	-63–+63	Sets the depth of modulation when it is used to control the Amp LFO Depth.
Mod P-MOD Depth	-63–+63	Sets the depth of modulation when it is used to control Phase Modulation X, Y.
Mod S-MOD Depth	-63–+63	Sets the depth of modulation when it is used to control the Shaping Modulation, Shaping Depth and Drive.
Mod P&S-MOD Depth	-63–+63	Sets the depth of modulation when it is used to control the Phase Modulation X, Y, the Shaping Modulation, Shaping Depth and Drive.
Mod WT Pos Depth	-63–+63	Sets the depth of modulation when it is used to control Wavetable Position. * Wavetable Position works for tones for which the Waveform Type is set to "TABLE"
Mod Mix/Rough Depth	-63–+63	Sets the depth of modulation when it is used to control Layer Mix and Morph Rough. * Layer Mix works for tones for which the Waveform Type is set to "TABLE." * Morph Rough works for tones for which the Waveform Type is set to "DRAWING."
Mod WT Pos&Mix Depth	-63–+63	Sets the depth of modulation when it is used to control the Wavetable Position and Layer Mix. * Wavetable Position and Layer Mix work for tones for which the Waveform Type is set to "TABLE"

SPREAD

Parameter	Value	Explanation
Spread Switch	OFF, ON	Turns the spread on/off.
Spread Depth	0–20	Sets the depth of the spread.
Spread Timing Tempo Sync	OFF, ON	To synchronize the Delay Time of the delay with the tempo, set this to "ON."
Delay Time (note)	1/64T, 1/64, 1/32T, 1/32, 1/16T, 1/32., 1/16, 1/8T, 1/16., 1/8, 1/4T, 1/8., 1/4, 1/2T, 1/4., 1/2, 1T, 1/2., 1, 2T, 1., 2	This works when Spread Timing Tempo Sync is set to "ON." Set the Delay Time to a note length.
Delay Time	0–1023	Sets the time it takes to hear the delay sound after you press a key.

MEMO

When Spread is "ON," the polyphony of the instrument is reduced.

EQ

Parameter	Value	Explanation
EQ Switch	OFF, ON	Turns the equalizer on/off for the tone.
Low Gain	-24.0–+24.0 [dB]	Adjusts the amount of boost/cut of the low-frequency range.
Mid Gain	-24.0–+24.0 [dB]	Adjusts the amount of boost/cut of the mid-frequency range.
High Gain	-24.0–+24.0 [dB]	Adjusts the amount of boost/cut of the high-frequency range.
Low Freq	20–16000 [Hz]	Sets the center frequency of the low range.
Mid Freq	20–16000 [Hz]	Adjusts the amount of mid-frequency boost/cut.
High Freq	20–16000 [Hz]	Sets the center frequency of the high range.
Mid Q	0.5–16.0 (0.1step)	Sets the width of the mid-frequency range. Higher values make the width more narrow.

MEMO

For the EQ, the values that were set are applied when a note sounds.

MFX

Parameter	Value	Explanation
MFX Switch	OFF, ON	Switches the MFX on/off.
MFX Type		Selects the MFX type.
MFX Chorus Send Level	0–127	Sets the amount of chorus. If you don't want to add the chorus effect, set it to 0.
MFX Reverb Send Level	0–127	Sets the amount of reverb. If you don't want to add the reverb effect, set it to 0.
MFX parameters		Edit the parameters for the selected MFX. The available parameters differ depending on the type of the effects you selected in MFX Type.

MFX CTRL

Parameter	Value	Explanation
Control 1–4 Source		Specifies the MIDI message that will control the corresponding MFX CONTROL parameter.
	OFF	MFx will not be used.
	CC01–31	Controller number 1–31
	CC33–95	Controller number 33–95
	BEND	Pitch Bend
Control 1–4 Destination	AFT	Aftertouch
	SYS-CTRL1–4	Use the controller that is assigned by the System Control Source 1–4.
Control 1–4 Sens		Specifies which of the multi-effect parameters are controlled using MFX CONTROL. The multi-effects parameters available for control will depend on the multi-effects type.
	-63–+63	Specifies the depth of MFX CONTROL. Specify a positive "+" value if you want to change the value of the assigned destination in a positive direction (larger, toward the right, faster, etc.), or specify a negative value "-" if you want to change the value in a negative direction (smaller, toward the left, slower, etc.). Larger values will allow a greater amount of control.

