SH-4d

Owner's Manual

Table of contents

An Overview of the SH-4d

The SH-4d is a tabletop synthesizer that lets you switch between a variety of oscillator models to intuitively create a wide range of sounds.

A variety of options for creating sounds

The new interpretive oscillator model featured on this unit lets you create a wide array of sounds, from classic synthesizers to modern wavetable synthesizer sounds.

Also, the rhythm part lets you build new and original kits by combining and processing a rich selection of built-in waveforms.

Step sequencer

There are four tone parts and one rhythm part, and each part features a step sequencer.

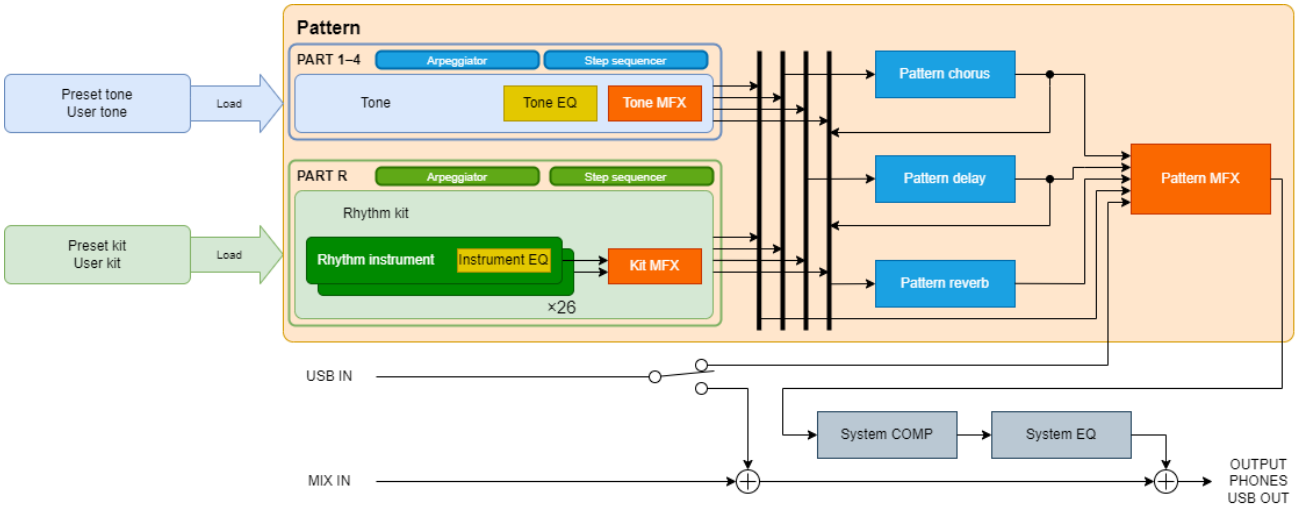
You can input sequences using a variety of methods like TR-REC, real-time input and step input, and control all the parts at the same time.

Aside from recording notes, you can also record or playback the knob motions at the same time.

Phrase creation

Besides a standard arpeggiator, this unit features unique functionality like D-MOTION and VISUAL ARPEGGIO, offering stimulating modes of creative expression for both musicians and producers.

How the Sound Module is Structured



Pattern

A “pattern” contains step sequencer data, settings for all parts (including tone number, pan, volume and so on), pattern effect settings, arpeggiator settings and more, all in one place.

By preparing several patterns in which you’ve stored your favorite settings, you can simultaneously change numerous settings simply by switching patterns.

Each SH-4d can store a total of 128 patterns, organized as eight banks of 16 patterns.

Part

A “part” is a place where you can load a tone and save it together with settings such as pan and EQ.

The SH-4d contains five parts. You can select synthesizer tones for parts 1–4 and a rhythm kit tone for part R (the rhythm part).

The part whose sound you can edit with the controllers and play using the keyboard buttons is called the “current part”.

➡ “Switching Between Parts(P.17)”

Tone

The sounds that you play in different pitches on the keyboard are called “tones”.

A tone consists of an oscillator (OSC) that creates the basis of the sound, along with a filter, effect and other components to modify that sound.

Rhythm kit

You can load instruments for rhythm sounds (rhythm instruments) into the set for part R.

One rhythm instrument can be assigned to each keyboard button to play.

A rhythm instrument consists of an oscillator (OSC) that stacks and plays back two built-in waveforms, along with a filter, effect and other components to modify that sound.

D-MOTION

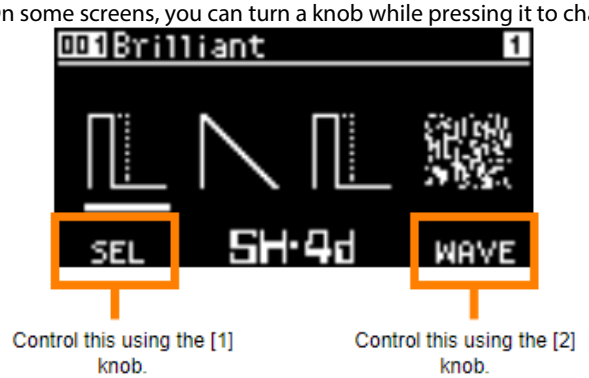
With this function, the tone parameter you set changes according to how you tilt this unit.

You can use the Matrix function at the same time to control many different parameters.

Panel Descriptions

Top Panel

1 Control section

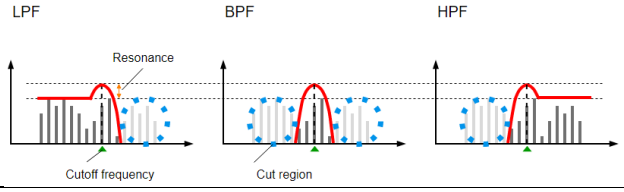
Controller	Explanation
[SOUND] button	Displays the tone list (sound browser) and switches between sounds (tones). When you press this button on the pattern screen, the mixer screen appears. ➡ "Adjusting the Volume Balance and Effect Sends(P.21)"
[SHIFT] button	When you press the [START], [PATTERN], [1]–[16] or [PAGE/TIE] buttons while holding down the [SHIFT] button, the operation listed below the respective button is executed. For the other buttons, a menu screen or the like corresponding to the button is shown. ➡ "Functions when holding down the [SHIFT] button and pressing the [START], [PATTERN], [1]–[16] and [WRITE] buttons"
[1] [2] knobs	Selects and sets the items on the screen. On the list screen, use the [1] knob to select the parameter and use the [2] knob to set the value. On the top screen and similar screens, edit the parameters that are shown at the bottom of the screen. On some screens, you can turn a knob while pressing it to change the value in steps of 10. 
[<] [>] [∧] [∨] buttons	Selects and sets the items on the screen.
[ENTER] button	Used for confirming a value or executing an operation.

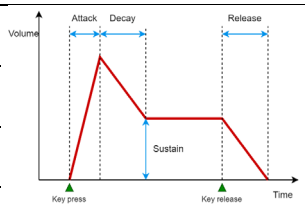
Controller	Explanation
[EXIT] button	Returns you to the previous screen. In some screens, this cancels the operation currently being executed. * If you operate a knob or other control while holding down the [EXIT] button, you can check how the tone sounds with the edited value without actually changing the tone.

2 OSC section

Controller	Explanation
[MODEL] knob	The function changes depending on the currently selected part (current part). For parts 1–4 (tone parts), this switches between oscillator models. For part R (rhythm part), this sets the waveform of the selected rhythm instrument.
[PITCH] knob	Sets the pitch in semitone units.
[TIMBRE] knob	Changes the tonal quality of the oscillator tone. The functions of this control change depending on the oscillator model. ➡ "Oscillator Model(P.26)"
[OSC 1]–[OSC 4] sliders **[OSC 1]–[OSC 4] buttons**	The functions of these controls change depending on the oscillator model. ➡ "Oscillator Model(P.26)"

3 FILTER/AMP/LFO section

Section	Controller	Explanation
FILTER	**[HPF] knob**	Sets the cutoff frequency of the -6dB/Oct high-pass filter.
	[TYPE] knob	Select the filter type. **LPF:** A -24dB/Oct 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:** A -12dB/Oct 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:** A -24dB/Oct 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.
	[CUTOFF] knob	Sets the cutoff frequency of the filter.
	[RES] knob	Emphasizes the frequencies around the filter's cutoff frequency (resonance). Larger values produce greater emphasis, creating a unique synthesizer-like sound. 
	[KYBD] knob	Adjusts how much the cutoff frequency changes (key follow) according to the note you play on the keyboard.
	[ATTACK] knob	Sets the attack time of the filter envelope.
	[DECAY] knob	Sets the decay time of the filter envelope.
	[SUSTAIN] knob	Sets the sustain level of the filter envelope.
	[RELEASE] knob	Sets the release time of the filter envelope.
	[ENV] knob	When the cutoff frequency is set to be controlled by the filter envelope, this adjusts how much the cutoff frequency changes. If the knob is in the center, no effect is applied.
	[DRIVE] knob	Adjusts how much the filter distorts the signal.
AMP	**[ATTACK] knob**	Sets the attack time of the amp envelope.
	[DECAY] knob	Sets the decay time of the amp envelope.



Section	Controller	Explanation
	[SUSTAIN] knob	Sets the sustain level of the amp envelope.
	[RELEASE] knob	Sets the release time of the amp envelope.
	[PAN] knob	Sets the panning of each part's sound when using stereo output.
	[LEVEL] knob	Adjusts the part volume.
LFO	**[TYPE] knob**	Sets the LFO waveform. **SINE:** sine wave **TRI:** triangle wave **SAW-UP:** sawtooth wave **SAW-DW:** sawtooth wave (negative polarity) **SQR:** Square wave **RND:** Random wave **TRP:** Trapezoidal wave **S&H:** Sample & hold wave (randomly changes the output value once per cycle). **CHS:** Chaos wave **VSINE:** Deformed sine wave (randomly changes the amplitude of the sine wave once per cycle).
	[RATE] knob	Sets the speed of the LFO cycle. The LFO cycle (rate) is set as a note length when the Rate Sync in the LFO setting is "ON". ➡ "Configuring the LFO(P.43)"
	[FADE] knob	Sets how long it takes for the LFO to reach maximum amplitude.
	[PITCH] knob	Sets how much the LFO affects the pitch.
	[FILTER] knob	Sets how much the LFO affects the cutoff frequency.
	[AMP] knob	Sets how much the LFO affects the volume.

4 Effects section

The SH-4d features one multi-effect unit (tone effect) per part, as well as four pattern effect units that are applied to the mix of all parts. Each pattern effect unit includes a multi-effect (MFX), delay, chorus and reverb.

Before using the [CTRL 1] and [CTRL 2] knobs to operate the effects, press the [TONE]–[DELAY] buttons in the effect section to select the effect you want to operate.

* For details on the effects, refer to "MFX Parameters(P.86)".

Controller	Explanation
[TYPE] knob	Switches between the type of effect you select. Press the knob to turn the selected effect on/off. If the tone effect or a pattern MFX is selected, turn the knob while pressing it to switch between effect categories.
[CTRL 1] [CTRL 2] knobs	Sets the parameters for the effect you selected. If you've selected Pattern Reverb/Chorus/Delay, use the [CTRL 1] knob to set the send amount to each effect. * If you operate a knob or other control while holding down the [EXIT] button, you can check the parameter to which the knob is assigned and the current value without changing the tone. * With the rhythm part, the [CTRL 1] knob selects the send amount of each effect, but only for the instrument that's selected by the keyboard buttons. To enable the effect send for each instrument, raise the Reverb/Chorus/Delay Send level for the rhythm part on the MIXER screen. For details, refer to "Adjusting the Volume Balance and Effect Sends(P.21)".
[TONE] button	**Quick press:** Selects the tone effect. **Long-press:** Shows the tone effect settings screen. ➡ "MFX Parameters(P.86)"
[MFX] button	**Quick press:** Selects the pattern MFX. **Long-press:** Shows the pattern MFX settings screen. ➡ "MFX Parameters(P.86)"
MFX [ON] button	Switches the pattern MFX on/off, regardless of which effect is selected.

Controller	Explanation
[REVERB] button	**Quick press:** Selects the pattern reverb. **Long-press:** Shows the pattern reverb settings screen. ➡ "PATTERN REVERB(P.173)"
[CHORUS] button	**Quick press:** Selects the pattern chorus. **Long-press:** Shows the pattern chorus settings screen. ➡ "PATTERN CHORUS(P.168)"
[DELAY] button	**Quick press:** Selects the pattern delay. **Long-press:** Shows the pattern delay settings screen. ➡ "PATTERN DELAY(P.171)"

MEMO

Hold down the [SHIFT] button and press each button in the effect section to display the setting screen for each effect.

5 Step sequencer section

Controller	Explanation
[START] button	Plays/stops the sequencer.
[PATTERN] button	Turn this on (the button lights up) to switch to the PATTERN screen. The unit enters pattern mode.
[1]–[16] buttons	Use these to input notes into the step sequencer. When in pattern mode, this selects the pattern.
[PAGE/TIE] button	Switches between the sequencer steps (pages) that are operated with the [1]–[16] buttons. When you're editing with the sequencer, this inputs a tie. In pattern mode, press the [1]–[8] buttons while holding down the [PAGE/TIE] button to switch between pattern banks.

Functions when holding down the [SHIFT] button and pressing the [START] [PATTERN], [1]–[16] and [WRITE] buttons

Controller	Explanation
[START] (REC)	Switches the step sequencer to Realtime Rec mode. ➡ "Recording Your Performance in Real Time (Real-time Input)(P.59)"
[PATTERN] (EDIT)	Shows the PATTERN SETTINGS screen.
[1] (PART1)	Selects part 1.
[2] (PART2)	Selects part 2.
[3] (PART3)	Selects part 3.
[4] (PART4)	Selects part 4.
[5] (RHYTHM)	Selects part R.
[6] (TONE)	Shows either the TONE screen or the RHYTHM KIT screen. ➡ "Configuring a Tone(P.38)"
[7] (MATRIX)	Shows the MATRIX screen. ➡ "Using the Modulation Matrix(P.40)"
[8] (LFO)	Shows the LFO screen. ➡ "Configuring the LFO(P.43)"
[9] (EQ)	Shows the TONE EQ screen. ➡ "Configuring the Tone EQ(P.44)"
[10] (INIT)	**When the current part is a tone part:** Initializes the tone. **When the current part is the rhythm part:** Initializes the rhythm kit or rhythm instrument.
[11] (TEMPO)	Shows the PATTERN TEMPO screen. ➡ "Setting the Tempo and Shuffle(P.53)"
[12] (UNDO)	Undoes the most recent sequencer operation, such as the note you inputted or deleted (UNDO). Press this again to cancel your most recent undo action (REDO).
[13] (COPY)	Shows the COPY screen. ➡ "Copying and Pasting the Content of Patterns(P.69)"
[14] (UTILITY)	Shows the PATTERN UTILITY screen. ➡ "Pattern Utilities(P.68)"
[15] (CLEAR)	**When the current part is a tone part:** Erases all notes in the step sequencer. **When the current part is the rhythm part:** Erases all notes for all instruments or for the current instrument in the step sequencer. On the PATTERN screen, this erases all notes in all parts.
[16] (MENU)	Shows the MENU screen. ➡ "Main Menu (MENU)(P.76)"

Controller	Explanation
[PAGE/TIE] (WRITE)	Shows the WRITE MENU screen. ➡ "Saving a Tone/Pattern (WRITE MENU)(P.73)"

6 Keyboard section

Controller	Explanation
OCTAVE [-] [+] buttons	Switches between octaves for the keyboard section. Press both buttons at the same time to reset the octave setting.
PITCH [-] [+] buttons	Applies pitch bend to the currently selected part while you hold down the buttons.
Keyboard buttons	Use these buttons as a keyboard. These can be used in combination with the [1]–[16] buttons to input notes into the sequencer. For part R, this selects the instrument to edit. * Press a keyboard button while holding down the [SHIFT] button when you want to change the instrument to edit without making it sound.
[ARPEGGIO] button	Turns the arpeggio on/off. Use this with the [SHIFT] button to show the settings screen. ➡ "Using the Arpeggiator(P.50)"
[HOLD] button	Turns the arpeggio hold on/off.

7 [VOLUME] knob

Adjusts the volume.

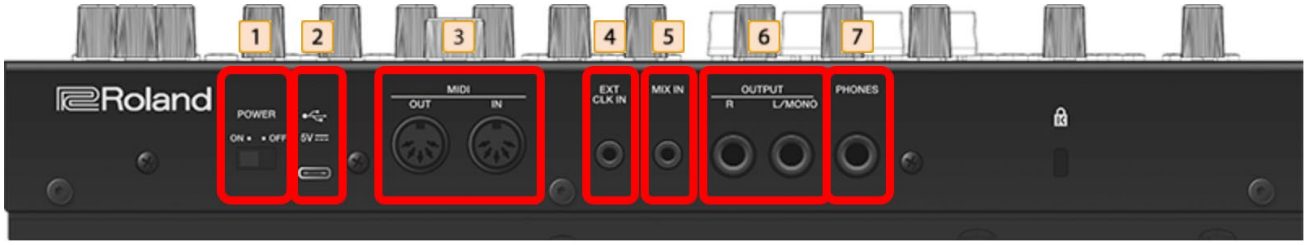
8 [D-MOTION] button

Turns the D-Motion function on/off, which controls the tones according to the angle at which this unit is tilted.

For details, refer to "Using D-MOTION(P.71)".

* When using this function, firmly grip both sides of this unit and be careful that the connected cables are not excessively bent.

Rear Panel



1 [POWER] switch

Turns the power on/off.

2 USB Type-C® port

Connect the included USB Type-C cable to this port for supplying power to this unit from a 5V USB AC adaptor or from the USB port on your computer.

Connecting to your computer using the included USB Type-C cable also lets you exchange USB MIDI and USB audio data.

* Do not use a USB cable that is designed only for charging. Charge-only cables cannot transmit data.
* If you're using a Mac, the SH-4d driver must be installed to connect to this unit.

  Access the website shown below to download the SH-4d Driver.
  https://roland.cm/sh-4d_dl

3 MIDI connectors

Connect a commercially available MIDI cable to these connectors to control the connected MIDI devices from this unit.

4 EXT CLK IN jack

Use this jack to input clock signals from an external source. You can make the steps of the sequencer advance in sync with the clock (pulse) that's inputted.

* If a plug is connected to the EXT CLK IN jack, this unit always operates in sync with the signals received from the EXT CLK IN jack, regardless of the Sync Mode setting on this unit.

  "System Settings (SYSTEM SETTINGS)(P.76)"
* Use cable with monaural mini phone type plug to connect to the EXT CLK IN jack. Do not use cable with stereo mini phone type plug, as this cable does not work.

5 MIX IN jack

Used for inputting audio. The sound from connected devices is output from the PHONES and OUTPUT jacks.

The signal input from the MIX IN jack is not output via USB audio.

6 OUTPUT jacks

Connect this jack to your amp or monitor speakers.

7 PHONES jack

Used for connecting headphones.

Turning the Power On

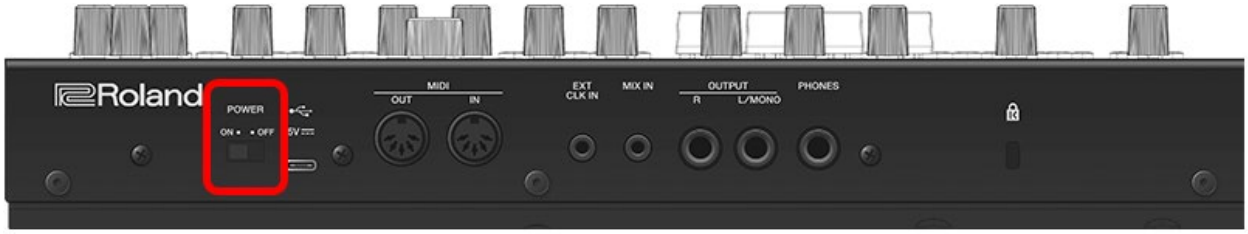
* Before turning the unit on/off, always be sure to turn the volume down. Even with the volume turned down, you might hear some sound when switching the unit on/off. However, this is normal and does not indicate a malfunction.

When supplying power via the USB port

1. **Connect the included USB Type-C cable to a 5V USB AC adaptor or to the USB port on your computer.**
2. **To turn on the power, slide the [POWER] switch of this unit to "ON".**

When supplying power via batteries

1. **Insert the batteries by following the steps in "Installing the batteries".**
2. **To turn on the power, slide the [POWER] switch of this unit to "ON".**



In places where small children are present, make sure that an adult provides supervision and guidance.

Installing the batteries

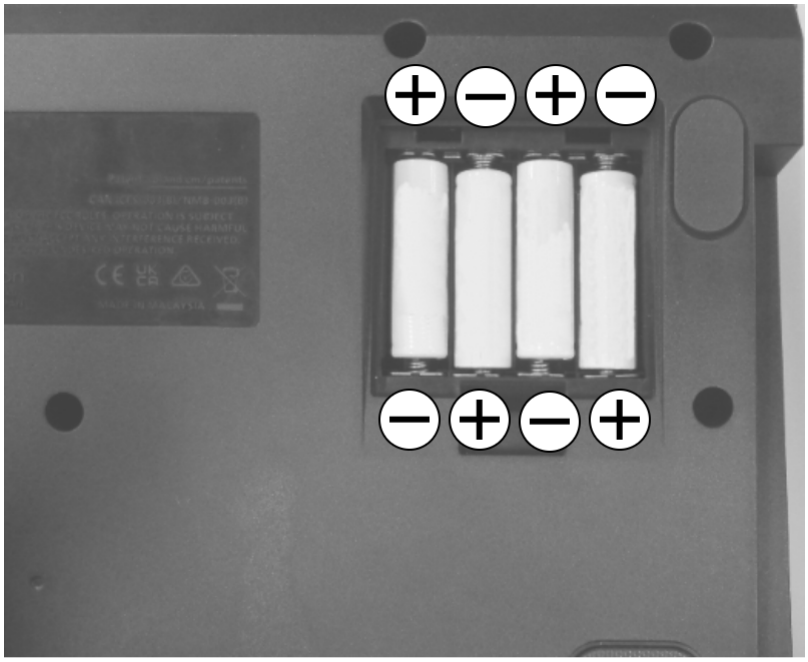
As an alternative to USB bus power, you can use commercially available AA nickel-metal hydride batteries or alkaline batteries to power the unit.

* If USB bus power is being supplied, the unit uses USB bus power even if batteries are installed.

1. **Remove the battery cover.**

   When turning the unit over, be careful so as to protect the buttons and knobs from damage. Also, handle the unit carefully; do not drop it.