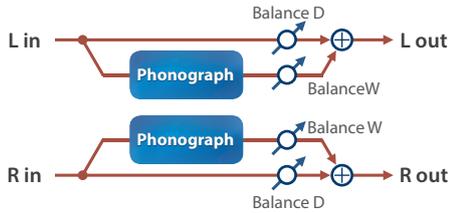
MFX Types Added

Three types of MFX have been added.

FANTOM MFX Parameter List

91: Phonograph

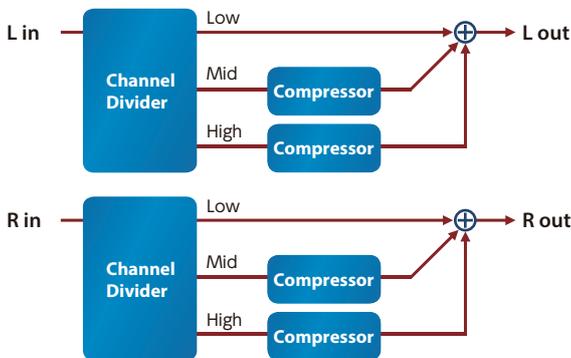
Recreates the sound of an analog record being played on a record player. This lets you simulate the unique noises produced when a record is played, as well as the variations that occur when the record spins.



Parameter	Value	Explanation
Signal Dist	0–127	Sets the amount of distortion.
Frequency Range	0–127	Sets the frequency characteristics of the playback system. Smaller values create the feeling of an older system with narrow frequency bands.
Disc Type	LP, EP, SP	Sets the turntable rotation speed. This has an effect on the scratch noise cycle.
Scratch Noise Lev	0–127	Sets the volume of noise created by scratches in the record.
Dust Noise Lev	0–127	Sets the volume of noise created by dust on the record.
Hiss Noise Lev	0–127	Sets the volume of continuous hiss noise.
Total Noise Lev	0–127	Sets the volume of noise overall.
Wow	0–127	Sets the amount of variation in record spin (long cycle).
Flutter	0–127	Sets the amount of variation in record spin (short cycle).
Random	0–127	Sets the amount of non-cyclical variation in record spin.
Total W/F	0–127	Sets the volume of variation in record spin overall.
Balance	D100:0W–D0:100W	Sets the volume balance between the original sound (D) and the effect sound (W).
Level	0–127	Sets the output volume.

92: Exciter

This adds dynamics to the sound, by dynamically bringing up the high end using a split-band compressor.

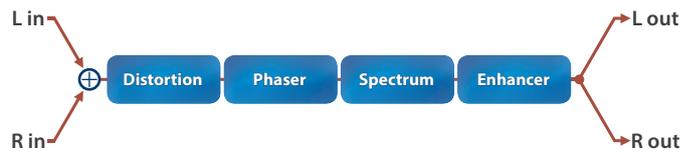


Parameter	Value	Explanation
Band2 Threshold	-80.0–0.0 (dB)	Raises the midrange frequency levels when they fall below the specified amount.
Band2 Max Gain	0–+24 (dB)	Sets how much to raise the levels when the midrange volume is low.

Parameter	Value	Explanation
Band3 Threshold	-80.0–0.0 (dB)	Raises the high-end frequency levels when they fall below the specified amount.
Band3 Max Gain	0–+24 (dB)	Sets how much to raise the levels when the high-end frequency volume is low.
Split1 Frequency	2000–5000 (Hz)	Frequency at which the low and midrange frequencies are split
Split2 Frequency	3000–10000 (Hz)	Frequency at which the midrange and high-end frequencies are split
Level	0–127	Output level

93: JD-Multi

Recreates the effects included in Group A of the JD-800.