2. **Taking care to observe the correct orientation of the batteries, insert the batteries into the battery case.**



3. **Close the battery cover.**

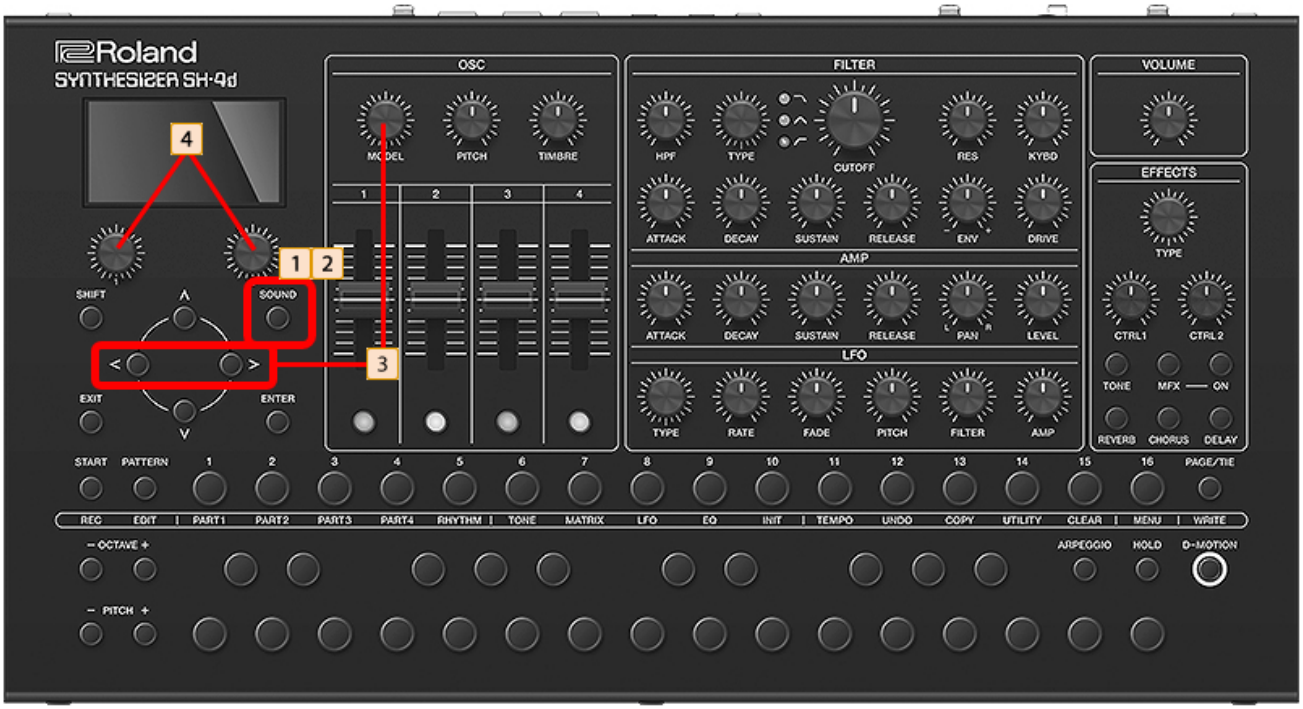
If you handle the battery improperly, you risk explosion and fluid leakage. Make sure that you carefully observe all of the items related to batteries that are listed in the “USING THE UNIT SAFELY” and “IMPORTANT NOTES” (“USING THE UNIT SAFELY”) leaflets for proper use.

Battery replacement indicator

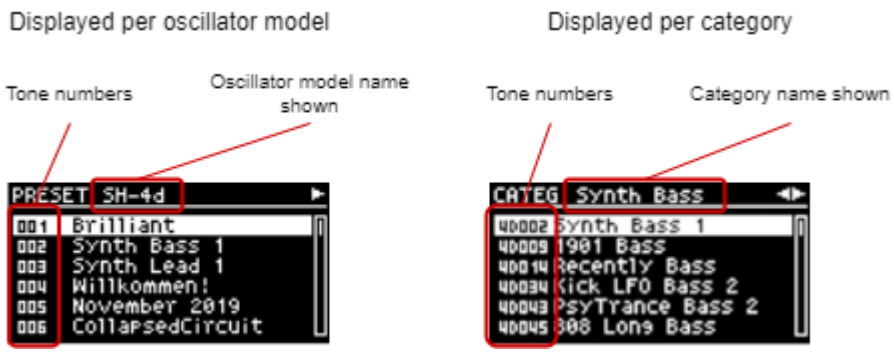
When the batteries have run down, the message “Battery Low!” appears on the screen.

When this occurs, install new batteries.

Switching Between Tones



1. **On any screen besides the PATTERN screen, press the [SOUND] button to display the sound browser.**
2. **Press the [SOUND] button to toggle between displaying the tones for each oscillator model, or the tones for each category.**



3. **Use the [MODEL] knob or the [<] [>] buttons to select either the oscillator model or the category.**
4. **Turn the [1] and [2] knobs or the [∧] [∨] buttons to select a tone, and press the [ENTER] button to confirm.**

MEMO

- You can use the keyboard buttons or an external keyboard to preview the selected tones.
- On the sound browser screen, press the [EXIT] button to reload the tone that was selected when you entered the sound browser.

Abbreviations when displaying categories	
SH-4d	4D
WAVETABLE	WT
Cross FM	CF
CHORD	CH
DRAWING	DR
SH-3D	3D
SH-101	SH
JUNO-106	JU
SYNC	SY
RING	RI

PCM	PC
User Tone	UT

To save an edited tone, execute the write operation.

For details on how to save a tone, refer to “Saving a Tone/Pattern (WRITE MENU)(P.73)”.

Switching Between Parts

1. **Hold down the [SHIFT] button and press the [1]–[5] buttons.**

   The mark shown at the top-right corner of the screen indicates the current part.

Switching Between Patterns

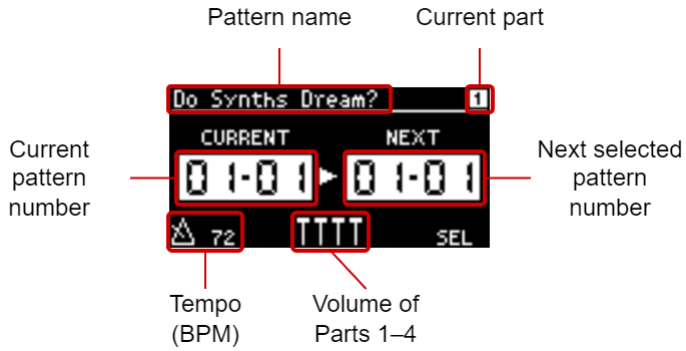
NOTE

When you switch to a different pattern, the previous unsaved tone/pattern is lost.
If you want to keep the unsaved tone or pattern, save the tone/pattern before switching patterns.

Using the [1]–[16] buttons to switch between patterns

1. **Press the [PATTERN] button.**

   The PATTERN screen appears.



2. **Hold down the [PAGE/TIE] button and press the [1]–[8] buttons to select the bank that contains the pattern you want to select.**

3. **Press the [1]–[16] buttons to select the pattern.**

   If a pattern is still playing back, the unit switches to the new pattern you select when the current pattern finishes playing back.

Using the [2] knob to switch patterns

1. **On the PATTERN screen, turn the [2] knob to make the button ([1]–[16]) blink that corresponds to the pattern you want to select.**

   Turn the [2] knob while holding down the [SHIFT] button to switch between banks.

2. **When playing back the pattern, press the [ENTER] button to confirm the pattern.**

Using the pattern browser to switch between patterns

1. **Press the [ENTER] button on the PATTERN screen.**

   The PATTERN BROWSER screen appears.

2. **Use the [1] or [2] knob or press the [∧] [∨] buttons to select the pattern.**

   The unit automatically switches to the pattern you select once the current pattern finishes playing back.

MEMO

To save the settings for a pattern you edit, execute the write operation.
For details on how to save a pattern, refer to "Saving a Tone/Pattern (WRITE MENU)(P.73)".

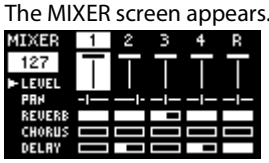
Muting a Part

1. **Press the [PATTERN] button.**

   The PATTERN screen appears.

2. **Press the [SOUND] button.**

   The MIXER screen appears.



3. **Use the [1]–[5] buttons and the keyboard buttons to mute the parts.**

Controller	Explanation
[1]–[5] buttons	Mutes/unmutes parts 1–4 and part R (RHYTHM).
Keyboard buttons	Mutes/unmutes rhythm instruments 1–26 for part R (RHYTHM).

You can also hold down the [PATTERN] button while pressing one of the [1]–[5] buttons or a keyboard button to mute the parts and rhythm instruments.

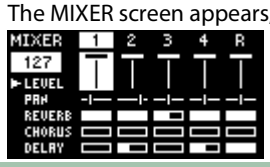
Adjusting the Volume Balance and Effect Sends

1. **Press the [PATTERN] button.**

   The PATTERN screen appears.

2. **Press the [SOUND] button.**

   The MIXER screen appears, and the following operations are available.



Controller	Explanation
[OSC 1]–[OSC 4] sliders	Adjusts the volume of parts 1–4.
[TIMBRE] button	Adjusts the volume of part R (RHYTHM).
[OSC 1]–[OSC 4] buttons	Selects parts 1–4.
[1]–[5] buttons	Mutes/unmutes parts 1–4 and part R (RHYTHM).
Keyboard buttons	Mutes/unmutes rhythm instruments 1–26 for part R (RHYTHM).

3. **Use the [∧] [∨] [<] [>] buttons to select the following parameters, and set the values using the [2] knob.**

Parameter	Explanation
Mix Level	Sets the volume of each part. This parameter is different from the Part Level parameter that's set using the AMP [LEVEL] knob.
Part Pan	Sets the pan position for the part's sound. This parameter is the same as the parameter that's set using the AMP [PAN] knob.
Reverb Send	Specifies the send level to the pattern reverb.
Chorus Send	Specifies the send level to the pattern chorus.
Delay Send	Specifies the send level to the pattern delay.

MEMO

- For the rhythm part, the amount of signal sent to the pattern reverb/chorus/delay from each instrument is the value set for each instrument with the EFFECT [CTRL 1] knob, multiplied by the Reverb/Chorus/Delay Send value that's set on the MIXER screen.
  When adjusting the send amount with the [CTRL 1] knob, raise the Reverb/Chorus/Delay Send level on the MIXER screen.
- You can use the [OSC 1]–[OSC 4] sliders and the [TIMBRE] knob to adjust the volume of each part, even when the PATTERN screen is shown.

Initializing a Tone/Pattern (INITIALIZE)

Initializing a tone part

1. **Set the part you want to initialize to the current part.**
2. **Hold down the [SHIFT] button and press the [10] button to display the dialog box.**

3. **Press the [ENTER] button.**

Initializing a Rhythm Kit/Instrument

1. **Set part R as the current part.**
2. **To initialize an instrument, press a keyboard button to select the instrument you want to initialize as the current instrument.**
3. **Hold down the [SHIFT] button and press the [10] button to display the dialog box.**

4. **Use the [<] [>] buttons to select what you want to initialize, and press the [ENTER] button.**

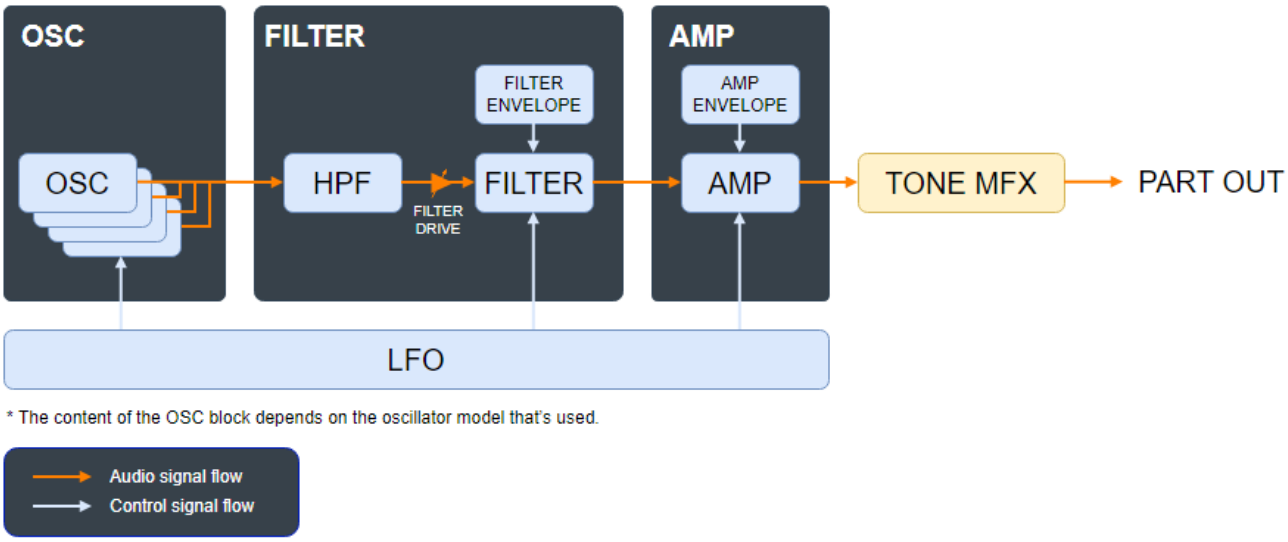
Initializing a Pattern

1. **Press the [PATTERN] button to display the PATTERN screen, and select the pattern to initialize.**
2. **Hold down the [SHIFT] button and press the [10] button to display the dialog box.**

3. **Press the [ENTER] button.**

Creating a Tone

How Parts 1–4 Are Structured



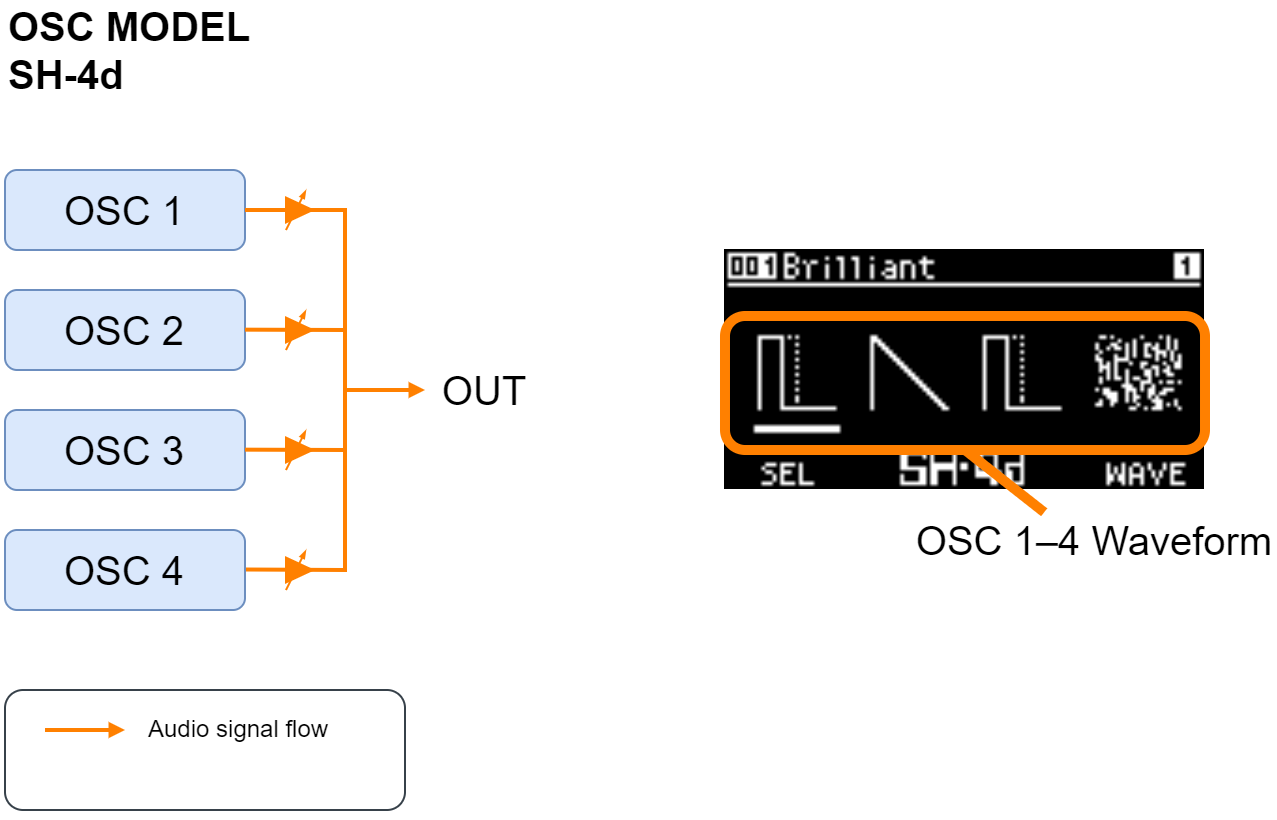
Oscillator Model

Oscillator model	Explanation
SH-4d	A virtual analog oscillator with four oscillators, featuring selectable waveforms that can be mixed.
SH-3D	A virtual analog oscillator with three oscillators and a secondary LFO.
SYNC	Two synchronizable virtual analog oscillators with a pitch envelope.
SH-101	An oscillator that recreates the famed SH-101 vintage mono synth.
JUNO-106	An oscillator that recreates the widely used JUNO-106 vintage poly synth.
Cross FM	An oscillator that recreates a two-operator FM synth.
RING	An oscillator that features two oscillators and a ring modulator.
WAVETABLE	A wavetable oscillator that lets you modulate the wave position.
CHORD	A chord oscillator that lets you freely control the chord shape.
DRAWING	An oscillator that lets you instantly play the waveforms you draw on the screen.
PCM	A PCM oscillator that lets you mix and play four waveforms.

MEMO

For some oscillator models, you can press the OSC section [1]–[4] buttons while holding down the [SHIFT] button to show the OSC SETTINGS screen.
This lets you configure the parameters that aren't assigned to a controller.

SH-4d



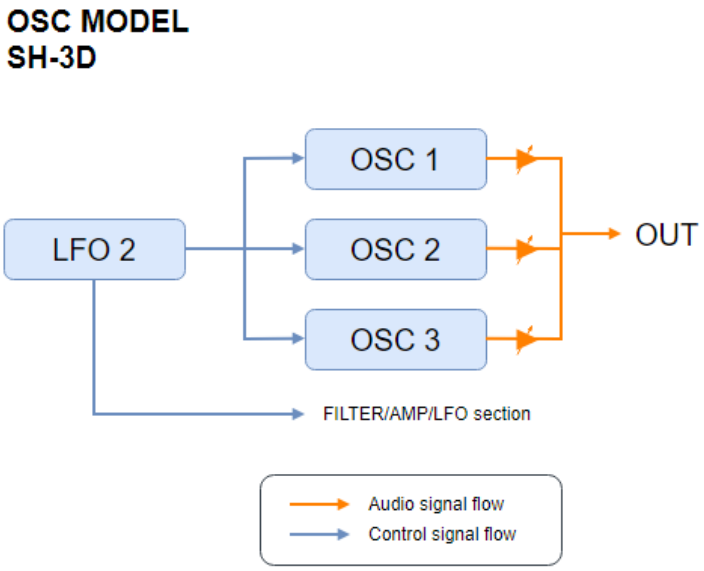
Turn the [1] knob or press the [OSC 1]–[OSC 4] buttons to select an oscillator, and use the [2] knob to select the oscillator waveform.

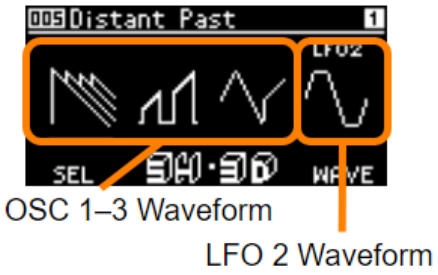
Use the [OSC 1]–[OSC 4] sliders to set the volume for each oscillator.

Parameter	Controllers	Value	Explanation
Osc 1–4 Waveform	[2] knob (on the top screen only)	This sets the waveform.	
		SAW	Sawtooth wave
		SQR	Square wave
		TRI	Triangle wave
		SINE	Sine wave

Parameter	Controllers	Value	Explanation
		RAMP	Ramp wave
		JUNO	Modulated sawtooth wave
		TRI2	Triangle wave variation
		TRI3	Triangle wave variation
		SINE2	Sine wave variation
		SSAW	SuperSAW
		NOISE	White noise
Osc 1–4 Coarse Tune	PITCH	-24–+24	Specifies the pitch in semitone steps (maximum ±2 octaves).
Osc 1–4 Fine Tune	SHIFT+PITCH	-50–+50	Specifies the pitch in cents (maximum ±50 cents).
Osc 1–4 PWM Depth	TIMBRE	0–63	Sets how much the LFO is applied (depth) to the PW (pulse width). The pulse width is modulated according to the LFO settings.
Osc 1–4 Pulse Width	SHIFT+TIMBRE	0–63	This effect changes the duty ratio of the pulse width to alter the waveform. You can use this effect with other waveforms besides SQR (square wave). * A value of zero results in a 50:50% duty ratio.
Osc 1 Level	[OSC 1] slider	0–127	Sets the volume of OSC 1.
Osc 2 Level	[OSC 2] slider	0–127	Sets the volume of OSC 2.
Osc 3 Level	[OSC 3] slider	0–127	Sets the volume of OSC 3.
Osc 4 Level	[OSC 4] slider	0–127	Sets the volume of OSC 4.
Osc 1–4 Fat	–	0–63	Distorts the waveform and adds a frequency component one octave lower than the original waveform.
Osc 1-2, 3-4 Sync	–	OFF, SYNC	Produces an oscillator sync effect that's found in analog synthesizers and other sound generators. Resets OSC 1 or OSC 3 using the pitch cycle of OSC 2 or OSC 4.
Osc 1–4 SSaw Detune	–	0–127	Adjusts how much the SuperSAW is detuned. Larger values create a greater detune effect. * This is enabled only when "SSAW" is selected for the waveform.
Osc 1–4 LED Color	–	RED, ORANGE, YELLOW, GREEN, BLUE, PURPLE, PINK, WHITE, SKYBLUE, P.YELLOW, P.BLUE, P.PINK, L.RED, L.ORANGE, L.YELLOW, L.GREEN, P.GREEN, L.SKYBLUE, L.BLUE, L.PURPLE	Sets the oscillator section LED color for each oscillator.

SH-3D





Turn the [1] knob or press the [1]–[4] buttons in the OSC section to select an oscillator or LFO 2, and use the [2] knob to select the oscillator or LFO 2 waveform.

Use the [1]–[3] sliders to set the volume for each oscillator. Set the speed of the LFO 2 cycle with the [4] slider.

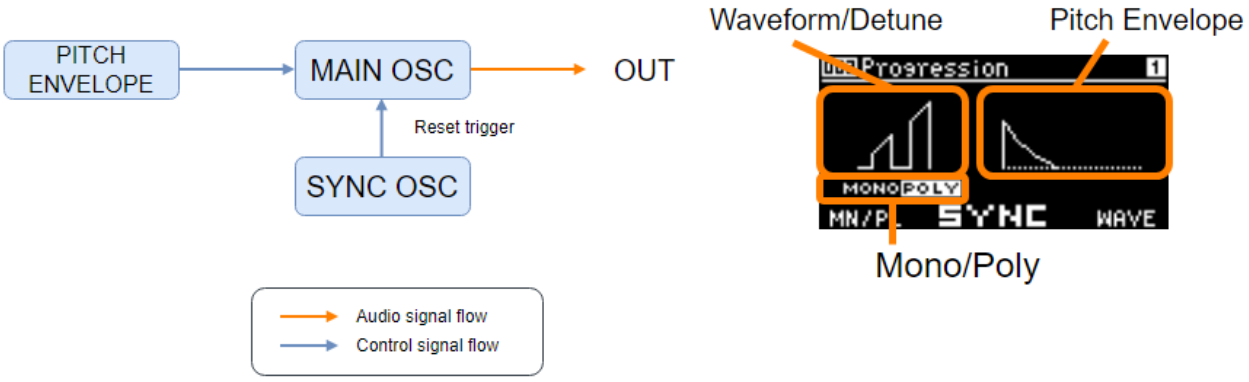
Parameter	Controllers	Value	Explanation
OSC 1–3			
Osc 1–3 Waveform	[2] knob (on the top screen only)	This sets the waveform.	
		SAW	Sawtooth wave
		SQR	Square wave
		TRI	Triangle wave
		SINE	Sine wave
		RAMP	Ramp wave
		JUNO	Modulated sawtooth wave
		TRI2	Triangle wave variation
		TRI3	Triangle wave variation
		SINE2	Sine wave variation
		SSAW	SuperSAW
		NOISE	White noise
LFO 2 Waveform	[2] knob (on the top screen only)	Sets the LFO 2 waveform.	
		SINE	Sine wave
		TRI	Triangle wave
		SAW-UP	Sawtooth wave
		SAW-DW	Sawtooth wave (negative polarity)
		SQR	Square wave
		RND	Random wave
		TRP	Trapezoidal wave
		S&H	Sample & hold wave (randomly changes the output value once per cycle).
		CHS	Chaos wave
		VSINE	Deformed sine wave (randomly changes the amplitude of the sine wave once per cycle).
Osc 1–3 Coarse Tune	PITCH	-24–+24	Specifies the pitch in semitone steps (maximum ±2 octaves).
Osc 1–3 Fine Tune	SHIFT+PITCH	-50–+50	Specifies the pitch in cents (maximum ±50 cents).
Osc 1–3 PWM Depth	TIMBRE	0–63	Sets how much the LFO is applied (depth) to the PW (pulse width). The pulse width is modulated according to the LFO settings.

Parameter	Controllers	Value	Explanation
Osc 1–3 Pulse Width	SHIFT+TIMBRE	0–63	This effect changes the duty ratio of the pulse width to alter the waveform. You can use this effect with other waveforms besides SQR (square wave). * A value of zero results in a 50:50% duty ratio.
Osc 1 Level	[OSC 1] slider	0–127	Sets the volume of OSC 1.
Osc 2 Level	[OSC 2] slider	0–127	Sets the volume of OSC 2.
Osc 3 Level	[OSC 3] slider	0–127	Sets the volume of OSC 3.
Osc 1–3 Fat	–	0–63	Distorts the waveform and adds a frequency component one octave lower than the original waveform.
Osc 1-2 Sync	–	OFF, ON	Produces an oscillator sync effect that's found in analog synthesizers and other sound generators. Resets OSC 1 using the pitch cycle of OSC 2 (only for OSC 1 and 2).
Osc 1–3 SSaw Detune	–	0–127	Adjusts how much the SuperSAW is detuned. Larger values create a greater detune effect. * This is enabled only when "SSAW" is selected for the waveform.
Osc 1–3 LED Color	–	RED, ORANGE, YELLOW, GREEN, BLUE, PURPLE, PINK, WHITE, SKYBLUE, P.YELLOW, P.BLUE, P.PINK, L.RED, L.ORANGE, L.YELLOW, L.GREEN, P.GREEN, L.SKYBLUE, L.BLUE, L.PURPLE	Sets the oscillator section LED color for each oscillator.
LFO 2			
LFO 2 Rate Note/Rate	[OSC 4] slider	0–1023 or 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 speed of the LFO 2 cycle. The LFO 2 cycle (rate) is set as a note length when the LFO2 Rate Sync setting is "ON".
LFO 2 Pitch Depth	PITCH (when LFO 2 is selected)	0–100	Sets the depth of LFO 2 when it is applied to the pitch.
LFO 2 Fade	TIMBRE (when LFO 2 is selected)	0–1023	Sets how long it takes for LFO 2 to reach maximum amplitude.
LFO 2 Type	–	Sets the LFO 2 waveform.	
		SINE	Sine wave
		TRI	Triangle wave
		SAW-UP	Sawtooth wave
		SAW-DW	Sawtooth wave (negative polarity)
		SQR	Square wave
		RND	Random wave
		TRP	Trapezoidal wave
		S&H	Sample & hold wave (randomly changes the output value once per cycle).
		CHS	Chaos wave
		VSINE	Deformed sine wave (randomly changes the amplitude of the sine wave once per cycle).
LFO 2 Rate Sync	–	OFF, ON	Turn this ON to sync the LFO 2 cycle with the tempo.
LFO 2 Key Trig	–	OFF, ON	Sets whether to synchronize the start of the LFO 2 cycle with the timing you use to play the keys ("ON" to synchronize, "OFF" to disable).
LFO 2 Flt Depth	–	0–100	Sets the depth of LFO 2 when it is applied to the cutoff frequency.
LFO 2 Amp Depth	–	0–100	Sets how much LFO 2 affects the volume.
LFO 2 Pan Depth	–	-63–+63	Sets the depth of the LFO 2 when it is applied to the pan setting.

Parameter	Controllers	Value	Explanation
LFO 2 Phase Pos	–	Sets the LFO 2 start phase value when Key Trigger is "ON".	
		0	1 cycle
		1	1/4 cycle
		2	1/2 cycle
		3	3/4 cycle

SYNC

OSC MODEL
SYNC

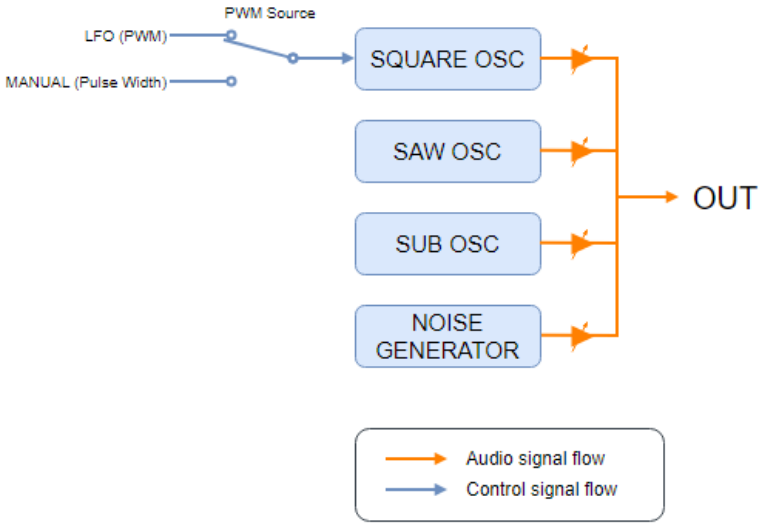


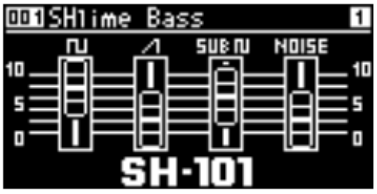
Use the [2] knob to set the waveform.

Parameter	Controllers	Value	Explanation
Coarse Tune	PITCH	-24–+24	Specifies the pitch in semitone steps (maximum ±2 octaves).
Fine Tune	SHIFT+PITCH	-50–+50	Specifies the pitch in cents (maximum ±50 cents).
PWM Depth	TIMBRE	0–63	Sets how much the LFO is applied (depth) to the PW (pulse width). The pulse width is modulated according to the LFO settings.
Pulse Width	SHIFT+TIMBRE	0–63	This effect changes the duty ratio of the pulse width to alter the waveform. You can use this effect with other waveforms besides SQR (square wave). * A value of zero results in a 50:50% duty ratio.
Detune	[OSC 1] slider	0–48	Sets the pitch of the synchronized oscillator in semitones.
PEnv Attack	[OSC 2] slider	0–1023	Sets the attack time of the pitch envelope.
PEnv Decay	[OSC 3] slider	0–1023	Sets the decay time of the pitch envelope.
PEnv Depth	[OSC 4] slider	0–100	Sets the intensity of the pitch envelope. Larger values produce a greater change with the pitch envelope.
Mono/Poly	[OSC 1] and [OSC 2] buttons	MONO, POLY	Sets whether the tones play in polyphonic (POLY) or monophonic (MONO) mode.
Sync	[OSC 4] button	OFF, ON	Turns oscillator sync on/off.

SH-101

OSC MODEL
SH-101

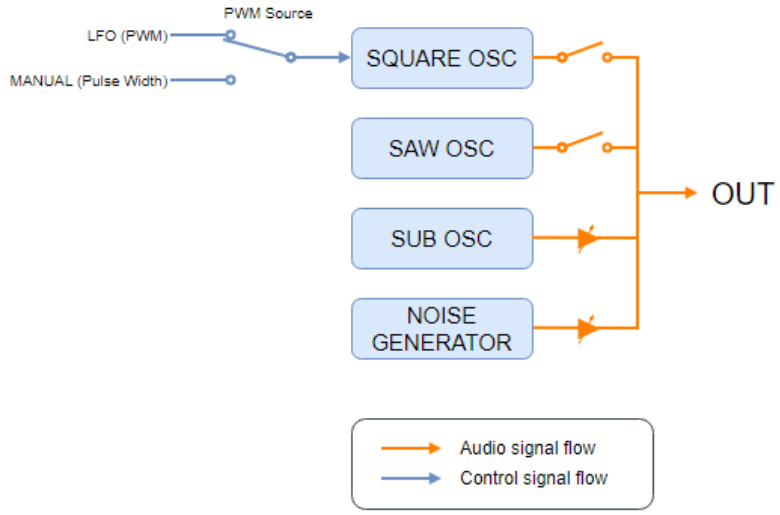


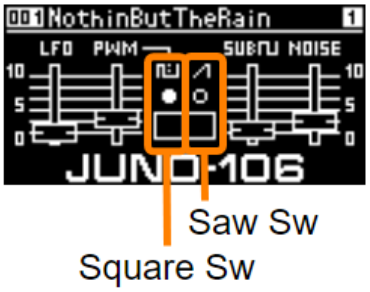


Parameter	Controllers	Value	Explanation
Coarse Tune	PITCH	-24–+24	Specifies the pitch in semitone steps (maximum ±2 octaves).
Fine Tune	SHIFT+PITCH	-50–+50	Specifies the pitch in cents (maximum ±50 cents).
Pulse Width	TIMBRE (when "PWM Source" is set to "MANUAL")	0–63	Changes the duty ratio of the pulse width to alter the waveform. * A value of zero results in a 50:50% duty ratio.
PWM Depth	TIMBRE (when "PWM Source" is set to "LFO")	0–63	Sets how much the LFO is applied (depth) to the PW (pulse width) of the square wave. The pulse width is modulated according to the LFO settings.
Square Level	[OSC 1] slider	0–127	Sets the square wave volume.
Saw Level	[OSC 2] slider	0–127	Sets the sawtooth wave volume.
Sub Osc Level	[OSC 3] slider	0–127	Sets the sub-oscillator volume.
Noise Level	[OSC 4] slider	0–127	Sets the noise generator volume.
PWM Source	[OSC 1] button	LFO, MANUAL	Switches the function of the [TIMBRE] knob between pulse width and PWM depth.
Sub Osc Wave	[OSC 3] button	1OCT SQR, 2OCT SQR, 2OCT PLS	Switches between sub-oscillator pitches and waveforms.

JUNO-106

OSC MODEL
JUNO-106

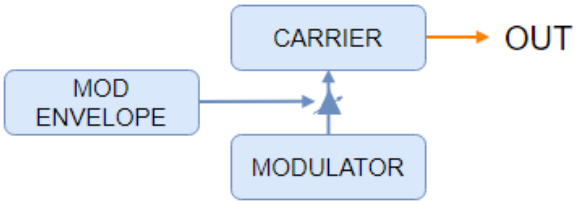


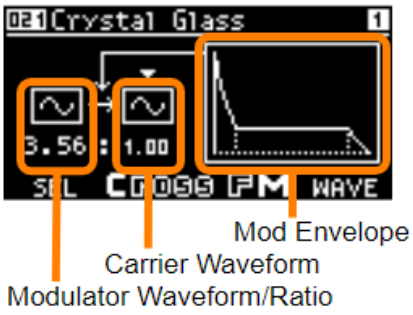


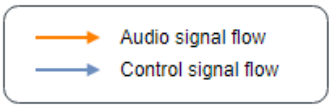
Parameter	Controllers	Value	Explanation
Coarse Tune	PITCH	-24–+24	Specifies the pitch in semitone steps (maximum ±2 octaves).
Fine Tune	SHIFT+PITCH	-50–+50	Specifies the pitch in cents (maximum ±50 cents).
Pulse Width	TIMBRE	0–63	Changes the duty ratio of the pulse width to alter the waveform. * A value of zero results in a 50:50% duty ratio.
LFO Pitch Depth	[OSC 1] slider	0–100	Sets the depth of the LFO when it is applied to the pitch.
PWM Depth	[OSC 2] slider	0–63	Sets how much the LFO is applied (depth) to the PW (pulse width) of the square wave. The pulse width is modulated according to the LFO settings.
Sub Osc Level	[OSC 3] slider	0–127	Sets the sub-oscillator volume.
Noise Level	[OSC 4] slider	0–127	Sets the noise generator volume.
Square Switch	[OSC 2] button	OFF, ON	Turns the square wave on/off.
Saw Switch	[OSC 3] button	OFF, ON	Turns the sawtooth wave on/off.

Cross FM

OSC MODEL
Cross FM



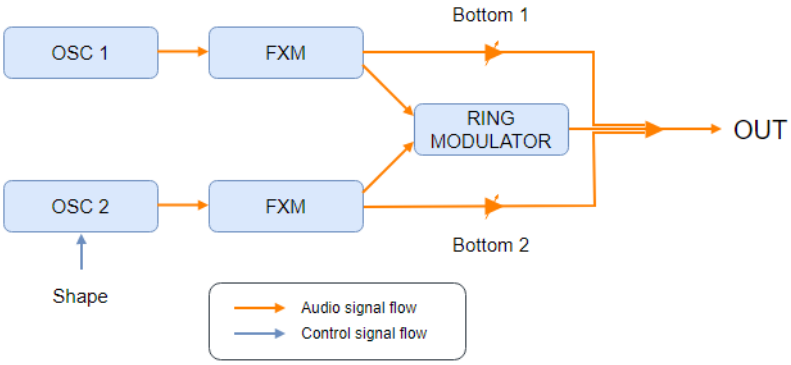




Parameter	Controllers	Value	Explanation
Carrier/Modulator Waveform	[2] knob (on the top screen only)	SINE, TRI, SQR, SAW	This sets the waveform.
Coarse Tune	PITCH	-24–+24	Specifies the pitch in semitone steps (maximum ±2 octaves).
Fine Tune	SHIFT+PITCH	-50–+50	Specifies the pitch in cents (maximum ±50 cents).
Ratio	TIMBRE	1.0–16.0	Sets the frequency ratio between the carrier and modulator.
Ratio Fine	SHIFT+TIMBRE	-50–+50	Sets the frequency ratio between the carrier and modulator in smaller steps.
Mod Env Atk	[OSC 1] slider	0–1023	Sets the attack time of the modulation envelope.
Mod Env Dcy/Rel	[OSC 2] slider	0–1023	Sets the decay and release times of the modulation envelope.
Mod Env Sus	[OSC 3] slider	0–511	Sets the sustain level of the modulation envelope.
Mod Depth	[OSC 4] slider	0–63	Sets the intensity of the modulation envelope. Larger values produce a greater change with the modulation envelope.
Carrier/Modulator Pulse Width	-	0–63	This effect changes the duty ratio of the pulse width to alter the waveform. You can use this effect with other waveforms besides SQR (square wave). * A value of zero results in a 50:50% duty ratio.
Carrier/Modulator PWM Depth	-	0–63	Sets how much the LFO is applied (depth) to the PW (pulse width). The pulse width is modulated according to the LFO settings.
Carrier/Modulator Fat	-	0–63	Distorts the waveform and adds a frequency component one octave lower than the original waveform.

RING

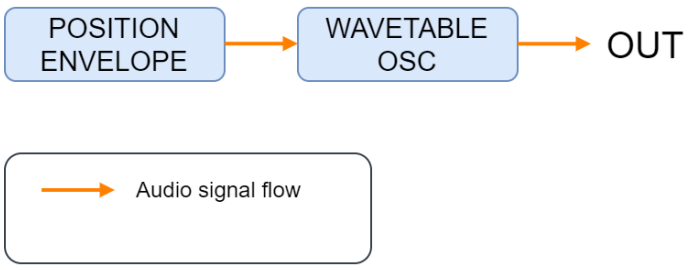
OSC MODEL
RING

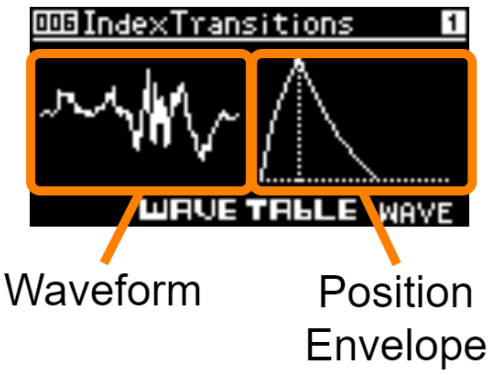


Parameter	Controllers	Value	Explanation
Osc 1–2 Waveform	[2] knob (on the top screen only)	SINE, TRI, SQR, SAW	This sets the waveform.
Coarse Tune	PITCH	-24–+24	Specifies the pitch in semitone steps (maximum ±2 octaves).
Fine Tune	SHIFT+PITCH	-50–+50	Specifies the pitch in cents (maximum ±50 cents).
Modulator Tune	TIMBRE	-48–+48	Specifies the pitch for oscillator 2 in semitone steps (maximum ±4 octaves).
Mod Fine Tune	SHIFT+TIMBRE	-50–+50	Specifies the pitch for oscillator 2 in cents (maximum ±50 cents).
Bottom 1	[OSC 1] slider	0–127	Sets the loudness of oscillator 1's signal that does not pass through the ring modulator.
Shape	[OSC 2] slider	0–63	Distorts the waveform of oscillator 2, and adds a frequency component one octave lower than the original waveform.
FXM	[OSC 3] slider	0–16	Sets the depth of FXM frequency modulation.
Bottom 2	[OSC 4] slider	0–127	Sets the loudness of oscillator 2's signal that does not pass through the ring modulator.
FXM Speed	[OSC 3] button	1–4	Sets the method used for FXM frequency modulation. Larger values produce a rougher sound, and smaller values produce a more metallic sound.

WAVETABLE

OSC MODEL
WAVETABLE

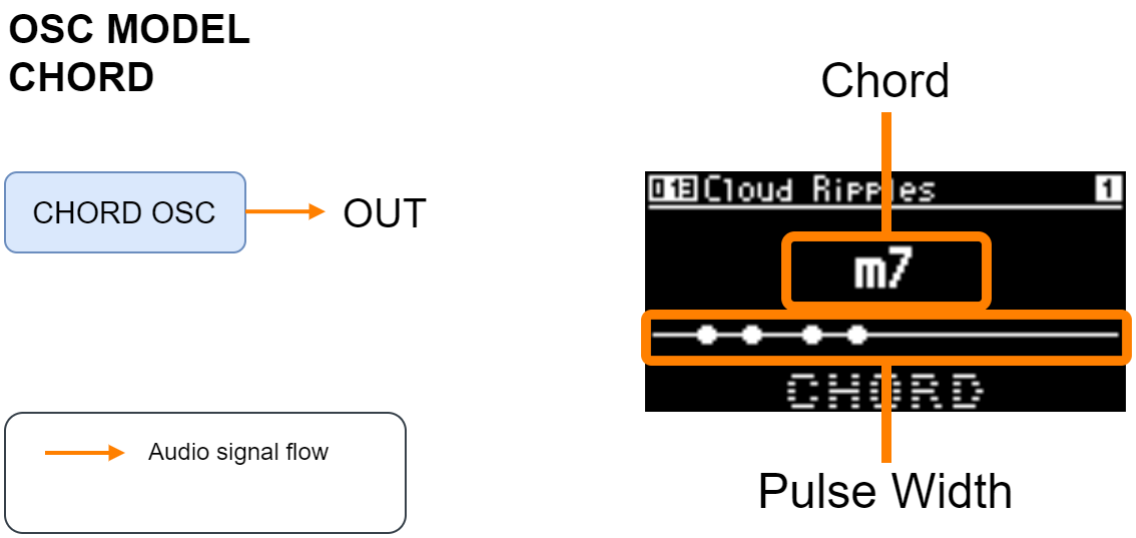




Parameter	Controllers	Value	Explanation
Wave Number	[2] knob (on the top screen only)	1–31	Sets the wave number.
Coarse Tune	PITCH	-24–+24	Specifies the pitch in semitone steps (maximum ±2 octaves).
Pos LFO Depth	TIMBRE	0–63	Sets how much the LFO is applied (depth) to the wave position.
Position	[OSC 1] slider	0–127	Sets the wave position on the selected wave number.

Parameter	Controllers	Value	Explanation
Position Env Atk	[OSC 2] slider	0–1023	Sets the attack time for the envelope that's applied at the wave position.
Position Env Dcy	[OSC 3] slider	0–1023	Sets the decay time for the envelope that's applied at the wave position.
Position Env Depth	[OSC 4] slider	0–63	Sets how much the envelope is applied (depth) to the wave position.

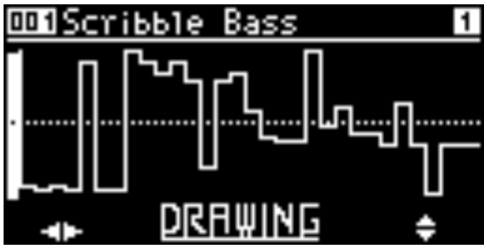
CHORD

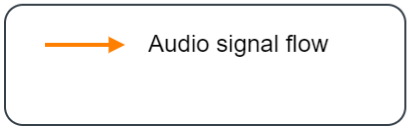


Parameter	Controllers	Value	Explanation
Coarse Tune	PITCH	-24–+24	Specifies the pitch in semitone steps (maximum ±2 octaves).
Fine Tune	SHIFT+PITCH	-50–+50	Specifies the pitch in cents (maximum ±50 cents).
Balance	TIMBRE	0–255	Sets the volume balance for the tones that make up the chord.
Chord	[OSC 1] slider	Major, 6th, 7th, Maj7, M7 (5), minor, m6, m7, mMaj7, dim、 dim7, m7 (5), aug、 aug7, sus2, sus4, 7sus4, 4ths, 5ths	Specifies the chord.
Voicing	[OSC 2] slider	1–5	Specifies the chord voicing.
Pulse Width	[OSC 3] slider	0–63	This effect changes the duty ratio of the pulse width to alter the waveform. You can use this effect with other waveforms besides SQR (square wave). * A value of zero results in a 50:50% duty ratio.
PWM Depth	[OSC 4] slider	0–63	Sets how much the LFO is applied (depth) to the PW (pulse width). The pulse width is modulated according to the LFO settings.
Waveform	[OSC 1]–[OSC 4] buttons	SINE, TRI, SQR, SAW	This sets the waveform.
Fat	-	0–63	Distorts the waveform and adds a frequency component one octave lower than the original waveform.

DRAWING

OSC MODEL
DRAWING





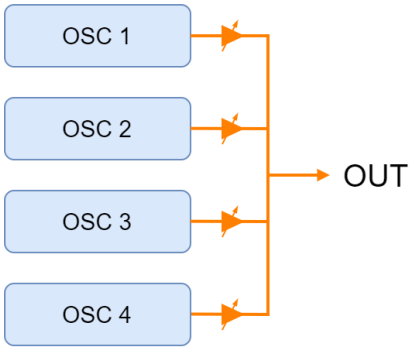
Use the [1] and [2] knobs to set the waveform shape.

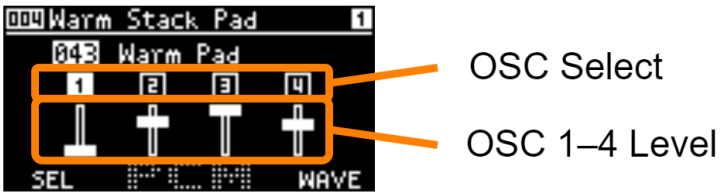
When you press the [ENTER] button, the cursor moves automatically, so you can draw the waveform by turning only the [2] knob.