Parameter	Value	Explanation
Seq	DS - PH - SP - EN	Selects the connection order of the effects. DS: Distortion PH: Phaser SP: Spectrum EN: Enhancer
	DS - PH - EN - SP	
	DS - SP - PH - EN	
	DS - SP - EN - PH	
	DS - EN - PH - SP	
	DS - EN - SP - PH	
	PH - DS - SP - EN	
	PH - DS - EN - SP	
	PH - SP - DS - EN	
	PH - SP - EN - DS	
	PH - EN - DS - SP	
	PH - EN - SP - DS	
	SP - DS - PH - EN	
	SP - DS - EN - PH	
	SP - PH - DS - EN	
	SP - PH - EN - DS	
SP - EN - DS - PH		
SP - EN - PH - DS		
EN - DS - PH - SP		
EN - DS - SP - PH		
EN - PH - DS - SP		
EN - PH - SP - DS		
EN - SP - DS - PH		
EN - SP - PH - DS		
DS Switch	OFF, ON	Turns the distortion on/off.
DS Type	MELLOW DRIVE	Softer distortion with a slightly darker sound.
	OVERDRIVE	Distortion that resembles a vacuum tube amp being driven.
	CRY DRIVE	Distortion that emphasizes the high end.
	MELLOW DIST	Gives the feeling of distortion playing through a large amp.
	LIGHT DIST	Strong distortion with a bright sound.
	FAT DIST	Thick distortion that emphasizes the low and high ends.
DS Drive	0–100	Sets the amount of distortion.
DS Level	0–100	Sets the distortion output level.
PH Switch	OFF, ON	Turns the phaser on/off.
PH Manual	50 [Hz]–15.0 [kHz]	Sets the basic frequency from which the sound is modulated with the phaser effect.
PH Rate	0.1–10.0 [Hz]	Sets the cycle of the phaser modulation.

Parameter	Value	Explanation
PH Depth	0-100	Sets the depth of the phaser modulation.
PH Resonance	0-100	Sets the amount of feedback for the phaser. Increasing the value creates a more unusual sound.
PH Mix	0-100	Sets the volume of the phased sound.
SP Switch	OFF, ON	Turns the spectrum on/off.
SP Band Ctrl1	-15--+15 [dB]	Sets the gain (amount of boost/cut) in the 250 Hz range.
SP Band Ctrl2	-15--+15 [dB]	Sets the gain (amount of boost/cut) in the 500 Hz range.
SP Band Ctrl3	-15--+15 [dB]	Sets the gain (amount of boost/cut) in the 1000 Hz range.
SP Band Ctrl4	-15--+15 [dB]	Sets the gain (amount of boost/cut) in the 2000 Hz range.
SP Band Ctrl5	-15--+15 [dB]	Sets the gain (amount of boost/cut) in the 4000 Hz range.
SP Band Ctrl6	-15--+15 [dB]	Sets the gain (amount of boost/cut) in the 8000 Hz range.
SP Width	1-5	Sets the bandwidth for changing the levels, common to all bands.
EH Switch	OFF, ON	Turns the enhancer on/off.
EH Sens	0-100	Sets how easily the enhancer effect is applied.
EH Mix	0-100	Sets the ratio at which the harmonics generated by the enhancer are mixed with the original sound.
Pan	L64-63R	Sets the panning of sound when using stereo output.
Level	0-127	Sets the output volume.

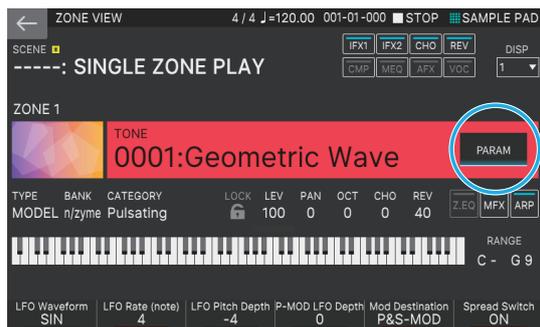
Menu	Explanation
[E3] knob	Selects the effect category.
[E4] knob	Selects the type within the category.
[E5] CANCEL	Cancels an operation.
[E6] OK	Confirms the effect type.

* All types are selected when you select "ALL" for the category.

PARAM Icon Added to ZONE VIEW

A <PARAM> icon has been added to the SINGLE ZONE PLAY screen. Touch this to open the tone edit screen.

* This works the same as the [PARAM] button in the panel's OSC section.