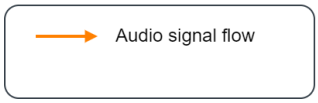
Parameter	Controllers	Value	Explanation
Wave Step 1–32	[2] knob, [∧] [∨] buttons (on the top screen only)	-72–+72	Sets the value for each step in the waveform data.
Coarse Tune	PITCH	-24–+24	Specifies the pitch in semitone steps (maximum ±2 octaves).
Wave Edge	TIMBRE	0–127	Sets how smoothly the steps are connected when playing back a waveform. Smaller values produce smoother transitions between steps.
Step 1–8	[OSC 1] slider	-72–+72	Sets the values for steps 1–8 in the waveform data.
Step 9–16	[OSC 2] slider	-72–+72	Sets the values for steps 9–16 in the waveform data.
Step 17–24	[OSC 3] slider	-72–+72	Sets the values for steps 17–24 in the waveform data.
Step 25–32	[OSC 4] slider	-72–+72	Sets the value for steps 25–32 in the waveform data.
Step 1–8 Slope	[OSC 1] button + [OSC 1] slider	-18–+18	Sets the slope of the straight lines that connect steps 1 through 8 in the waveform data.
Step 9–16 Slope	[OSC 2] button + [OSC 2] slider	-18–+18	Sets the slope of the straight lines that connect steps 9 through 16 in the waveform data.
Step 17–24 Slope	[OSC 3] button + [OSC 3] slider	-18–+18	Sets the slope of the straight lines that connect steps 17 through 24 in the waveform data.
Step 25–32 Slope	[OSC 4] button + [OSC 4] slider	-18–+18	Sets the slope of the straight lines that connect steps 25 through 32 in the waveform data.

PCM

OSC MODEL
PCM







Parameter	Controllers	Value	Explanation
OSC 1–4 Wave	[2] knob, [∧] [∨] buttons (on the top screen only)	1–53	Selects the PCM waveforms that play.
Osc 1–4 Coarse Tune	PITCH	-24–+24	Specifies the pitch in semitone steps (maximum ±2 octaves).
Osc 1–4 Fine Tune	SHIFT+PITCH	-50–+50	Specifies the pitch in cents (maximum ±50 cents).
Osc 1 Level	[OSC 1] slider	0–127	Sets the volume of OSC 1.
Osc 2 Level	[OSC 2] slider	0–127	Sets the volume of OSC 2.
Osc 3 Level	[OSC 3] slider	0–127	Sets the volume of OSC 3.
Osc 4 Level	[OSC 4] slider	0–127	Sets the volume of OSC 4.
Osc 1–4 LED Color	-	RED, ORANGE, YELLOW, GREEN, BLUE, PURPLE, PINK, WHITE, SKYBLUE, P.YELLOW, P.BLUE, P.PINK, L.RED, L.ORANGE, L.YELLOW, L.GREEN, P.GREEN, L.SKYBLUE, L.BLUE, L.PURPLE	Sets the oscillator section LED color for each oscillator.

Configuring a Tone

1. **Hold down the [SHIFT] button and press the [1]–[5] buttons to select a tone part.**
2. **Hold down the [SHIFT] button and press the [6] button.**

The TONE screen appears.

Item	Value	Explanation
Level	0–127	Adjusts the overall volume for all tones.
Octave	-3–+3	Sets the pitch of the tone's sound in octaves (up to ±3 octaves).
Coarse Tune	-48–+48	Specifies the pitch in semitone steps (maximum ±4 octaves).
OSC 2 Coarse Tune	-48–+48	Sets the pitch of oscillator 2 in semitones (only when using the SYNC model).
Analog Feel	0–127	Changes the pitch and volume over time of the tone that's playing, to give the tone a more irregular feel. Higher values produce more irregularity, which results in a more unstable sound (only when using SH-4d, SH-3D, SYNC, SH-101, JUNO-106, Cross FM, RING, CHORD or PCM models).
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.
Legato Sw	OFF, ON	This is enabled when "Mono Poly" is set to "MONO". When "Legato Sw" is "ON", you play a note while holding down the first note (legato style), the second note you play sounds without its attack portion. This lets you smoothly connect the pitches without a gap in the notes.
Porta Sw	OFF, ON	Select "ON" to apply portamento, or "OFF" if you don't want to apply portamento. * Portamento is a 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.
Porta Mode	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).
Porta Time	0–1023	When portamento is used, this sets the speed taken for the pitch to change. Higher settings cause the pitch to take longer when gliding to the next note.
Amp Velo Sense	-100–+100	Set this to change the tone volume according to how hard you play the keys. Positive values make the tone sound louder when you play the keys harder, and negative values make the tone sound softer.

Item	Value	Explanation
Cutoff Velo Sense	-100–+100	Sets how much the cutoff frequency changes according to how hard you play the keys. Positive values make the cutoff frequency increase when you play the keys harder, and negative values make the cutoff frequency decrease.
BendRange Up	0–48	Sets how much the pitch changes (in semitones) when the [PITCH +] button is pressed. For instance, a setting of "48" makes the pitch bend up four octaves when you press the [PITCH +] button.
BendRange Dw	0–48	Sets how much the pitch changes (in semitones) when the [PITCH -] button is pressed. For instance, a setting of "48" makes the pitch bend down four octaves when you press the [PITCH -] button.
Env Mode	ADR, ADSR	ADSR: Once the envelope passes its decay time, it stays at the sustain level until the note is released (note off). When the note is released, the envelope then goes to its release segment from the current position. ADR: Regardless of when you release the note (note off), the envelope goes to its release segment once the decay time has passed, and the envelope operates according to its set time.
Catg	–	Sets the category for the tone.

Using the Modulation Matrix

What is the Modulation Matrix?

The modulation matrix is a function that lets you freely "rewire" signals like the LFO and envelope generator, to create a variety of sounds that normally can't be achieved when connecting these components with the system default settings.

For the signal source, you can use internal signals like the LFO, as well as external MIDI signals like control change messages.

You can set one source and up to four output destinations for each slot, and you can set the modulation intensity (depth) for each destination.

Editing the Modulation Matrix

1. **Hold down the [SHIFT] button and press the [7] button.**

   The MATRIX screen appears.

2. **Press the [<] [>] buttons to select the slot to edit.**

   For some models, you can use a maximum of two to four slots.

3. **Press the [∧] [∨] buttons to select the source/destination to edit.**

4. **Use the [1] knob to set the source/destination, and the [2] knob to set the modulation intensity for each destination.**

MATRIX ASSIGN function

This function sets the source and destination according to how you operate the knobs.

1. **On the MATRIX screen, press the [∧] [∨] buttons to select the source/destination to edit.**
2. **Press the [ENTER] button.**

   The MATRIX ASSIGN screen appears.

3. **Operate the controller (knob, slider or button) corresponding to the source/destination you want to set.**

   This sets the source/destination according to the controller you operated.

4. **Press the [ENTER] button to exit the MATRIX ASSIGN screen.**

AUTO ASSIGN function

When you use the knobs to confirm both the source and destination, this function automatically assigns the source and destination to an available slot.

1. **On the MATRIX screen, hold down the [SHIFT] button and press the [7] button again.**

   The AUTO ASSIGN screen appears.

2. **Operate the controller (knob, slider or button) corresponding to the source you want to set.**

   The source is selected, and the screen changes.

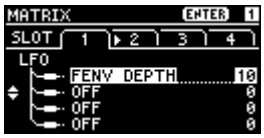
   

3. **Operate the controller (knob, slider or button) corresponding to the destination you want to set.**

   The destination is selected, and the slot is confirmed.
   The screen changes.

4. **Once the display changes to the MATRIX screen, use the [2] knob to set the modulation intensity.**

   If no slots are available, the message “No empty slot” appears, and the display automatically switches to the MATRIX screen. Try changing the settings on the MATRIX screen to a different slot or destination that has already been set.

Configuring the LFO

1. **Hold down the [SHIFT] button and press the [8] button.**

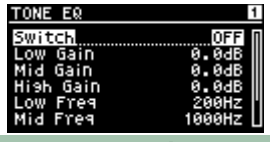
   The LFO screen appears.

Item	Value	Explanation
Rate Sync	OFF, ON	Turn this ON to sync the LFO cycle with the tempo.
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 Pan Depth	-63–+63	Sets the depth of the LFO when it is applied to the pan setting.
Phase Position	Sets the LFO start phase value when Key Trigger is “ON”.	
	0	1 cycle
	1	1/4 cycle
	2	1/2 cycle
	3	3/4 cycle

Configuring the Tone EQ

1. **Hold down the [SHIFT] button and press the [9] button.**

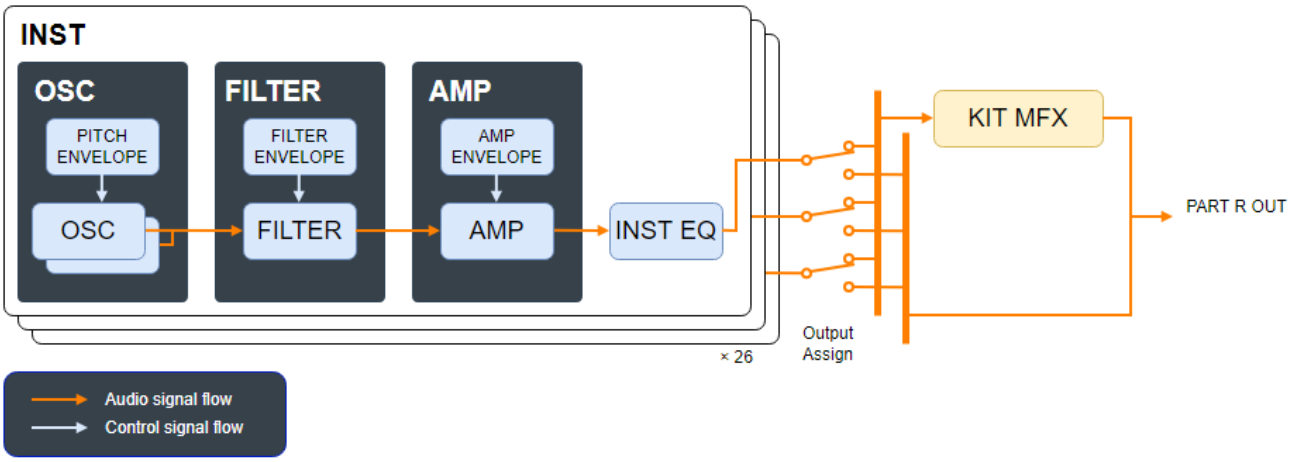
   The TONE EQ screen appears.



Item	Value	Explanation
Switch	OFF, ON	Turns the equalizer on/off.
Low Gain	-24.0–+24.0 [dB]	Adjusts the 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 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]	Sets the center frequency of the mid range.
High Freq	20–16000 [Hz]	Sets the center frequency of the high range.
Mid Q	0.5–16.0	Sets the bandwidth of the mid-frequency range. Higher values make the bandwidth narrower.

Creating a Rhythm Kit

How Part R is Structured

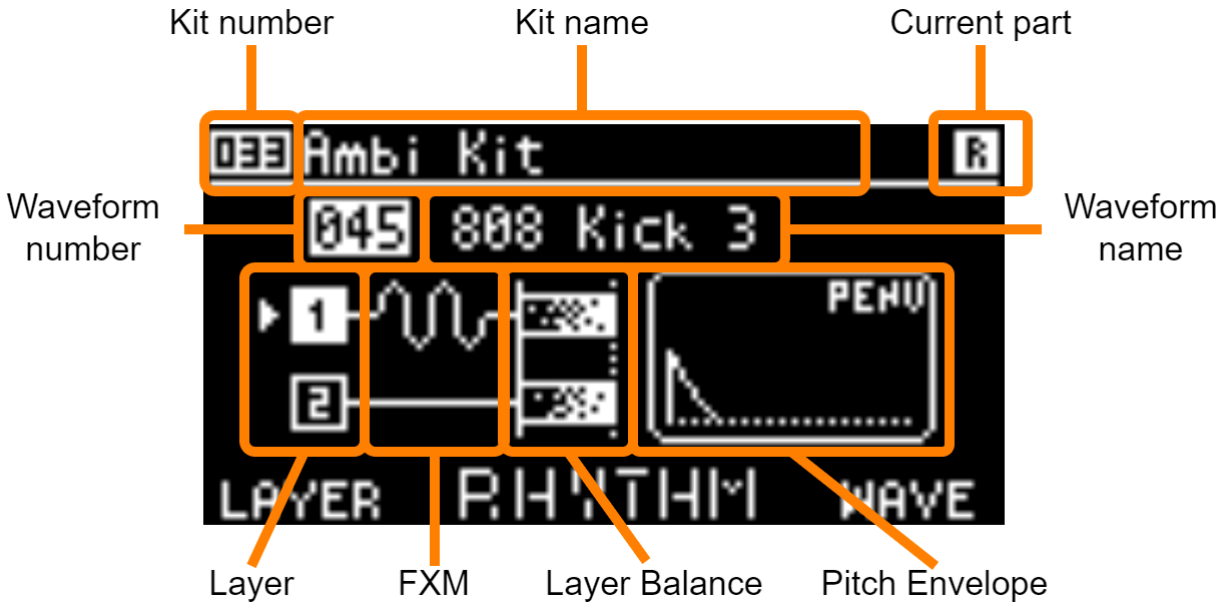


Creating a Rhythm Instrument

1. **Hold down the [SHIFT] button and press the [5] button to set part R as the current part.**
2. **Press a keyboard button to select the rhythm instrument you want to set.**

   The settings for the selected instrument are shown on the top screen, and you can configure the parameters of the instrument that you selected using the panel knobs.

OSC section



1. **Use the [1] knob, [∧] [∨] or [OSC 1] [OSC 2] buttons to select the layer for which you want to choose a waveform.**

2. **Use the [2] knob (only if the top screen is shown) or the [MODEL] knob to select a waveform.**

Use the [2] knob, [PITCH] knob, [OSC 1] slider, and [OSC 4] button to set the parameters of the layer you selected in step 1.

Parameter	Controller	Value	Explanation
Layer 1/2 Waveform	[2] knob (only if the top screen is shown), [MODEL] knob	-	Selects the waveform that's played for each layer.
Layer 1/2 Coarse Tune	PITCH	-48–+48	Specifies the pitch in semitone steps (maximum ±4 octaves) for each layer.
Layer 1/2 Fine Tune	SHIFT+PITCH	-50–+50	Specifies the pitch in cents (maximum ±50 cents) for each layer.
Layer Balance	TIMBRE	127:0–0:127	Specifies the balance in volume between two layers. When this is set to 127:0, only layer 1 sounds.
Layer 1/2 FXM Depth	[OSC 1] slider	0–16	Sets the depth of FXM frequency modulation.
PEnv Attack	[OSC 2] slider	0–255	Sets the attack time of the pitch envelope.
PEnv Decay	[OSC 3] slider	0–255	Sets the decay time of the pitch envelope.
PEnv Depth	[OSC 4] slider	0–+100	Sets the intensity of the pitch envelope. Larger values produce a greater change with the pitch envelope.
Layer 1/2 FXM Color	[OSC 4] button	1–4	Sets the method used for FXM frequency modulation. Larger values produce a rougher sound, and smaller values produce a more metallic sound.

FILTER/AMP/LFO section

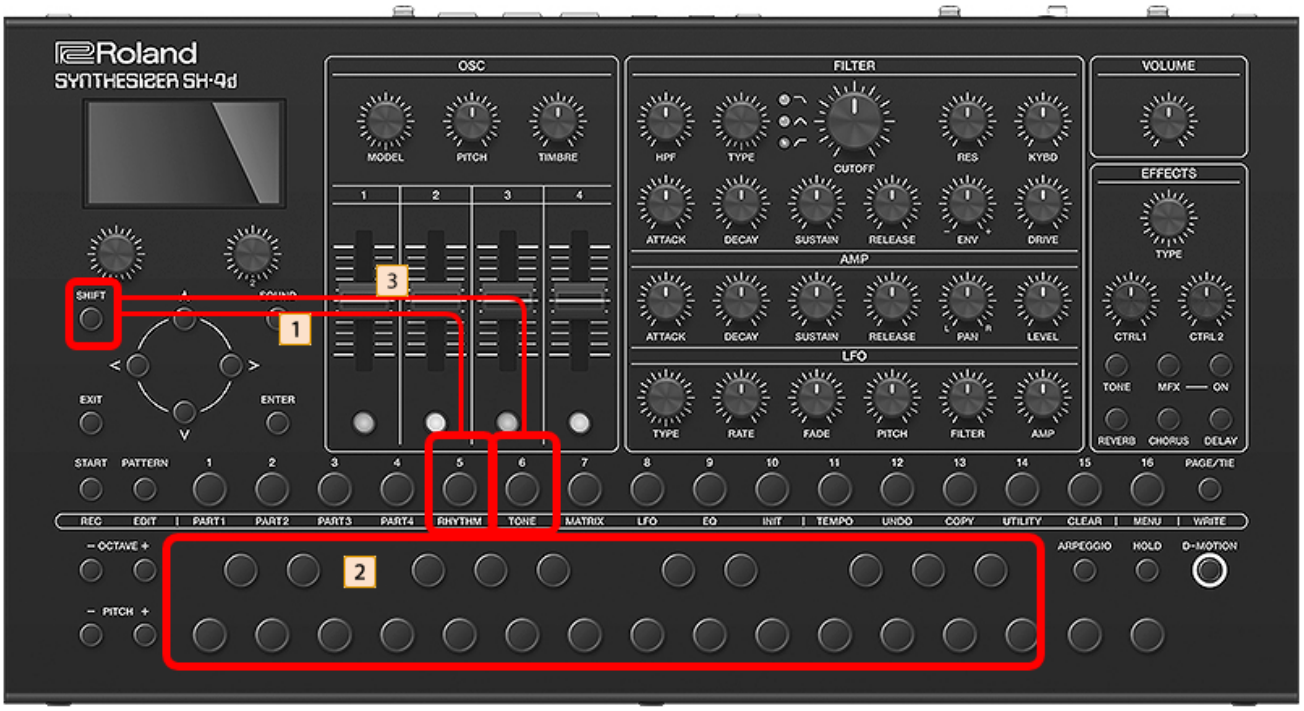
You can adjust the following parameters to process the waveform for each rhythm instrument.

Section	Controller	Value	Explanation
FILTER	TYPE	Select the filter type.	
		LPF	A low-pass filter. This cuts off frequencies above the cutoff frequency. Cutting off the high frequencies makes the sound more mellow.
		BPF	A band-pass filter. This cuts off frequencies except for those around the cutoff frequency.
		HPF	A high-pass filter. This cuts off frequencies below the cutoff frequency.
	CUTOFF	0–1023	Sets the cutoff frequency of the filter.
	RES	0–1023	Emphasizes the frequencies around the filter's cutoff frequency. Larger values produce greater emphasis, creating a unique synthesizer-like sound.
	FLT ENV ATTACK	0–255	Sets the attack time of the filter envelope.

Section	Controller	Value	Explanation
	FLT ENV DECAY	0–255	Sets the decay time of the filter envelope.
	FLT ENV SUSTAIN	0–1023	Sets the sustain level of the filter envelope.
	FLT ENV RELEASE	0–1023	Sets the release time of the filter envelope.
	FLT ENV DEPTH	-63–+63	When the cutoff frequency is set to be controlled by the filter envelope, this adjusts how much the cutoff frequency changes.
AMP	AMP ENV ATTACK	0–255	Sets the attack time of the amp envelope.
	AMP ENV DECAY	0–255	Sets the decay time of the amp envelope.
	AMP ENV SUSTAIN	0–1023	Sets the sustain level of the amp envelope.
	AMP ENV RELEASE	0–1023	Sets the release time of the amp envelope.
	PAN	L63–63R	Sets the panning of the rhythm instrument's sound when using stereo output.
	LEVEL	0–127	Adjusts the volume of the rhythm instrument.

* The HPF, KEY-F, DRIVE and LFO section knobs can't be operated for part R.

Configuring a Rhythm Kit/Instrument



1. **Hold down the [SHIFT] button and press the [5] button to set part R as the current part.**
2. **Press a keyboard button to select a rhythm instrument you want to edit.**
3. **Hold down the [SHIFT] button and press the [6] button.**

   The RHYTHM KIT EDIT screen appears.

MEMO

Kit Level is a setting for the entire kit, whereas the other parameters are settings for each rhythm instrument.

Parameter	Value	Explanation
Kit Level	0–127	Adjusts the volume of the entire rhythm kit.
INST SETTINGS		
Voice	Sets how sounds are played when you press the same key a number of times.	
	SINGLE	In this mode, when you repeatedly play the same note, the sound from the same note you just played is muted (stops) and retriggered.
	MULTI	In this mode, the sound plays normally each time you repeatedly play the same note, and you can trigger that sound for a number of times up to the maximum polyphony of this unit.
Mute Group	OFF, 1–31	Sets certain keys within the same group that should not play simultaneously. For instance, this is useful when you want the open hi-hat and closed hi-hat to play, but not at the same time. Keys that don't belong to any such group should be set to "OFF".
Env Mode	ADR, ADSR	ADSR: once the envelope passes its decay time, it stays at the sustain level until the note is released (note off). When the note is released (note off), the envelope then goes to its release segment from the current value. ADR: the envelope skips to its release segment once the decay time has passed, and the envelope operates according to its set time, regardless of when you release the note (note off).
Layer 1 Gain	-18–+12 [dB]	Sets the gain (amplitude) of the waveform. The value changes in units of 6 dB (decibels). An increase of 6 dB means twice the amount of gain.
Layer 2 Gain		
Output Assign	DRY, MFX	This sets whether each instrument is output to the part MFX (MFX), or is sent to the part output mix without going through the part MFX (DRY).

Using the Arpeggiator

1. **Press the [ARPEGGIO] button to make it light.**
2. **Play more than one key on the keyboard at the same time.**

When you press the [HOLD] button to make it light up, the arpeggiator keeps playing even if you take your fingers off the keys.

Configuring the Arpeggio

1. Long-press the [ARPEGGIO] button, or hold down the [SHIFT] button and press the [ARPEGGIO] button.

The ARPEGGIO settings menu appears.

Parameter	Value	Explanation
Mode	Sets the order in which notes are played by the arpeggio when you play a chord.	
	UP	The notes are played from the lowest key you played to the highest.
	DOWN	The notes are played from the highest key you played to the lowest.
	UP&DOWN	The notes are played from low to high, and then from high to low.
	RANDOM	The notes are played in random order.
	NOTE ORDER	The notes are played in the order in which you play them.
Rate	Sets the length of one note for each step that the arpeggio plays.	
	1/4	Quarter note
	1/8	Eighth note
	1/8T	Eighth-note triplet
	1/16	Sixteenth note
	1/16T	Sixteenth-note triplet
	1/32	Thirty-second note
Oct Range	-3–+3	Specifies the range of octaves in which the arpeggio is sounded. You can specify whether the arpeggio is sounded in the octave(s) above (+) or below (-) the notes you play.
Transpose	-36–+36	Shifts the arpeggio notes in semitone steps.
Gate Length	0–100 [%]	Sets the length (ratio) used for playing back each note length in the arpeggio pattern. Shortening the duration produces a staccato feel, and lengthening the duration produces a tenuto feel.
Shuffle	-50–+50	Creates a shuffle rhythm by varying the timing at which the upbeat notes play. When this setting is "0", notes are sounded at equal spacing. Increasing the value adds a shuffle feel like a dotted-note rhythm.
Velocity	REAL, 1–127	Sets the velocity of notes played by the arpeggiator. To change the velocity (how hard the notes are played) for the arpeggio notes according to how hard you play the notes input from the external keyboard, use the "REAL" setting. To make the arpeggio notes play at a fixed velocity, set this to a value from 1 to 127.

Creating a Pattern (Step Sequencer)

What is the Step Sequencer?

With the step sequencer, you can input notes for each step and then play them back in a loop.

You can change the number of steps within a range of 1–64 for each part.

Up to 128 patterns can be stored.

Selecting and Playing a Pattern

1. **Press the [PATTERN] button to make it light.**

   The unit enters pattern mode, and the pattern name and number appears on the display.

2. **Press the [1]–[16] buttons to select a pattern.**

   Hold down the [PAGE/TIE] button and press the [1]–[8] buttons to switch between banks.
   For details, refer to "Switching Between Patterns(P.18)".

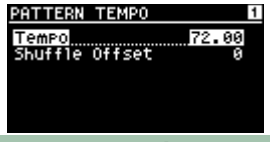
3. **Press the [START] button to play back the pattern.**

   The pattern toggles between playback and stop each time you press the button.
   You can select the next pattern while a pattern is still playing.
   The current pattern either stops playing back or the next pattern begins playing back at the next 16-step division.
   While the pattern is playing back, hold down the [PATTERN] button and press the [START] button to make the pattern play back from the beginning.

Setting the Tempo and Shuffle

1. Hold down the [SHIFT] button and press the [11] button.

The PATTERN TEMPO screen appears.



Parameter	Value	Explanation
Tempo	20.00–300.00	Sets the tempo of the pattern and arpeggio. * Hold down the [SHIFT] button or the [2] knob while operating the controls to set the value in 0.01 increments.
Shuffle Offset	-90–+90	Creates a shuffle rhythm by varying the timing at which the upbeat notes play. When this setting is "0", notes are sounded at equal spacing. Increasing the value adds a shuffle feel like a dotted-note rhythm. * The Shuffle value set in PATTERN SETTINGS for the respective part plus this value equals the actual shuffle amount for the respective part.

On the PATTERN screen, you can also turn the [1] knob to edit the pattern's tempo.

Editing the Range of Steps to View/Edit (PAGE)

1. **Press the [PAGE/TIE] button.**

Use the [1]–[16] buttons to advance the range of steps to show or edit, in 16-step increments.

MEMO

- Turn the [1] knob while holding down the [PAGE/TIE] button to edit the number of steps (step length) of the current part.
- Hold down the [PAGE/TIE] button and turn the [2] knob to change the play mode.
  For details, refer to "Configuring the Patterns(P.66)".

Inputting and Editing Notes

You can use the [1]–[16] buttons to input notes for each step.

MEMO

When editing with the step sequencer, make sure that the [PATTERN] button is not lit.
When the [PATTERN] button is lit, you can press the [EXIT] button several times to return to the top screen.

Tone Part

1. **Hold down one of the [1]–[16] buttons and press a keyboard button.**

   You can also hold down a keyboard button and press the step [1]–[16] buttons corresponding to the note you want to input.

Rhythm part (TR-REC)

1. **Press a keyboard button to select the instrument you want to input.**
2. **Press the [1]–[16] buttons corresponding to the notes you want to input for the selected instrument.**

MEMO

- You can input up to eight notes per step. When you input more than eight notes, the previous notes you inputted are deleted, with the oldest note deleted first.
- When "Remote Kbd" is "ON", you can use an external device to input notes via MIDI signals instead of using the keyboard buttons.
  For details, refer to "System Settings (SYSTEM SETTINGS)(P.76)".

Inputting a Tie

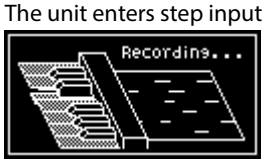
1. **Hold down one of the [1]–[16] buttons corresponding to where you want the tie to start, and press the [PAGE/TIE] button.**

   When you press the [PAGE/TIE] button more than once, a tie is input into the following steps.

Inputting a Pattern While the Steps Automatically Advance (Step Input)

1. **Hold down the [1]–[16] buttons and press the [START] button to select the step where you want to start inputting.**

   The unit enters step input mode, and “Recording” appears on the display.

2. **Input the notes using the keyboard buttons or an external keyboard.**

   The steps automatically advance each time you input a note.
   When you press the [PAGE/TIE] button, a tie is input to connect the current step (at the time you pressed the button) to the previous step.

3. **To exit step input mode, press the [EXIT] button.**

   When you input the last step, step input mode automatically ends.

Recording Your Performance in Real Time (Real-time Input)

1. **Hold down the [SHIFT] button and press the [START] button.**

   The unit enters real-time input mode, and “Recording” appears on the display.

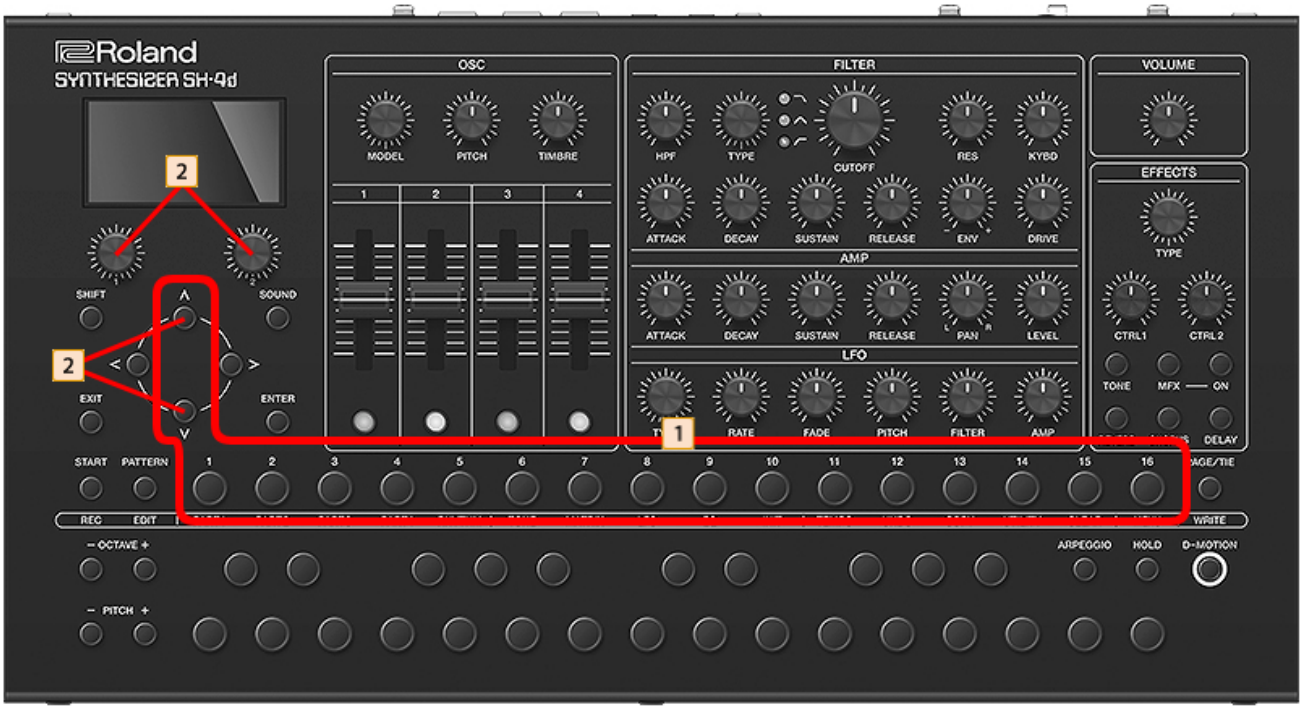
2. **Input the notes using the keyboard buttons or an external keyboard.**

   Your playing is recorded in real time.

3. **Press the [EXIT] button to exit real-time input.**

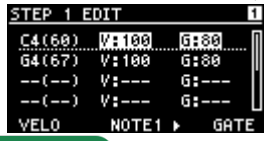
Inputting/Editing Velocity and Gate Length

For tone parts



1. **Long-press the [1]–[16] buttons to bring up the STEP EDIT screen. While holding down the [1]–[16] buttons, press one of the [∧] [∨] buttons.**

   The STEP EDIT screen stays open.



MEMO

Without pressing the [∧] [∨] buttons, take your finger off the [1]–[16] buttons to close the STEP EDIT screen.

2. **Press the [∧] [∨] buttons to select the note whose velocity or gate length you wish to edit.**

   Turn the [1] knob to edit the velocity.
   Turn the [2] knob to edit the gate length.

MEMO

- When the gate length is set to maximum, the tie is connected to the note in the next step.
- The actual gate length when the pattern plays back equals the gate length set in the respective pattern plus the "Gate Length" value set on the PATTERN SETTINGS screen.
  For details, refer to "Configuring the Patterns(P.66)".

For the rhythm part

1. **Long-press the [1]–[16] buttons to bring up the STEP EDIT screen. While holding down the [1]–[16] buttons, press one of the [∧] [∨] buttons.**

   The STEP EDIT screen stays open.

MEMO

Without pressing the [∧] [∨] buttons, take your finger off the [1]–[16] buttons to close the STEP EDIT screen.

2. **Press the keyboard buttons to select the instrument whose velocity or gate length you wish to edit.**

   Turn the [1] knob to edit the velocity.
   Turn the [2] knob to edit the gate length.

MEMO

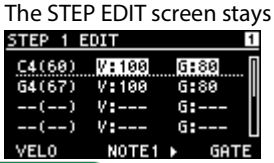
The actual gate length when the pattern plays back equals the gate length set in the respective pattern plus the “Gate Length” value set on the PATTERN SETTINGS screen.
For details, refer to “Configuring the Patterns(P.66)”.

Inputting/Editing the Probability and Sub Steps

For each step in a sequence, you can set the probability with which the step sounds, and the sounds that play continuously within that step (sub steps).

1. **Long-press the [1]–[16] buttons to bring up the STEP EDIT screen. While holding down the [1]–[16] buttons, press one of the [∧] [∨] buttons.**

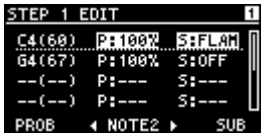
   The STEP EDIT screen stays open.



MEMO

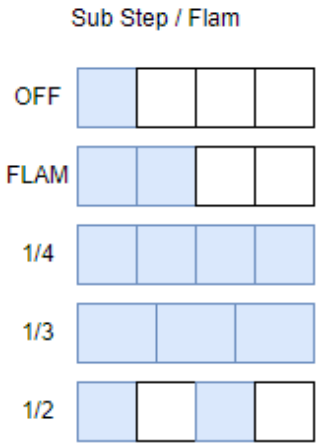
Without pressing the [∧] [∨] buttons, take your finger off the [1]–[16] buttons to close the STEP EDIT screen.

2. **Press the [>] button to move to the NOTE 2 page.**



3. **Press the [∧] [∨] buttons to select the note whose probability or sub step you wish to edit.**

   Turn the [1] knob to edit the probability. To make the step always play, set the value to 100%; and to never play the step, set the value to 0%.
   Edit the sub step using the [2] knob.



MEMO

Hold down one of the [1]–[16] buttons in step 1 and press the [>] button to move to the NOTE 2 page.

Recording the Knob Motions

You can record and play back the motions of the knobs while the step sequencer plays back.

1. **Hold down the [SHIFT] button and press the [START] button.**

   The unit enters real-time input mode, and “Recording” appears on the display.

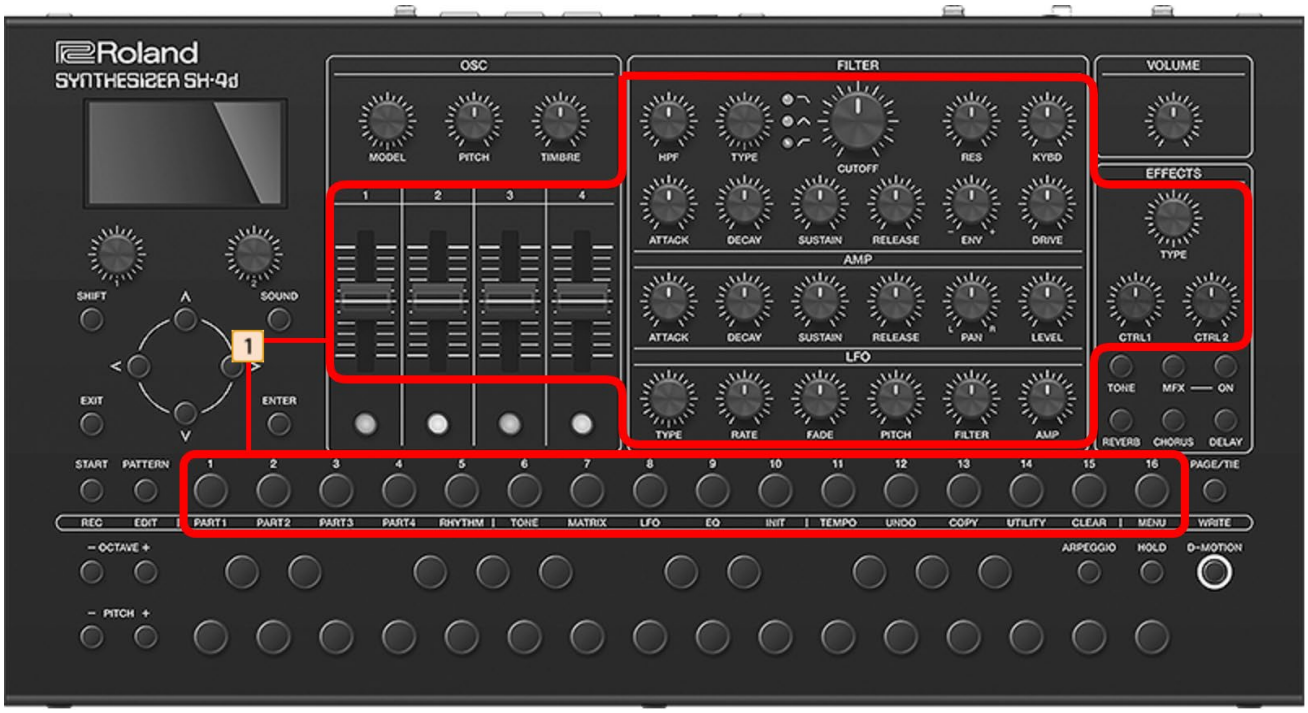
2. **Move the knobs while the sequencer plays back.**

   The knob positions are recorded in each step as you operate the knobs.

3. **Press the [EXIT] button to exit real-time input.**

   This also stops the recording of the knob motions.

You can also record the knob position into each step by following the steps in "Inputting and Editing Notes(P.55)".



1. **Hold down the respective [1]–[16] buttons while turning the knob of the selected step where you want to save the motion, and set the value.**

   The MOTION page of the STEP EDIT screen is shown, where you can check the knobs, CC numbers and values you've set.
   Press the [∨] button while holding down the [1] –[16] buttons to make the screen stay open.

   When you play back the step sequencer, the values for the knobs change according to the values recorded for each step.

MEMO

You can input up to four knob values per step. If you input more than four knob values, the previous knob values you inputted are deleted, with the oldest value deleted first.

MEMO

For control change signals from external devices connected to the MIDI IN connector or USB port, you can record the values corresponding to each step by using either of the above steps, as well as by using the knobs on this unit.

* Motions are not recorded for the following knobs.

[1], [2], [MODEL], [PITCH], [TIMBRE], [FILTER TYPE], [LFO TYPE], [EFFECTS TYPE], [CTRL1], [CTRL2]

Configuring the Patterns

1. **Hold down the [SHIFT] button and press the [PATTERN] button.**

   The PATTERN SETTINGS screen appears.

2. **Use the [1] knob or press the [∧] [∨] buttons to select the item.**

3. **Use the [2] knob to select a value.**

4. **Press the [EXIT] button to exit the PATTERN SETTINGS screen.**

Item	Value	Explanation
	Part	
Step Length	1–64	Sets the number of steps in the pattern. **MEMO** You can also set this by holding down the [PAGE/TIE] button and turning the [1] knob.
Scale	1/8, 1/16, 1/32, 1/4T, 1/8T, 1/16T	For details, refer to "Note(P.167)".
Play Mode	Sets the order of steps for playback. **MEMO** You can also set this by holding down the [PAGE/TIE] button and turning the [2] knob.	
	FWD	Plays forward from the first step.
	REV	Plays backward from the last step.
	FWD+REV	Plays forward from the first step, and plays backward after reaching the last step.
	INV	Switches to playing (inverts) the even-numbered and odd-numbered steps.
	RND	Plays steps randomly.
Gate Length Offset	-128–127	Sets the global gate length, which changes the relative gate length for each step.
Shuffle	-90–0–+90	Adjusts the timing at which the even-numbered steps (2, 4, 6...) play.
Smooth	This applies fluid changes to the control change signals (motions), for smooth changes to the sound.	
	AUTO	The Smooth function is disabled only for the slider and envelope knobs.
	OFF	The Smooth function is disabled for all knobs.
	ON	The Smooth function is enabled for all knobs.
Motion Sw	OFF, ON	Toggles the output for the control change signals (motion) on/off.
Mute Sw	OFF, ON	Switches the part mute on/off.
First Step Sw	OFF, ON	Turns the First Step setting on/off.
First Step	From 1 to (value set in STEP LENGTH)	This specifies any step besides the first and last step to be played back as the first step.

Item	Value	Explanation
Last Step Sw	OFF, ON	Switches the last step settings on/off.
Last Step	From 1 to (value set in STEP LENGTH)	This specifies any step besides the first and last step to be played back as the last step.
Level	0–127	Sets the part level.
Pan	L64–63R	Sets the panning of each part's sound when using stereo output.
Pattern		
Pattern Level	0–127	Sets the overall pattern volume.
Voice Reserve		
Part 1	1–60	Specifies how polyphony resources are allocated to each part. The track is given priority for the specified number of voices. * The number of voices used differs depending on the sound.
Part 2		
Part 3		
Part 4		
Part R		

MEMO

The effect send (level) for each instrument in part R is the value of the effect send on this screen multiplied by the value of the effect send for each instrument, which is set using the knob.

Pattern Utilities

1. **Hold down the [SHIFT] button and press the [14] button.**

   The PATTERN UTILITY screen appears.

2. **Use the [1] or [2] knob or press the [∧] [∨] buttons to select the item.**

3. **To execute the operation, press the [ENTER] button.**

Item	Explanation
DUPLICATE STEPS (PART)	Duplicates the content of the step sequencer for the selected part, which doubles the number of steps. * A part can contain up to 64 steps after its content is doubled.
DUPLICATE STEPS (PTN)	Duplicates the content of the step sequencer for all parts, which doubles the number of steps of each part. * A part can contain up to 64 steps after its content is doubled.
CLEAR MOTION	Erases all recorded knob motions for the selected part.
RANDOMIZE STEPS	Randomly overwrites the step sequencer for the selected part.
INITIALIZE PATTERN	Initializes the selected pattern.

Copying and Pasting the Content of Patterns

You can copy and paste the data in a pattern to a different pattern, part or step.

Copying the Data

1. **Hold down the [SHIFT] button and press the [13] button.**

   The COPY screen appears.

2. **Press the [<] [>] buttons or the [1] knob to select what to copy (the copy source).**

Copy source	Explanation
PATTERN	Copies the entire contents of the pattern. The tone numbers that are loaded into each part of the pattern are also copied/pasted. **MEMO** The existing content of tones that are not saved are lost when you paste the new data.
PART	Copies the content of the current part from the pattern. Tone numbers are not copied/pasted.
STEP	Copies the content of one step from the step sequencer of the current part. Use the [2] knob or the [1]–[16] buttons to select what to copy/paste.
MULTI-STEP	Copies the content of multiple steps from the step sequencer of the current part.

3. **Press the [∧] button to execute the copy operation.**

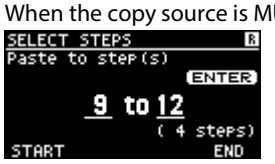
   When the source is MULTI-STEP, the SELECT STEPS screen appears.

   Use the [1] knob to select the starting step and the [2] knob to select the ending step number, and press the [ENTER] button to execute the copy operation.

Pasting the Data

1. **Follow the steps in "Selecting and Playing a Pattern(P.52)" to select the copy destination pattern.**
2. **Hold down the [SHIFT] button and press the [1]–[5] buttons to select the copy destination part.**
3. **Follow steps 1–2 in "Copying the Data" to select the copy source.**
4. **Press the [∨] button to execute the paste operation.**

When the copy source is MULTI-STEP, the SELECT STEPS screen appears.

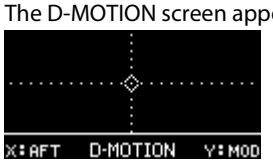


Use the [1] knob or the [2] knob to select the starting step number, and press the [ENTER] button to execute the paste operation.

Using D-MOTION

1. **Press the [D-MOTION] button.**

   The D-MOTION screen appears, and D-MOTION is turned on.



2. **Turn the [1] [2] knobs to select the parameter that changes when this unit is tilted to the left and right (X-axis) or forward/backward (Y-axis).**

Value	Parameter
AFT	Channel aftertouch
MOD	Modulation (CC#01)
PIT	Pitch bend

3. **Tilt the unit forward/backward and to the left and right.**

   The selected parameter changes according to how you tilt this unit.

NOTE

When using this function, firmly grip both sides of this unit and be careful that the connected cables are not excessively bent.

MEMO

- With the modulation matrix, you can use D-MOTION to affect other parameters by setting the parameter (MOD or AFT) to which the D-MOTION effect is applied as its source, and by setting the other parameters as the destination.
  For details, refer to "Using the Modulation Matrix(P.40)".
- If the values drift horizontally or vertically even though you've placed the unit on a flat surface, press each of the [1] and [2] knobs once.
  The Offset X and Offset Y values are set according to how this unit is tilted.
  For details, refer to "System Settings (SYSTEM SETTINGS)(P.76)".

4. **To turn D-MOTION off, press the [D-MOTION] button again.**

MEMO

While the D-MOTION screen is still open, you can press the [EXIT] button to exit the D-MOTION screen while still leaving D-MOTION on.

Saving a Tone/Pattern (WRITE MENU)

The edits that you make to a tone or pattern, or the sequencer data that you record are temporary.

They will be lost if you turn off the power or select another tone or pattern.

If you want to keep the data you've edited or recorded, you must save it to a tone or pattern.

1. **Hold down the [SHIFT] button and press the [PAGE/TIE] button.**

   The WRITE MENU screen appears.

Item	Explanation
OVERWRITE	Overwrites the edited parts of the currently selected pattern and tone. If a preset tone is selected, you must select a user tone for the save destination.
PATTERN&TONE	Saves the edited pattern and tone by specifying the save destination pattern/tone number.
PATTERN	Saves only the currently selected pattern. **MEMO** When you select a pattern to save, the currently selected tone number for each part is reloaded, and your edits are discarded.
PART1–4 TONE	Saves only the tones for each tone part.
PARTR RYTM KIT	Saves only the part R rhythm kit.

Saving a Tone

* When you edit the settings of a tone, the E icon appears on the top screen, and the EDITED icon appears on the WRITE MENU screen.

1. **Hold down the [SHIFT] button and press the [PAGE/TIE] button.**

   The WRITE MENU screen appears.