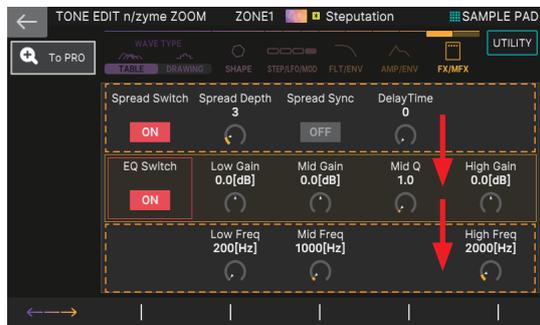
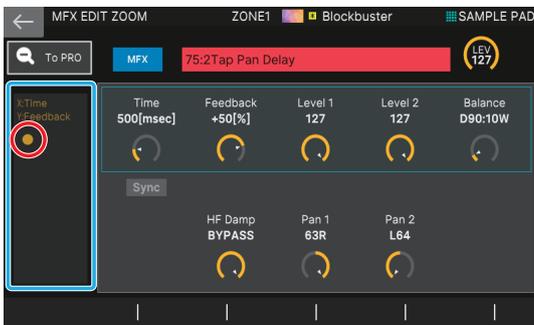
[E1] Knob Operation Changed on All TONE EDIT Screens

The way that the [E1] knob works when pressed has been changed for the TONE EDIT screens.

* This has been changed for all TONE EDIT screens including Z-Core, not just for the n/zyme tones.

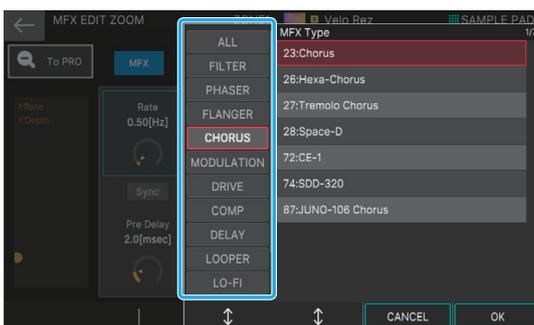
XY Pad Added to the MFX EDIT ZOOM Screen

An XY Pad was added to the MFX EDIT ZOOM screen. The MFX parameter changes when you drag and move the indicator.



Category Selector Added to the MFX Screen

A function for filtering the effect categories when searching the effect type (a category selector) on MFX EDIT and other screens has been added.



Menu	Previous version	Version 3.00 and later
Press [E1]	Switches between ZOOM EDIT and PRO EDIT	Moves to the row of the parameter to edit
Press [E1] while holding down the [SHIFT] button	-	Switches between ZOOM EDIT and PRO EDIT

Longer Patterns

A single pattern can now be up to 64 measures long when you record.

* The maximum number of measures you can set depends on the beat setting.

REC STANDBY screen

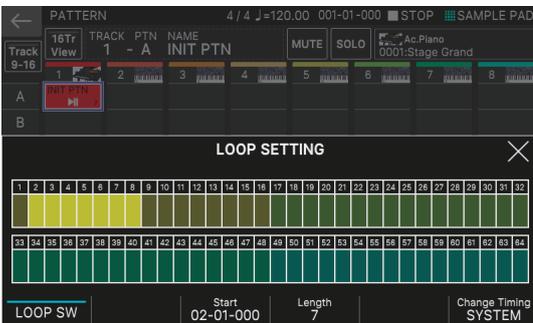
This is set for each pattern.

Recording Parameter

Parameter	Value	Explanation
Length	1-64	Sets the length of the pattern.

LOOP SETTING screen

You can use a setting of up to 64 measures on the LOOP SETTING screen.



LOOP Parameters

Parameter	Value	Explanation
Start [E3] knob	01-01-000-64-01-000	Sets the playback start position. Settings can be made in units of beats. The loop range is from the position set in "Start" through the length set in "Length."
Length [E4] knob	1-64	Sets the length of the loop. You can set a value that's longer than the original pattern's length. In this case, the extra measures you set are played back as empty measures.

More Beats (Time Signatures) Added

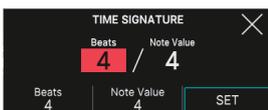
More beats (time signatures) are available to set when you record a pattern.

REC STANDBY screen

This can be specified when all patterns are empty.

1. Touch <Time Signature>.

The TIME SIGNATURE settings screen appears.