2. **Turn the [1] knob to select the part containing the tone you want to save, and press the [ENTER] button.**

3. **Turn the [1] knob to select the save-destination tone number, and then press the [ENTER] button.**

4. **Turn the [1] and [2] knobs to input the tone name, and press the [ENTER] button to confirm.**

5. **Press [ENTER] again on the dialog box screen.**

This saves the tone.

Saving the Pattern

* When you edit the settings of a pattern, the E icon appears on the PATTERN screen, and the EDITED icon appears on the WRITE MENU screen.

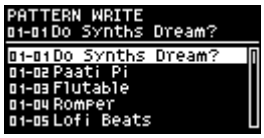
1. **Hold down the [SHIFT] button and press the [PAGE/TIE] button.**

The WRITE MENU screen appears.

2. **Turn the [1] knob to select "PATTERN", and then press the [ENTER] button.**

If you select "PATTERN" and save, the tones assigned to that pattern are reset to the tones that you last saved.

3. **Turn the [1] knob to select the save-destination pattern number, and then press the [ENTER] button.**



4. **Turn the [1] and [2] knobs to input the pattern name, and press the [ENTER] button to confirm.**

5. **Press [ENTER] again on the dialog box screen.**

This saves the pattern.

Saving the Pattern and Tones

1. **Hold down the [SHIFT] button and press the [PAGE/TIE] button.**

   The WRITE MENU screen appears.

2. **Turn the [1] knob to select “PATTERN & TONE” or “OVERWRITE”, and press the [ENTER] button.**

   If the tone to save is a user tone and you select “OVERWRITE”, the tone name input is skipped and the tone is saved with the current tone number and name.

3. **Turn the [1] knob to select the save destination number for the tone or pattern to save, and then press the [ENTER] button.**

4. **Turn the [1] and [2] knobs to input the name of the tone or pattern to save, and press the [ENTER] button to confirm.**

5. **Press [ENTER] again on the dialog box screen.**

   This saves the pattern.

Main Menu (MENU)

1. **Hold down the [SHIFT] button and press the [16] button.**

   The MENU screen appears.

2. **Turn the [1] and [2] knobs to select a menu item, and press the [ENTER] button.**

Item	Explanation
SYSTEM SETTINGS	Configures the system settings.
SYSTEM EQ/COMP	Configures the equalizer and compressor settings for the system.
VISUAL ARPEGGIO	Opens the VISUAL ARPEGGIO menu.
FACTORY RESET	Performs a factory reset.
INFORMATION	Shows the version information for the system.

System Settings (SYSTEM SETTINGS)

Here are the system settings that you can configure.

GENERAL

Parameter	Value	Explanation
System Tune	415.3–466.2	Adjusts the overall tuning. The value shown is the frequency of the A4 key (middle A).
Sys Key Shift	-24–+24	Shifts the overall pitch range in semitone steps.
USB In Lev	0–127	Adjusts the level of audio input from the USB port.
USB Out Lev	0–127	Adjusts the level of audio output from the USB port.
USB In to MFX	OFF, ON	Sets whether to mix the sound of this unit with the audio input signal from the USB port and input the result to the pattern effect (ON), or to mix only the MAIN OUT/PHONES OUT signals from this unit without the audio input signal from the USB port (OFF). * When this is ON, the USB input from this unit is looped back to the USB output, even when the pattern effect is off. Make sure before turning this ON that the signal is not looped within the device you've connected to this unit.
Auto Off	OFF, 30min, 240min	Specifies whether the unit will turn off automatically after a certain time has elapsed. If you don't want the unit to turn off automatically, choose "OFF" setting. **MEMO** The Auto Off setting is disabled (the power does not turn off automatically) when the unit is connected via USB.

Parameter	Value	Explanation
LCD Contrast	1–10	Adjusts the contrast of the display.
Startup Pattern	01-01–08-16	Specifies the pattern that is selected at start-up.
OSC MODEL Lock	OFF, ON	If this is "ON", a dialog box is displayed that confirms the change in oscillator modes when you turn the model knob.

TEMPO/SYNC

Parameter	Value	Explanation
Tempo	20.00–300.00	Specifies the system tempo.
Tempo Src	PATTERN, SYSTEM	When you switch patterns, this setting specifies whether to use the system tempo (SYSTEM) or the tempo stored in the pattern (PATTERN).
Sync Mode	AUTO, INT, MIDI, USB	Sets which synchronization signal is used by this unit. **MEMO** If a plug is connected to the EXT CLK IN jack, this unit always operates in sync with the signals received from the EXT CLK IN jack, regardless of the Sync Mode setting on this unit. ➡ "EXT CLK IN jack(P.12)"
Sync Out	OFF, MIDI, USB, MIDI/USB	Specifies the connector from which MIDI clock messages etc. are output.

MIDI

Parameter	Value	Explanation
Ctrl Ch	1–16, OFF	Specifies the MIDI receive channel on which MIDI messages (program change and bank select) from an external MIDI device can be received to switch programs. If you don't want programs to be switched from a connected MIDI device, turn this "OFF".
Part 1 Ch	1–16	Specifies the MIDI receive channel for part 1.
Part 2 Ch	1–16	Specifies the MIDI receive channel for part 2.
Part 3 Ch	1–16	Specifies the MIDI receive channel for part 3.
Part 4 Ch	1–16	Specifies the MIDI receive channel for part 4.
Part R Ch	1–16	Specifies the MIDI receiving channel for part R.
Soft Thru	OFF, ON	If this is ON, MIDI messages that are input from the MIDI IN connector are re-transmitted without change from the MIDI OUT connector.
USB-MIDI Thru	OFF, ON	Specifies whether MIDI messages received at the USB or MIDI IN port are transmitted without change from the MIDI OUT connector and USB port (ON) or not (OFF).
Remote Kbd	OFF, MIDI IN, USB	Sets which connector is used for input when you use an external MIDI keyboard instead of the keyboard of the SH-4d. Normally you will leave this "OFF". **MEMO** Set the transmit channel of your external MIDI keyboard to the Ctrl Ch of this unit. ➡ "System Settings (SYSTEM SETTINGS)(P.76)"
Local Sw	OFF, ON	Connects (ON) or disconnects (OFF) the keyboard from the internal sound generator.

MIDI Tx

Parameter	Value	Explanation
Tx PC	OFF, ON	Specifies whether program change messages will be transmitted (ON) or not be transmitted (OFF).
Tx Bank	OFF, ON	Specifies whether bank select messages will be transmitted (ON) or not be transmitted (OFF).

MIDI Rx

Parameter	Value	Explanation
Rx PC	OFF, ON	Specifies whether program change messages will be received (ON) or not be received (OFF).
Rx Bank	OFF, ON	Specifies whether bank select messages will be received (ON) or not be received (OFF).

CONTROLLER

Parameter	Value	Explanation
KBD Sw Velo	1–127	Sets the note velocity that's generated when you press one of the keyboard buttons on this unit.
Knob Mode	DIRECT, CATCH	Specifies whether the parameter value corresponding to a controller is immediately updated when you operate that controller (DIRECT) or only after the controller reaches the same position as the parameter's current value (CATCH).
Note Color	WHITE, YELLOW, ORANGE, PURPLE, PINK, SKY BLUE, PALE YELLOW, PALE GREEN, PALE BLUE, PALE PINK	Sets the color used to light up each [1]–[16] button LED, when notes are present in the corresponding steps (in sequencer mode).

D-MOTION

Parameter	Value	Explanation
Offset X	-100–+100	Sets the output X (horizontal direction) value when this unit is placed flat.
Offset Y	-100–+100	Sets the output Y (forward/backward direction) value when this unit is placed flat.
Sense	1–10	Sets the output sensitivity to this unit's tilt. Smaller values produce a greater output in respect to this unit's tilt.
Gravity	0–10	When this unit is placed nearly flat, this sets how much force is required to return the output value to zero.

Configuring the System EQ and System Comp Settings (SYSTEM EQ/SYSTEM COMP)

Parameter	Value	Explanation
		SYSTEM EQ
Switch	OFF, ON	Turns SYSTEM EQ on/off.
In Gain	-24–+24 [dB]	Adjusts the amount of boost/cut for the input to the EQ.
Low Gain	-24.0–+24.0 [dB]	Adjusts the boost/cut of the low frequency range.
Mid1 Gain	-24.0–+24.0 [dB]	Adjusts the amount of boost/cut of the mid-frequency range 1.
Mid2 Gain	-24.0–+24.0 [dB]	Adjusts the amount of boost/cut of the mid-frequency range 2.
Mid3 Gain	-24.0–+24.0 [dB]	Adjusts the amount of boost/cut of the mid-frequency range 3.
High Gain	-24.0–+24.0 [dB]	Adjusts the boost/cut of the high frequency range.
Low Freq	20–16000 [Hz]	Sets the center frequency of the low range.
Mid1 Freq	20–16000 [Hz]	Sets the center frequency of the mid range 1.
Mid2 Freq	20–16000 [Hz]	Sets the center frequency of the mid range 2.
Mid3 Freq	20–16000 [Hz]	Sets the center frequency of the mid range 3.
High Freq	20–16000 [Hz]	Sets the center frequency of the high range.
Mid1 Q	0.5–16.0	Sets the bandwidth of the mid-frequency range 1. Higher values make the bandwidth narrower.
Mid2 Q	0.5–16.0	Sets the bandwidth of the mid-frequency range 2. Higher values make the bandwidth narrower.
Mid3 Q	0.5–16.0	Sets the bandwidth of the mid-frequency range 3. Higher values make the bandwidth narrower.
		SYSTEM COMP
Switch	OFF, ON	Turns SYSTEM COMP on/off.
Low Attack	0.1–100 [ms]	Specifies the time from when the input exceeds Low Thres until compression is applied to the volume of the low-frequency band.
Low Release	10–1000 [ms]	In a state when compression is already being applied, this specifies the time from when the input decreases below Low Thres until the low-frequency band stops being compressed.
Low Thres	-60–0 [dB]	Specifies the volume level at which compression starts for the low-frequency band.
Low Ratio	1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1	Specifies the compression ratio for the low-frequency band.
Low Knee	0–30 [dB]	This function smooths out the sonic transition, from when the compression is not engaged until when the compression begins. This gradually applies compression from just before the Low Thres point. Higher values produce a smoother transition.
Low Gain	-24–+24 [dB]	Specifies the output volume of the low-frequency band.
Mid Attack	0.1–100 [ms]	Specifies the time from when the input exceeds Mid Thres until compression is applied to the volume of the mid-frequency band.
Mid Release	10–1000 [ms]	In a state when compression is already being applied, this specifies the time from when the input decreases below Mid Thres until the mid-frequency band stops being compressed.
Mid Thres	-60–0 [dB]	Specifies the volume level at which compression starts for the mid-frequency band.
Mid Ratio	1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1	Specifies the compression ratio for the mid-frequency band.
Mid Knee	0–30 [dB]	This function smooths out the sonic transition, from when the compression is not engaged until when the compression begins. This gradually applies compression from just before the Mid Thres point. Higher values produce a smoother transition.
Mid Gain	-24–+24 [dB]	Specifies the output volume of the mid-frequency band.
High Attack	0.1–100 [ms]	Specifies the time from when the input exceeds High Thres until compression is applied to the volume of the high-frequency band.
High Release	10–1000 [ms]	In a state when compression is already being applied, this specifies the time from when the input decreases below High Thres until the high-frequency band stops being compressed.
High Thres	-60–0 [dB]	Specifies the volume level at which compression starts for the high-frequency band.
High Ratio	1:1, 2:1, 3:1, 4:1, 8:1, 16:1, 32:1, INF:1	Specifies the compression ratio for the high-frequency band.
High Knee	0–30 [dB]	This function smooths out the sonic transition, from when the compression is not engaged until when the compression begins. This gradually applies compression from just before the High Thres point. Higher values produce a smoother transition.
High Gain	-24–+24 [dB]	Specifies the output volume of the high-frequency band.
Split Freq Low	16–16000 [Hz]	Specifies the frequency at which the low-frequency band (Low) and mid-frequency band (Mid) are divided.
Split Freq High	16–16000 [Hz]	Specifies the frequency at which the high-frequency band (High) and mid-frequency band (Mid) are divided.

Creating Phrases and Modulation (VISUAL ARPEGGIO)

This function lets you create phrases and modulation by various means.

BOUNCE

Press a keyboard button and then tilt this unit.

You can also play using an external keyboard connected to this unit.

Controller	Explanation
[1] knob	Sets the width of the bouncing board.
[2] knob	Sets the strength of the rebound effect on the board.

BUBBLE

Press a keyboard button.

You can also play using an external keyboard connected to this unit.

Controller	Explanation
[1] knob	Adjusts the overall speed.
[2] knob	Sets how much the tilt of this unit affects the movement of the bubbles.
[∧] button	The bubbles are erased from first to last.
[∨] button	The bubbles are erased from last to first.

SKETCH

Draw a series of notes (a scale) on the screen and press the [ENTER] button.

Controller	Explanation
[1] knob	Moves the cursor left/right. Hold down the knob and move it to draw lines.
[2] knob	Moves the cursor up/down. Hold down the knob and move it to draw lines.
[<] [>] buttons	Sets the scale used to quantize the notes you draw (making the notes you draw fit into the scale). If this is set to a value other than "CHROMA", the notes that play are the closest in the selected scale to the ones you drew.
[∧] [∨] buttons	Sets the scale root.
Keyboard buttons	Moves the cursor to the note position (pitch) you played.

PONG

Press a keyboard button and use the [1] and [2] knobs to move the paddles.

Controller	Explanation
[1] knob	Moves the left paddle.
[2] knob	Moves the right paddle.

ORBIT

Press the [∧] button and use the keyboard buttons to play a sustaining sound.

MEMO

You can more easily trigger the effect if you set the AMP [SUSTAIN] knob to a higher value to create a sustaining sound while the keyboard buttons are being played.

Controller	Explanation
[1] knob	Sets the effect destination parameter.
[2] knob	Sets the strength of the effect.
[∧] [∨] buttons	Increases or decreases the number of satellites.
[<] [>] buttons	Speeds up ([>]) or slows down ([<]) the movement of the satellites.

Restoring the Factory Settings (Factory Reset)

Here's how to return the SH-4d to its factory-set state.

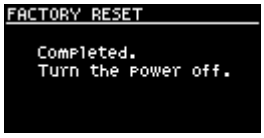
1. **On the MENU screen, select "FACTORY RESET", and then press the [ENTER] button to display the dialog screen.**

2. **Press the [>] button and select "OK", and then press the [ENTER] button to execute the factory reset.**

NOTE

Never turn off the power while the "Executing..." message is shown and the unit is still processing.

3. **Once the message "Completed. Turn the power off." appears on the screen, turn this unit off.**



Prioritizing the Battery (Battery Fixed Operation Mode)

In this mode, the unit does not switch to using bus power, even when a USB power supply is connected to the USB port.

Although the unit does normally switch to bus power when batteries are installed and you connect a power supply to the USB port, you can make the unit run on batteries only when using battery fixed operation mode, regardless of the bus power supply.

When the power is turned off, the fixed battery operation mode is canceled.

1. **While holding down the [∨] button, turn on the power.**

   This makes this unit operate on batteries.

Backing Up and Restoring Data

Backup

1. **Connect your computer to the SH-4d's USB port via USB cable.**
2. **While holding down the [EXIT] button, turn on the power.**
3. **Open the "SH-4D" drive on your computer.**

   The backup files are located in the "BACKUP" folder on the "SH-4D" drive.
4. **Copy the backup files to the computer.**
5. **Once copying is finished, eject the USB drive from your computer.**

Windows

Right-click on the "SH-4D" icon on your computer (located on the right corner of the taskbar or in Windows Explorer), and click "Eject".

macOS

Drag the "SH-4D" icon to the Trash icon in the Dock.

6. **Turn off the power.**

Restoring

1. **Connect your computer to the SH-4d's USB port via USB cable.**
2. **While holding down the [START] button, turn the power on.**
3. **Open the "SH-4d" drive on your computer.**
4. **The backup files are copied to the "RESTORE" folder on the "SH-4d" drive.**
5. **Once copying is finished, eject the USB drive from your computer, and press the [ENTER] button.**
6. **Once the message "Completed. Turn the power off." appears on the screen, turn this unit off.**

Main Specifications

User Memory	SOUND PTACH: 256 PATTERN: 128
Oscillator Model	SH-4d SH-3D SYNC SH-101 JUNO-106 Cross FM RING WAVETABLE CHORD DRAWING PCM RHYTHM (only for RHYTHM part)
Maximum Polyphony	60 voices (varies according to the sound generator load)
Parts	5 parts (Tone part: 4, Rhythm part: 1)
Effects	Multi-Effects: 5 systems, 93 types Reverb: 9 types Chorus: 5 types Delay: 5 types Master Effect: 93 types Master EQ / Comp
Arpeggiator	5 types
Sequencer	parts: 5 Steps: 64 Sub Steps Flam Probability
Controllers	Switch Keyboard Step buttons D-Motion (motion sensor)
Display	Graphic LCD 128 x 64 dots
Connectors	PHONES jack: stereo standard type OUTPUT jacks (L/MONO, R): standard type MIX IN jack: stereo mini type EXT CLK IN jack: mini type MIDI (IN, OUT) jacks USB port: USB Type-C® (Audio, MIDI)
Power source	USB bus power supply (USB Type-C® port) Ni-MH batteries (AA, HR6) (sold separately) x 4 Alkaline battery (AA, LR6) (sold separately) x 4
Power consumption	500 mA (USB bus power supply)
Battery life for continuous use	Alkaline battery: Approx. 4 hours Ni-MH battery: Approx. 5 hours * Depends on battery specifications, capacity, and usage conditions.
Dimensions	360 (W) x 195 (D) x 66 (H) mm 14-3/16 (W) x 7-11/16 (D) x 2-5/8 (H) inches
Weight	1,780 g (excluding Batteries) 3 lbs 15 oz
Accessories	Quick Start Leaflet “USING THE UNIT SAFELY” USB Type-C to USB Type-A cable Alkaline battery (AA, LR6) x 4

* This document explains the specifications of the product at the time that the document was issued. For the latest information, refer to the Roland website.

MFX Parameters

MFX List

MFX Common Parameters(P.89)	
Thru(P.90)	
Filter Type(P.91)	Equalizer(P.91) Mid-Side EQ (Mid-Side Equalizer)(P.91) Spectrum(P.93) Isolator(P.93) Low Boost(P.94) SuperFilter(P.94) MM Filter (Multi-mode Filter)(P.95) Step Filter(P.96) Enhancer(P.96) Exciter(P.97) Auto Wah(P.98) Humanizer(P.98)
Phaser Type(P.100)	Phaser(P.100) Small Phaser(P.101) Script 90(P.101) Script 100(P.102)

	Step Phaser(P.102) M StagePhsr (Multi Stage Phaser)(P.103) Inf Phaser (Infinite Phaser)(P.104)
Flanger Type(P.105)	Flanger(P.105) SBF-325 (Flanger)(P.106) StepFlanger(P.107)
Chorus Type(P.108)	Chorus(P.108) Hexa-Chorus(P.109) Trem Chorus (Tremolo Chorus)(P.110) Space-D(P.111) CE-1 (Chorus)(P.112) SDD-320 (DIMENSION D)(P.112) JUNO Chorus (JUNO-106Chorus)(P.113)
Modulation Type(P.114)	Ring Mod (Ring modulator)(P.114) Tremolo(P.115) Auto Pan(P.116) Slicer(P.116) Rotary(P.117) VK Rotary(P.118)

Drive / Amp(P.119)	Overdrive(P.119) Distortion(P.119) T-Scream(P.120) Fuzz(P.120) Fattener (Tone Fattener)(P.121) HMS Distort (HMS Distortion)(P.121) Saturator(P.122) W Saturator (Worm Saturator)(P.123) Gt Amp Sim (Guitar Amp Simulator)(P.124) EP Amp Sim (RD EP Amp Simulator)(P.125) Speaker Sim (Speaker Simulater)(P.126)
Comp / Limiter(P.127)	Compressor(P.127) M/S Comp (Mid-Side Compressor)(P.127) Limiter(P.128) Sustainer(P.128) Transient(P.129) Gate(P.130)
Delay Type(P.131)	Delay(P.131) Mod Delay (Modulation Delay)(P.132) 2Tap PanDly (2 Tap Pan Delay)(P.134) 3Tap PanDly (3 Tap Pan Delay)(P.135) 4Tap PanDly (4 Tap Pan Delay)(P.136) MultiTapDly (Multi Tap Delay)(P.137) Reverse Dly (Reverse Delay)(P.138) TimeCtrlDly (Time Control Delay)(P.139) Tape Echo(P.140) M/S Delay (Mid-Side Delay)(P.141)
Looper(P.142)	DJFX Looper(P.142) BPM Looper(P.143)
Lo-fi(P.144)	LOFI Comp (Lo-Fi Compressor)(P.144) Bit Crusher(P.144) Phonograph(P.145)
Pitch(P.146)	PitchShiftr (Pitch Shifter)(P.146) 2V PShifter (2 Voice Pitch Shifter)(P.147)

Combination(P.148)	OD -> Chorus (Overdrive -> Chorus)(P.148) OD -> Flanger (Overdrive -> Flanger)(P.148) OD -> Delay (Overdrive -> Delay)(P.149) DS -> Chorus (Distortion -> Chorus)(P.150) DS -> Flanger (Distortion -> Flanger)(P.150) DS -> Delay (Distortion -> Delay)(P.151) OD/DS -> T. Wah (Overdrive/Distortion -> Touch Wah)(P.151) OD/DS -> A. Wah (Overdrive/Distortion -> Auto Wah)(P.152) Gt -> Chorus (Guitar Amp Simulator -> Chorus)(P.153) Gt -> Flanger (Guitar Amp Simulator -> Flanger)(P.154) Gt -> Phaser (Guitar Amp Simulator -> Phaser)(P.155) Gt -> Delay (Guitar Amp Simulator -> Delay)(P.156) EP -> Tremolo (EP Amp Simulator -> Tremolo)(P.158) EP -> Chorus (EP Amp Simulator -> Chorus)(P.159) EP -> Flanger (EP Amp Simulator -> Flanger)(P.159) EP -> Phaser (EP Amp Simulator -> Phaser)(P.160) EP -> Delay (EP Amp Simulator -> Delay)(P.161) Enhncr -> Cho (Enhancer -> Chorus)(P.162) Enhncr -> Fl (Enhancer -> Flanger)(P.162) Enhncr -> Dly (Enhancer -> Delay)(P.163) Chorus -> Dly (Chorus -> Delay)(P.163) Flanger -> Dly (Flanger -> Delay)(P.164) Chorus -> Fl (Chorus -> Flanger)(P.165) JD-Multi(P.165)

MFX Common Parameters

Parameter	Value	Explanation
Categ	Selects the MFX category.	
Type	Selects the MFX type.	
Switch	OFF, ON	Switches the MFX on/off.
MFX parameters	Depends on the MFX type.	For details, refer to each MFX parameter.
Cho Send	0–127	Sets the amount of chorus. If you don't want to add the chorus effect, set it to 0.
Rev Send	0–127	Sets the amount of reverb. If you don't want to add the reverb effect, set it to 0.

MEMO

- When sending audio signals with the rhythm part from the MFX to the pattern chorus/reverb, raise the Reverb/Chorus/Delay Send level of the rhythm part to set on the MIXER screen.
  ➡ "Adjusting the Volume Balance and Effect Sends(P.21)"
- For the rhythm part, the signal sent from the MFX to the pattern chorus/reverb is routed separately from the effect send for each rhythm instrument.

Thru

Filter Type

Equalizer

This is a four-band stereo equalizer (low, mid x 2, high).

Parameter	Value	Explanation
Low Freq	20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400 [Hz]	Frequency of the low range
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
Mid1 Freq	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Frequency of the middle range 1
Mid1 Gain	-15–+15 [dB]	Gain of the middle range 1
Mid1 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 1 Set a higher value for Q to narrow the range to be affected.
Mid2 Freq	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Frequency of the middle range 2
Mid2 Gain	-15–+15 [dB]	Gain of the middle range 2
Mid2 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 2 Set a higher value for Q to narrow the range to be affected.
HighFreq	2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12500, 16000 [Hz]	Frequency of the high range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Mid-Side EQ (Mid-Side Equalizer)

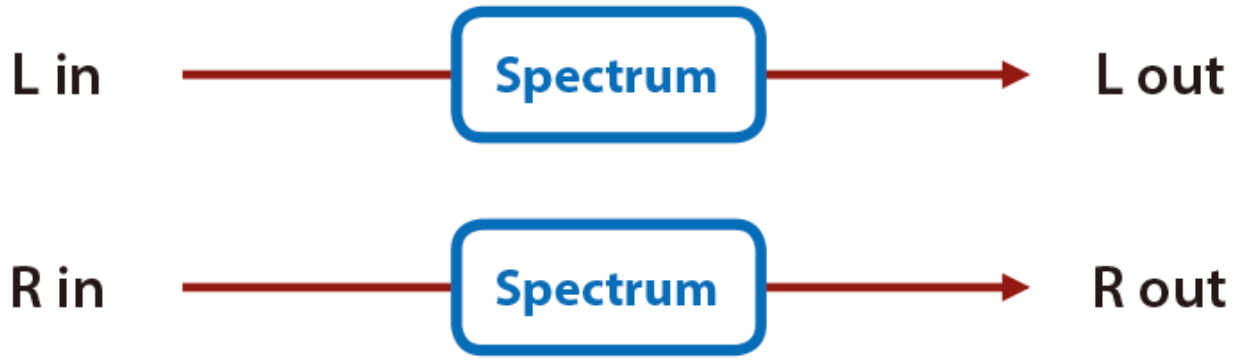
This effect allows the left/right signals that have similar phase to be tonally adjusted in a different way than the left/right signals that have different phase.

Parameter	Value	Explanation
M EQ Switch	OFF, ON	Switches whether to apply tonal adjustment to left/right input signals whose phase is similar (in phase).
M In G	-12.00–+12.00 [dB]	Volume of left/right input signals whose phase is similar (in phase)
M Low F	20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400 [Hz]	Frequency of the low range
M Low G	-12.00–+12.00 [dB]	Amount of boost/cut for the low-frequency range

Parameter	Value	Explanation
M Mid1 F	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Frequency of the middle range 1
M Mid1G	-12.00–+12.00 [dB]	Gain of the middle range 1
M Mid1 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 1 Set a higher value for Q to narrow the range to be affected.
M Mid2 F	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Frequency of the middle range 2
M Mid2G	-12.00–+12.00 [dB]	Gain of the middle range 2
M Mid2 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 2 Set a higher value for Q to narrow the range to be affected.
M Mid3 F	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Frequency of the middle range 3
M Mid3G	-12.00–+12.00 [dB]	Gain of the middle range 3
M Mid3 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 3 Set a higher value for Q to narrow the range to be affected.
M High F	2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12500, 16000 [Hz]	Frequency of the high range
M HighG	-12.00–+12.00 [dB]	Amount of boost/cut for the high-frequency range
S EQ Switch	OFF, ON	Switches whether to apply tonal adjustment to left/right input signals whose phase is distant (opposite phase).
S In G	-12.00–+12.00 [dB]	Volume of left/right signals whose phase is distant (opposite phase)
S Low F	20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400 [Hz]	Frequency of the low range
S Low G	-12.00–+12.00 [dB]	Amount of boost/cut for the low-frequency range
S Mid1 F	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Frequency of the middle range 1
S Mid1G	-12.00–+12.00 [dB]	Gain of the middle range 1
S Mid1 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 1 Set a higher value for Q to narrow the range to be affected.
S Mid2 F	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Frequency of the middle range 2
S Mid2G	-12.00–+12.00 [dB]	Gain of the middle range 2
S Mid2 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 2 Set a higher value for Q to narrow the range to be affected.
S Mid3 F	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Frequency of the middle range 3
S Mid3G	-12.00–+12.00 [dB]	Gain of the middle range 3
S Mid3 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 3 Set a higher value for Q to narrow the range to be affected.
S High F	2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12500, 16000 [Hz]	Frequency of the high range
S HighG	-12.00–+12.00 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Spectrum

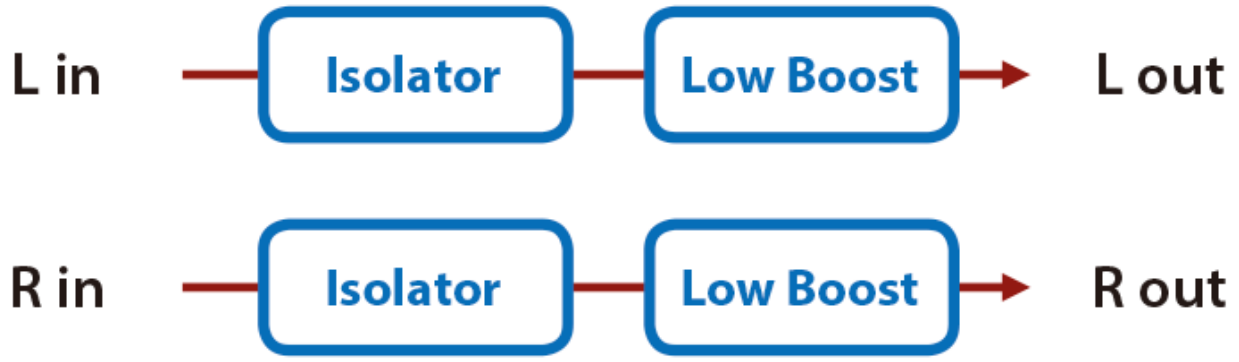
This is a stereo spectrum. Spectrum is a type of filter which modifies the timbre by boosting or cutting the level at specific frequencies.



Parameter	Value	Explanation
Band1	-15–+15 [dB]	Gain of each frequency band
Band2		
Band3		
Band4		
Band5		
Band6		
Band7		
Band8		
Q	0.5, 1.0, 2.0, 4.0, 8.0	Simultaneously adjusts the width of the adjusted ranges for all the frequency bands.
Level	0–127	Output Level

Isolator

This is an equalizer which cuts the volume greatly, allowing you to add a special effect to the sound by cutting the volume in varying ranges.

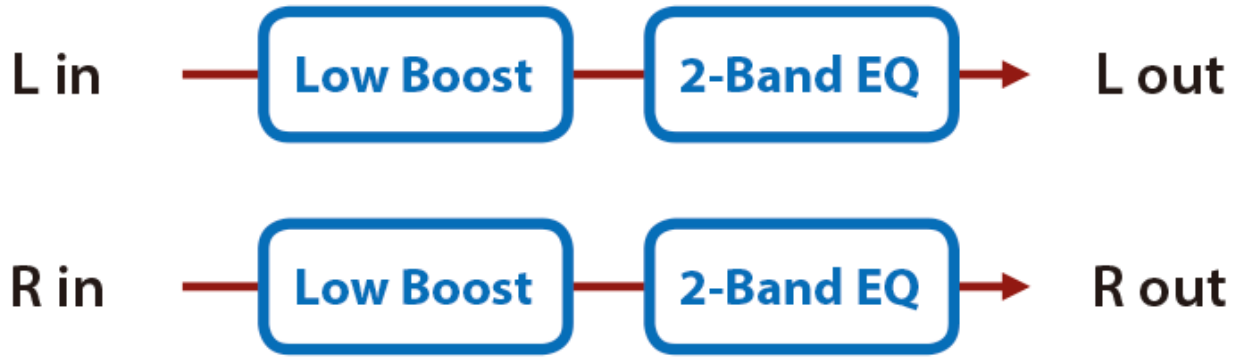


Parameter	Value	Explanation
Low Level	-60–+4 [dB]	These boost and cut each of the High, Middle, and Low frequency ranges. At -60 dB, the sound becomes inaudible. 0 dB is equivalent to the input level of the sound.
Mid Level	-60–+4 [dB]	
High Level	-60–+4 [dB]	
Low AP Sw	OFF, ON	Turns the Anti-Phase function on and off for the Low frequency ranges. When turned on, the counter-channel of stereo sound is inverted and added to the signal.
Low AP Lv	0–127	Adjusts the level settings for the Low frequency ranges. Adjusting this level for certain frequencies allows you to lend emphasis to specific parts (This is effective only for stereo source.).
Mid AP Sw	OFF, ON	Settings of the Anti-Phase function for the Middle frequency ranges.
Mid AP Lv	0–127	The parameters are the same as for the Low frequency ranges.

Parameter	Value	Explanation
Boost Sw	OFF, ON	Turns Low Booster on/off. This emphasizes the bottom to create a heavy bass sound.
Boost Lv	0–127	Increasing this value gives you a heavier low end. Depending on the Isolator and filter settings this effect may be hard to distinguish.
Level	0–127	Output Level

Low Boost

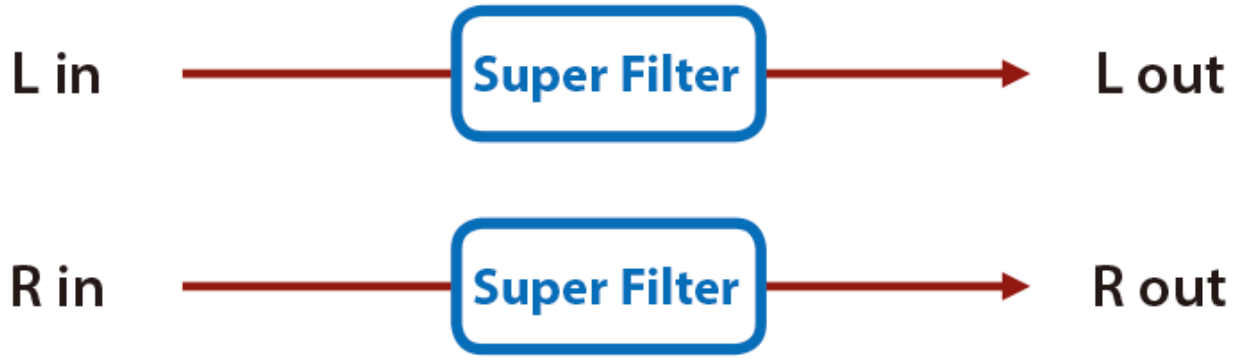
Boosts the volume of the lower range, creating powerful lows.



Parameter	Value	Explanation
Boost Freq	50, 56, 63, 71, 80, 90, 100, 112, 125 [Hz]	Center frequency at which the lower range will be boosted
Boost Gain	0–+12 [dB]	Center frequency at which the lower range will be boosted
Boost Wid	WIDE, MID, NARROW	Width of the lower range that will be boosted
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

SuperFilter

This is a filter with an extremely sharp slope. The cutoff frequency can be varied cyclically.

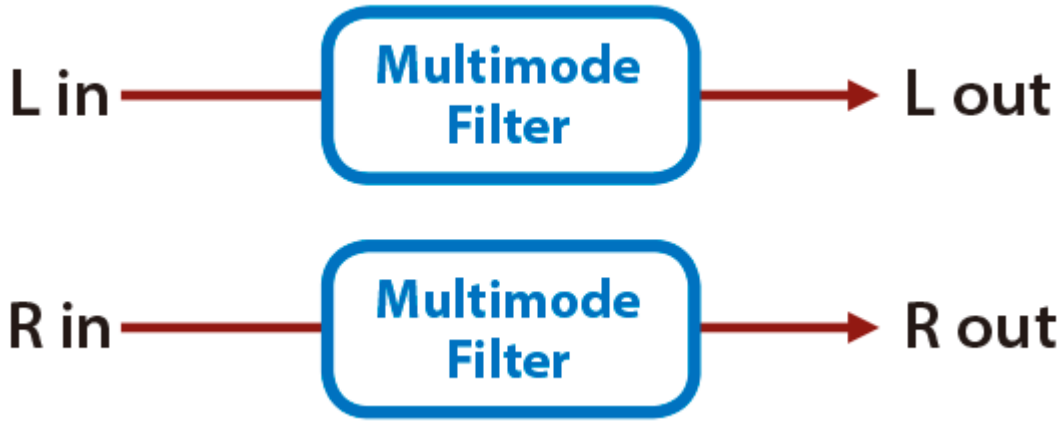


Parameter	Value	Explanation
Type	LPF, BPF, HPF, NOTCH	Frequency range that will pass through each filter LPF: Frequencies below the cutoff BPF: Frequencies in the region of the cutoff HPF: Frequencies above the cutoff NOTCH: Frequencies other than the region of the cutoff
Slope	-12, -24, -36 [dB]	Amount of attenuation per octave -12 dB: Gentle -24 dB: Steep -36 dB: Extremely steep
Cutoff	0–127	Cutoff frequency of the filter Increasing this value will raise the cutoff frequency.
Resonance	0–100	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.

Parameter	Value	Explanation
Gain	0–+12 [dB]	Amount of boost for the filter output
Mod Sw	OFF, ON	On/off switch for cyclic change
Mod Wave	TRI, SQR, SIN, SAW1, SAW2	How the cutoff frequency will be modulated TRI: Triangle wave SQR: Square wave SIN: Sine wave SAW1: Sawtooth wave (upward) SAW2: Sawtooth wave (downward) 
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern)(P.53) Tempo (System)(P.77)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note(P.167)	
Depth	0–127	Depth of modulation
Attack	0–127	Speed at which the cutoff frequency will change This is effective if Mod Wave is SQR, SAW1, or SAW2.
Level	0–127	Output Level

MM Filter (Multi-mode Filter)

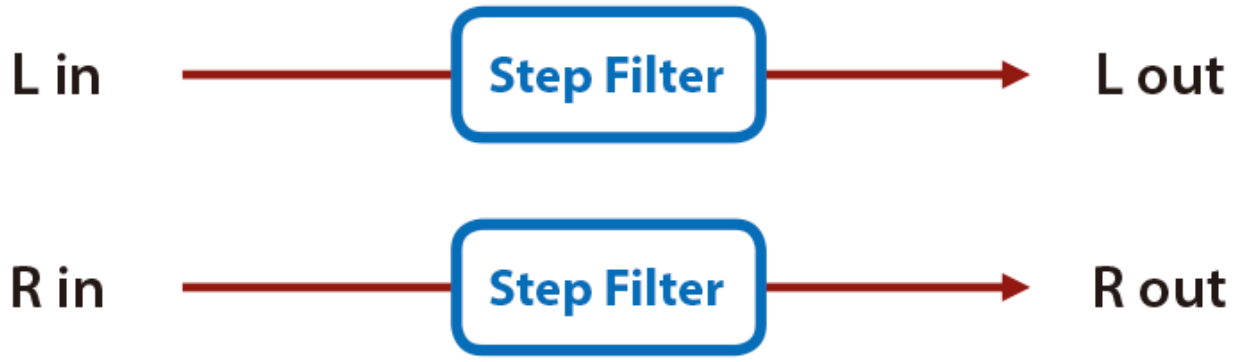
This is a filter that is adjusted for effective use in a DJ performance.



Parameter	Value	Explanation
Type	LPF/HPF, LPF, HPF, BPF	LPF/HPF: The filter type is automatically switched according to the Filter Tone parameter value.
Tone	0–255	Frequency at which the filter operates
Color	0–255	Filter resonance level Higher values more strongly emphasize the region of the operating frequency.
Slope	-12, -24, -36 [dB]	Amount of attenuation per octave -12 dB: gentle -24 dB: steep -36 dB: extremely steep
Gain	0–+12 [dB]	Amount of boost for the filter output
Level	0–127	Output Level

Step Filter

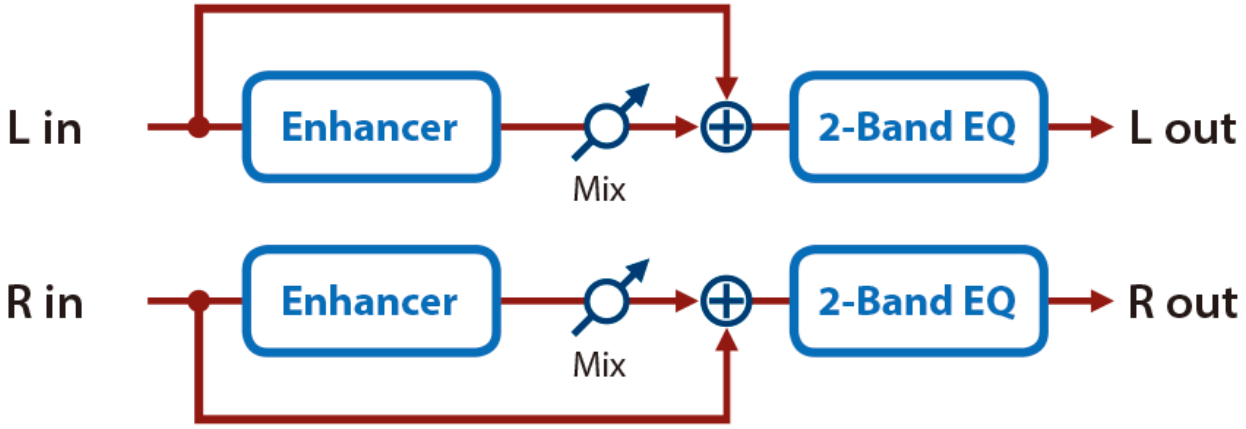
This is a filter whose cutoff frequency can be modulated in steps. You can specify the pattern by which the cutoff frequency will change.



Parameter	Value	Explanation
Step 1–16	0–127	Cutoff frequency at each step
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern)(P.53) Tempo (System)(P.77)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note(P.167)	
Attack	0–127	Speed at which the cutoff frequency changes between steps
Type	LPF, BPF, HPF, NOTCH	Frequency range that will pass through each filter LPF: Frequencies below the cutoff BPF: Frequencies in the region of the cutoff HPF: Frequencies above the cutoff NOTCH: Frequencies other than the region of the cutoff
Slope	-12, -24, -36 [dB]	Amount of attenuation per octave -12 dB: Gentle -24 dB: Steep -36 dB: Extremely steep
Reso	0–127	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Gain	0–+12 [dB]	Amount of boost for the filter output
Level	0–127	Output Level

Enhancer

Controls the overtone structure of the high frequencies, adding sparkle and tightness to the sound.

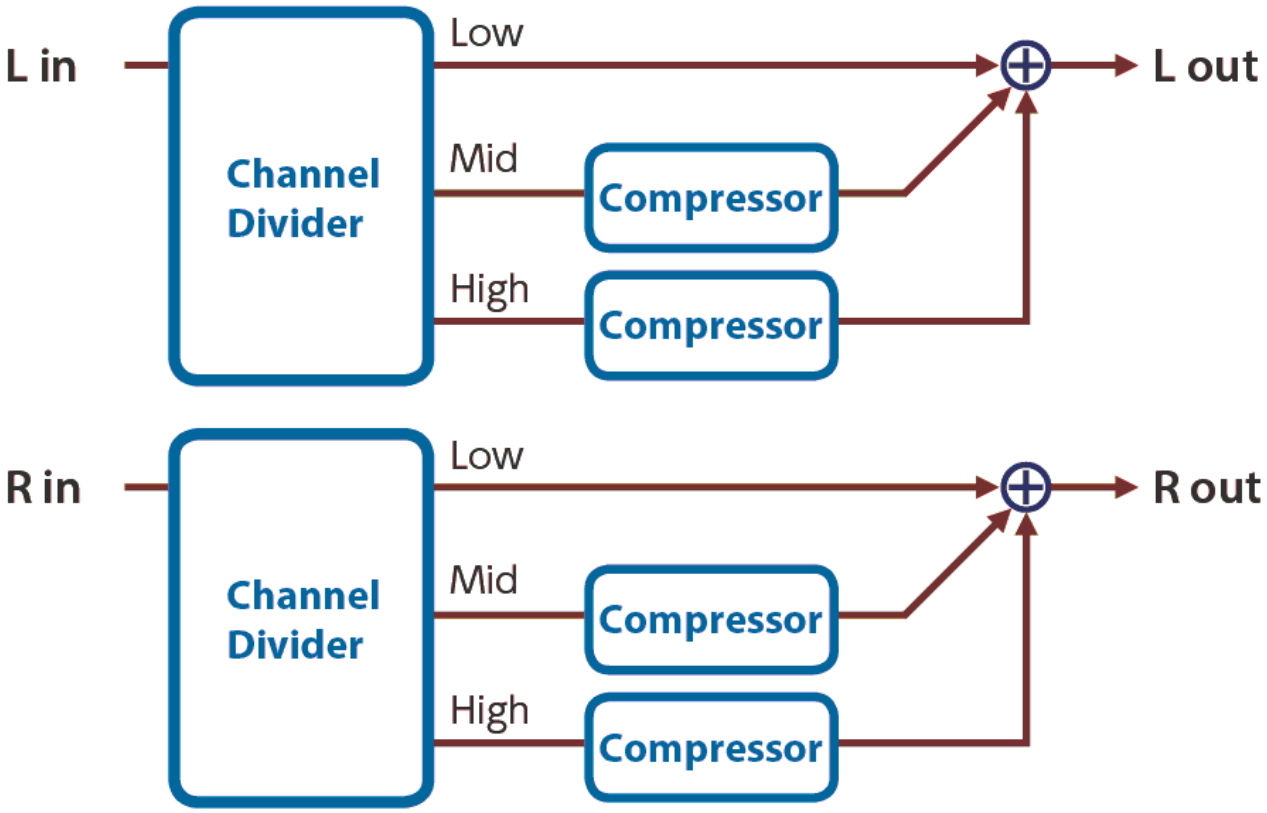


Parameter	Value	Explanation
Sens	0–127	Sensitivity of the enhancer
Mix	0–127	Level of the overtones generated by the enhancer

Parameter	Value	Explanation
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Exciter

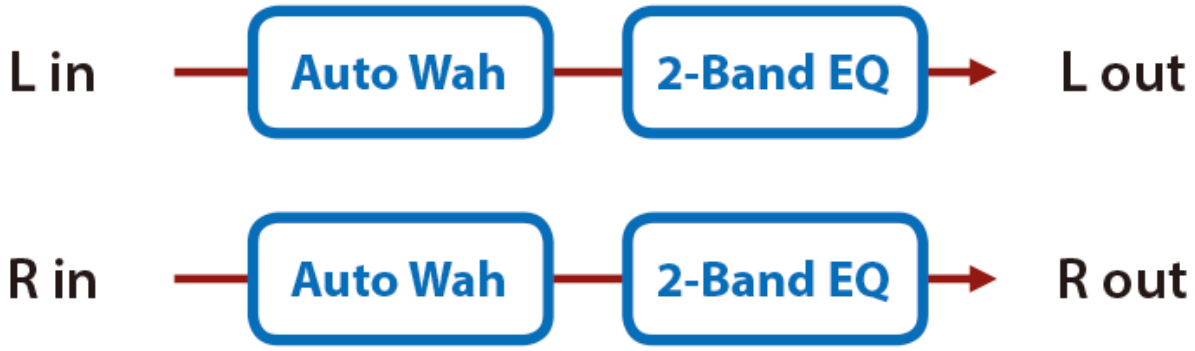
This adds dynamics to the sound, by dynamically bringing up the high end using a split-band compressor.



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.
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

Auto Wah

Cyclically controls a filter to create cyclic change in timbre.