2. Specifies the time signature.

Parameter	Value	Explanation
Beats [E4] knob	1-32	Sets how many beats are in a measure.
Note Value [E5] knob	2, 4, 8, 16	Sets the length of the one beat.

3. Select [E6] SET.

This sets the beat.

Functions Added to TR-REC

Several functions were added to TR-REC.

Beat display and step position display

The beat is now shown as a numerical value, instead of an icon.

Selects the Scale for TR-REC. Scale types have been added.

Example: When Scale=1/24T and Beat=2/8, the tone category buttons 1-6 correspond to each step. When a step is not input for the six buttons that are enabled, the buttons illuminate in light red to indicate the effective button range.

Parameter	Value	Explanation
Scale	$\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$, $\frac{1}{32}$, $\frac{1}{64}$, $\frac{1}{128}$, $\frac{1}{256}$, $\frac{1}{512}$, $\frac{1}{1024}$, $\frac{1}{2048}$, $\frac{1}{4096}$, $\frac{1}{8192}$, $\frac{1}{16384}$, $\frac{1}{32768}$, $\frac{1}{65536}$, $\frac{1}{131072}$, $\frac{1}{262144}$, $\frac{1}{524288}$, $\frac{1}{1048576}$, $\frac{1}{2097152}$, $\frac{1}{4194304}$, $\frac{1}{8388608}$, $\frac{1}{16777216}$, $\frac{1}{33554432}$, $\frac{1}{67108864}$, $\frac{1}{134217728}$, $\frac{1}{268435456}$, $\frac{1}{536870912}$, $\frac{1}{1073741824}$, $\frac{1}{2147483648}$, $\frac{1}{4294967296}$, $\frac{1}{8589934592}$, $\frac{1}{17179869184}$, $\frac{1}{34359738368}$, $\frac{1}{68719476736}$, $\frac{1}{137438953472}$, $\frac{1}{274877906944}$, $\frac{1}{549755813888}$, $\frac{1}{1099511627776}$, $\frac{1}{2199023255552}$, $\frac{1}{4398046511104}$, $\frac{1}{8796093022208}$, $\frac{1}{17592186044416}$, $\frac{1}{35184372088832}$, $\frac{1}{70368744177664}$, $\frac{1}{140737488355328}$, $\frac{1}{281474976710656}$, $\frac{1}{562949953421312}$, $\frac{1}{1125899906842624}$, $\frac{1}{2251799813685248}$, $\frac{1}{4503599627370496}$, $\frac{1}{9007199254740992}$, $\frac{1}{18014398509481984}$, $\frac{1}{36028797018963968}$, $\frac{1}{72057594037927936}$, $\frac{1}{144115188075855872}$, $\frac{1}{288230376151711744}$, $\frac{1}{576460752303423488}$, $\frac{1}{1152921504606846976}$, $\frac{1}{2305843009213693952}$, $\frac{1}{4611686018427387904}$, $\frac{1}{9223372036854775808}$, $\frac{1}{18446744073709551616}$, $\frac{1}{36893488147419103232}$, $\frac{1}{73786976294838206464}$, $\frac{1}{147573952589676412928}$, $\frac{1}{295147905179352825856}$, $\frac{1}{590295810358705651712}$, $\frac{1}{1180591620717411303424}$, $\frac{1}{2361183241434822606848}$, $\frac{1}{4722366482869645213696}$, $\frac{1}{9444732965739290427392}$, $\frac{1}{18889465931478580854784}$, $\frac{1}{37778931862957161709568}$, $\frac{1}{75557863725914323419136}$, 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Data Compatibility with Versions Prior to 3.00

All types of data created on FANTOM versions earlier than 3.00 can be loaded into version 3.00.

However, caution is required when loading data that you created in version 3.00 into a FANTOM running versions earlier than 3.00.

FANTOM version 2.00 or later	Version 3.00 data can be loaded, but SCENE sequences cannot be loaded.
FANTOM versions earlier than 2.00	Version 3.00 data cannot be loaded. Update to version 2.00 or later.

* To load the sequencer data saved in a scene, you must update the FANTOM that's loading the data to version 3.00. Also, EXM, EXZ, sounds and samples not included in the instrument cannot be recreated. These must be installed as necessary.