Parameter	Value	Explanation
Mode	LPF, BPF	Filter type LPF: The wah effect will be applied over a wide frequency range. BPF: The wah effect will be applied over a narrow frequency range.
Manual	0–127	Center frequency at which the wah effect is applied
Peak	0–127	Width of the frequency region at which the wah effect is applied Increasing this value will make the frequency region narrower.
Sens	0–127	Sensitivity with which the filter is modified
Polarity	UP, DOWN	Direction in which the filter will move UP: The filter will change toward a higher frequency. DOWN: The filter will change toward a lower frequency.
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note(P.167)	
Depth	0–127	Depth at which the wah effect is modulated
Phase	0–180 [deg]	Adjusts the degree of phase shift of the left and right sounds when the wah effect is applied.
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Humanizer

Adds a vowel character to the sound, making it similar to a human voice.

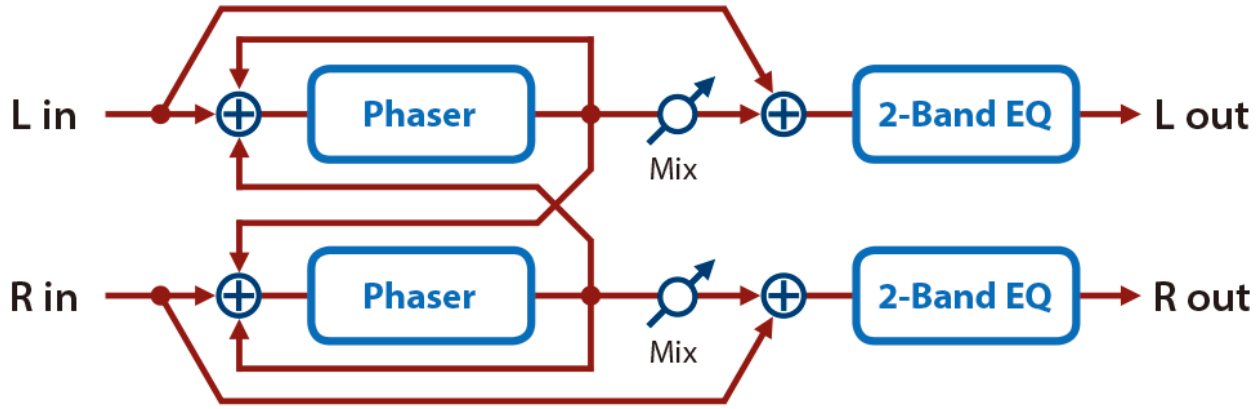
Parameter	Value	Explanation
Drive Sw	OFF, ON	Overdrive on/off
Drive	0–127	Degree of distortion Also changes the volume.
Vowel1	a, e, i, o, u	Selects the vowel.
Vowel2	a, e, i, o, u	
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency at which the two vowels switch

Parameter	Value	Explanation
Rate Note	Note(P.167)	
Depth	0–127	Effect depth
In Sync Sw	OFF, ON	LFO reset on/off Determines whether the LFO for switching the vowels is reset by the input signal (ON) or not (OFF).
InSyncThres	0–127	Volume level at which reset is applied
Manual	0–100	Point at which Vowel 1/2 switch 0–49: Vowel 1 will have a longer duration. 50: Vowel 1 and 2 will be of equal duration. 51–100: Vowel 2 will have a longer duration.
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Pan	L64–63R	Stereo location of the output sound
Level	0–127	Output Level

Phaser Type

Phaser

A phase-shifted sound is added to the original sound and modulated.

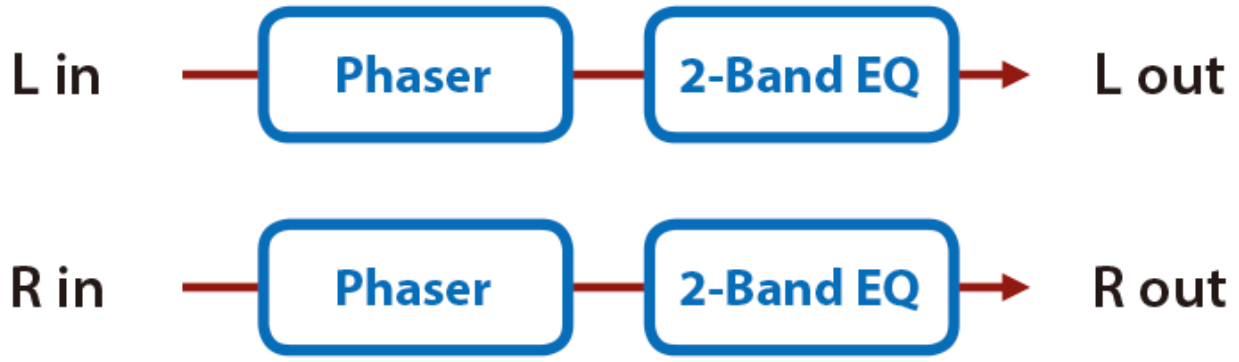


Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note(P.167)	
Depth	0–127	Depth of modulation
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation will be the same or the opposite. INVERSE: The left and right phase will be opposite. When using a mono source, this spreads the sound. SYNCHRO: The left and right phase will be the same. Select this when inputting a stereo source.
Resonance	0–127	Amount of feedback
Feedback	-98–+98 [%]	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
Mix	0–127	Level of the phase-shifted sound
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Small Phaser

This simulates an analog phaser of the past.

It is particularly suitable for electric piano.

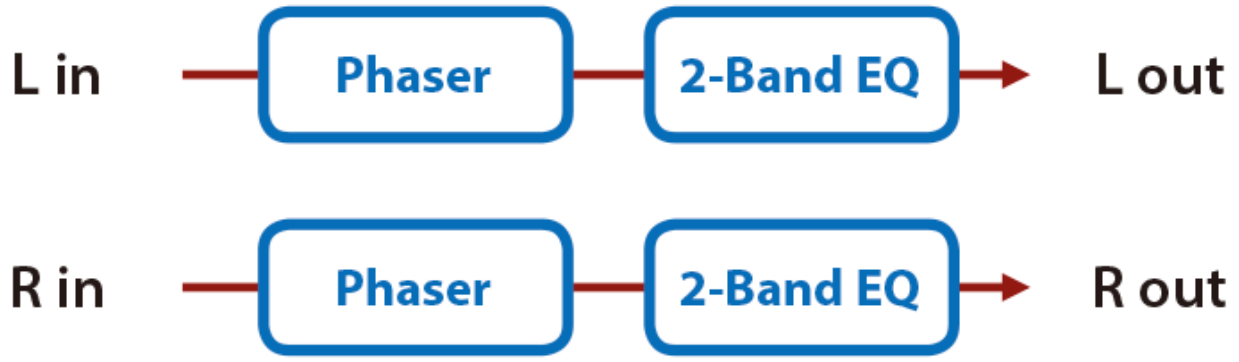


Parameter	Value	Explanation
Rate	0–100	Frequency of modulation
Color	1, 2	Modulation character
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Script 90

This simulates a different analog phaser than Small Phaser.

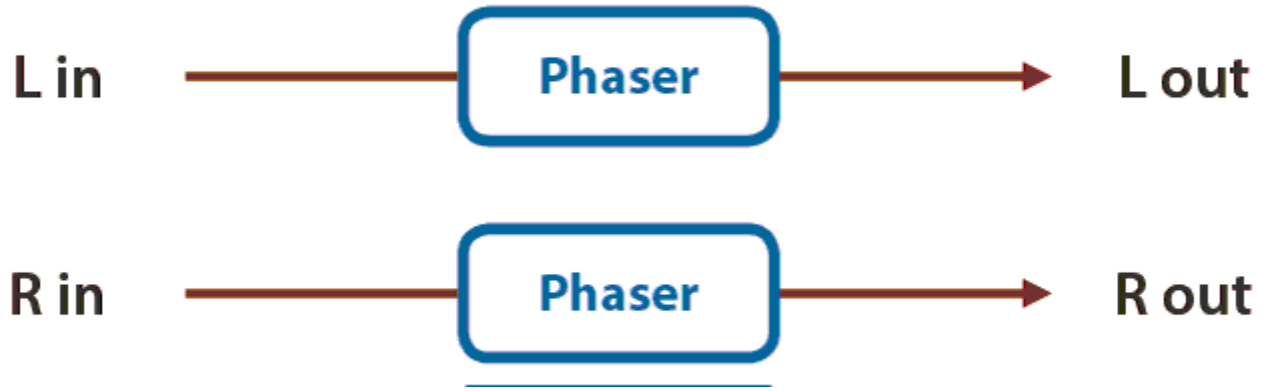
It is particularly suitable for electric piano.



Parameter	Value	Explanation
Speed	0–100	Speed of modulation
Depth	0–127	Depth of modulation
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Script 100

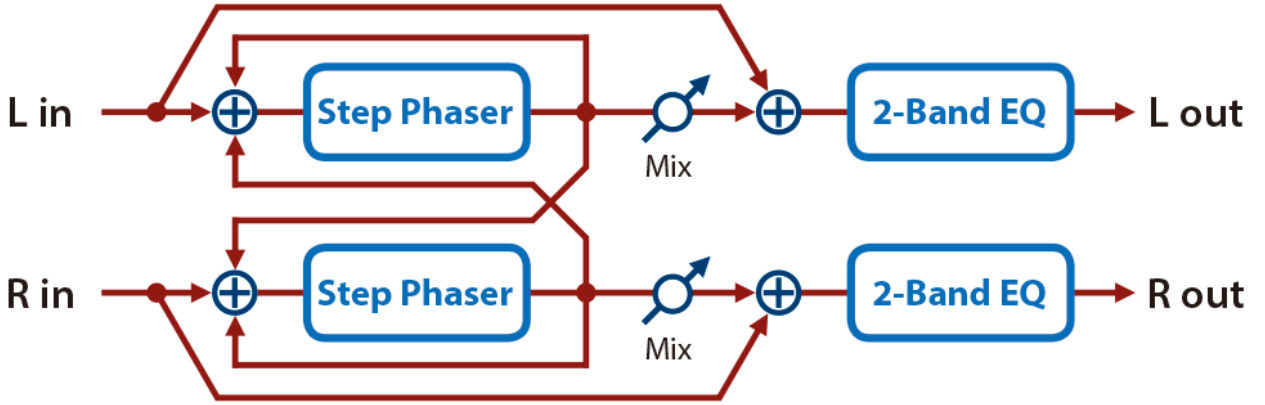
This simulates an analog phaser of the past.



Parameter	Value	Explanation
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note	
Duty	-50–50	Adjusts the ratio of speeds at which the modulation rises or falls.
Min	0–100	Lower limit reached by modulation
Max	0–100	Upper limit reached by modulation
Manual Sw	OFF, ON	Applies modulation according to the value of the Manual parameter, rather than modulating automatically.
Manual	0–100	Adjusts the basic frequency from which the sound will be modulated.
Resonance	0–66	Amount of feedback
Mix	0–127	Level of the phase-shifted sound
Level	0–127	Output Level

Step Phaser

This is a stereo phaser. The phaser effect will be varied gradually.

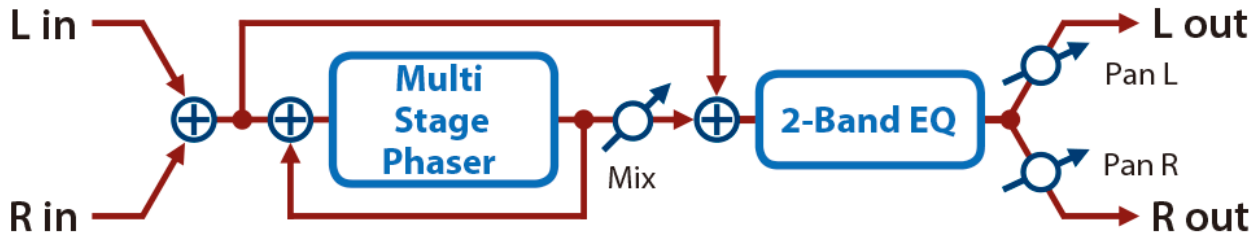


Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note(P.167)	
Depth	0–127	Depth of modulation

Parameter	Value	Explanation
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation will be the same or the opposite. INVERSE: The left and right phase will be opposite. When using a mono source, this spreads the sound. SYNCHRO: The left and right phase will be the same. Select this when inputting a stereo source.
Resonance	0–127	Amount of feedback
Feedback	-98–+98 [%]	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
S Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
S.Rate	0.10–20.00 [Hz]	Rate of the step-wise change in the phaser effect
S.Rate Nt	Note(P.167)	
Mix	0–127	Level of the phase-shifted sound
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

M StagePhsr (Multi Stage Phaser)

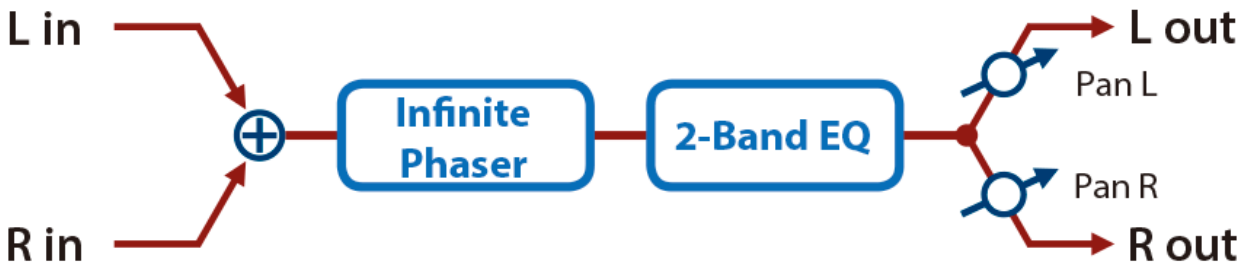
Extremely high settings of the phase difference produce a deep phaser effect.



Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE, 16-STAGE, 20-STAGE, 24-STAGE	Number of stages in the phaser
Manual	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note(P.167)	
Depth	0–127	Depth of modulation
Resonance	0–127	Amount of feedback
Mix	0–127	Level of the phase-shifted sound
Pan	L64–63R	Stereo location of the output sound
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Inf Phaser (Infinite Phaser)

A phaser that continues raising/lowering the frequency at which the sound is modulated.



Parameter	Value	Explanation
Mode	1–4	Higher values will produce a deeper phaser effect.
Speed	-100–+100	Speed at which to raise or lower the frequency at which the sound is modulated (+: upward / -: downward)
Resonance	0–127	Amount of feedback
Mix	0–127	Level of the phase-shifted sound
Pan	L64–63R	Stereo location of the output sound
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

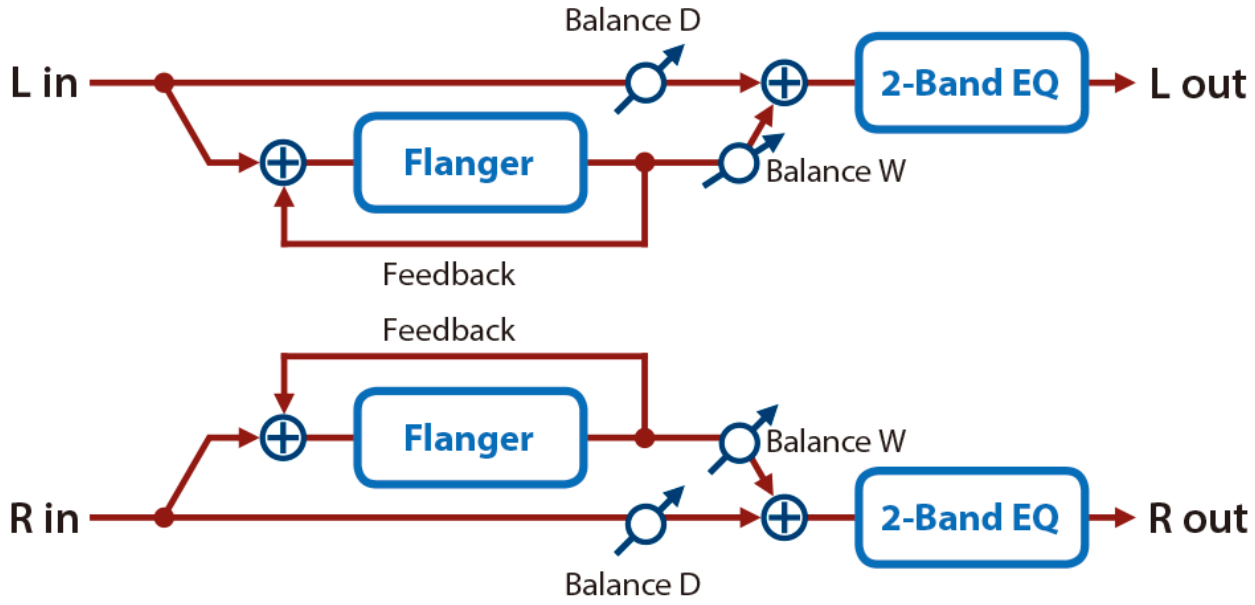
Flanger Type

Flanger

This is a stereo flanger (The LFO has the same phase for left and right.).

It produces a metallic resonance that rises and falls like a jet airplane taking off or landing.

A filter is provided so that you can adjust the timbre of the flanged sound.



Parameter	Value	Explanation
Type	OFF, LPF, HPF	Filter type OFF: No filter is used LPF: Cuts the frequency range above the Cutoff Freq HPF: Cuts the frequency range below the Cutoff Freq
Cutoff	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Basic frequency of the filter
Pre Delay	0.0–100 [ms]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note(P.167)	
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

SBF-325 (Flanger)

This effect reproduces Roland's SBF-325 analog flanger.

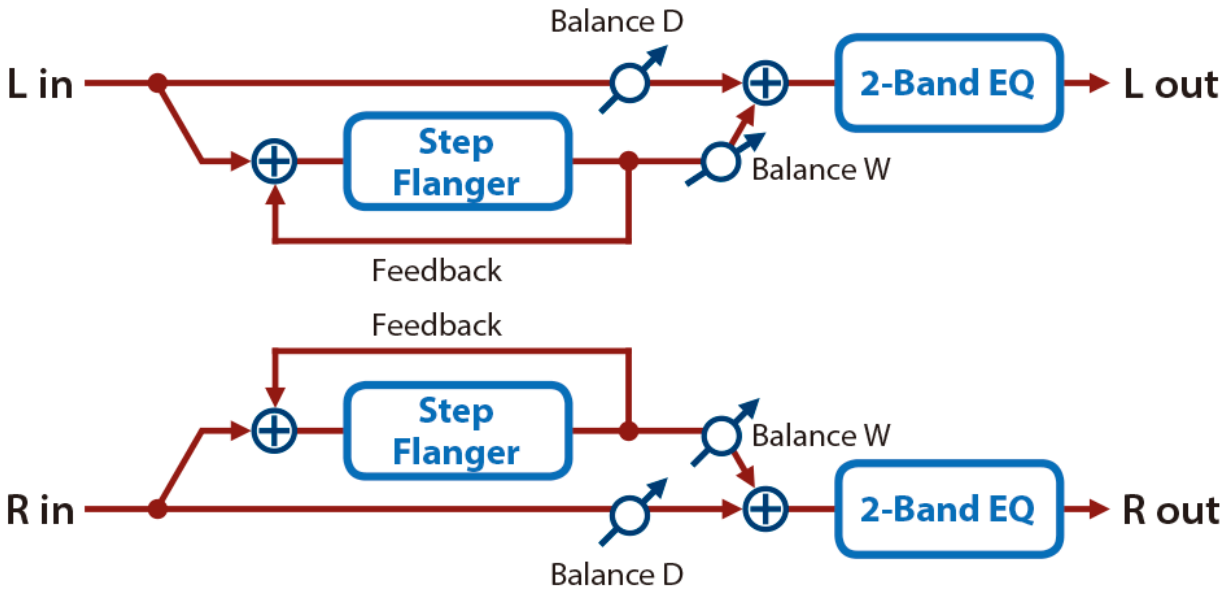
It provides three types of flanging effect (which adds a metallic resonance to the original sound) and a chorus-type effect.

Parameter	Value	Explanation
Mode	Types of flanging effect	
	FL1	A typical mono flanger
	FL2	A stereo flanger that preserves the stereo positioning of the original sound
	FL3	A cross-mix flanger that produces a more intense effect
	CHO	A chorus effect
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.02–5.00 [Hz]	Modulation frequency of the flanger effect
Rate Note	Note(P.167)	
Depth	0–127	Modulation depth of the flanger effect
Manual	0–127	Center frequency at which the flanger effect is applied
Feedback	0–127	Amount by which the flanging effect is boosted If Mode is CHO, this setting is ignored.
RMod Phase	NORM, INV	Phase of the right channel modulation: Normally, you will leave this at Normal (NORM). If you specify Inverted (INV), the modulation (upward/downward movement) of the right channel is inverted.
L Phase	NORM, INV	Phase when mixing the flanging sound with the original sound NORM: normal phase INV: inverse phase
R Phase	NORM, INV	
Level	0–127	Output Level

StepFlanger

This is a flanger in which the flanger pitch changes in steps.

The speed at which the pitch changes can also be specified in terms of a note-value of a specified tempo.

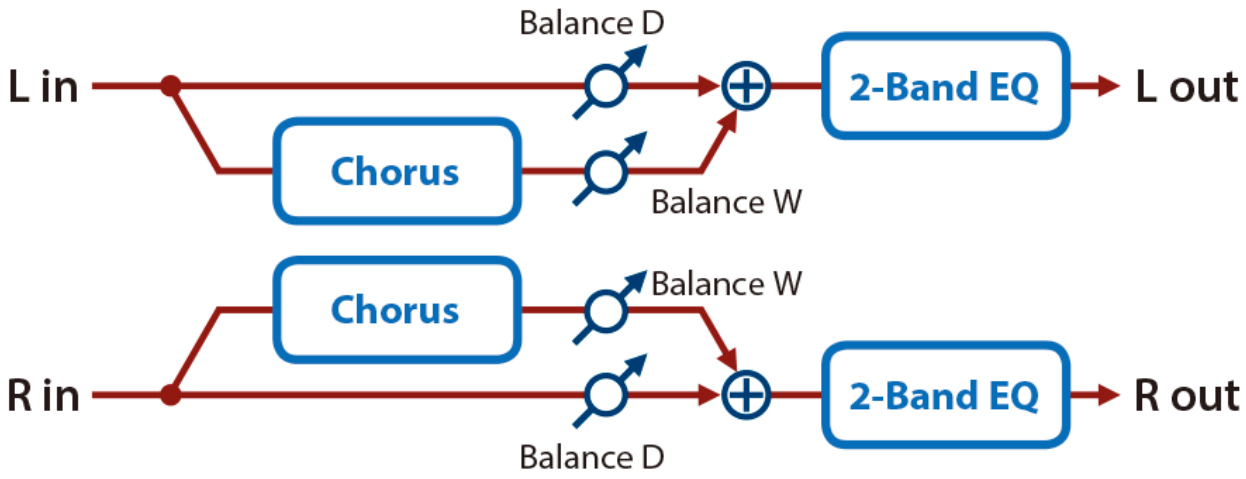


Parameter	Value	Explanation
Type	OFF, LPF, HPF	Filter type OFF: No filter is used LPF: Cuts the frequency range above the Cutoff Freq HPF: Cuts the frequency range below the Cutoff Freq
Cutoff	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Basic frequency of the filter
Pre Delay	0.0–100 [ms]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note(P.167)	
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
S.Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
S.Rate	0.10–20.00 [Hz]	Rate (period) of pitch change
S.Rate Nt	Note(P.167)	
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100：0W～D0：100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0～127	Output Level

Chorus Type

Chorus

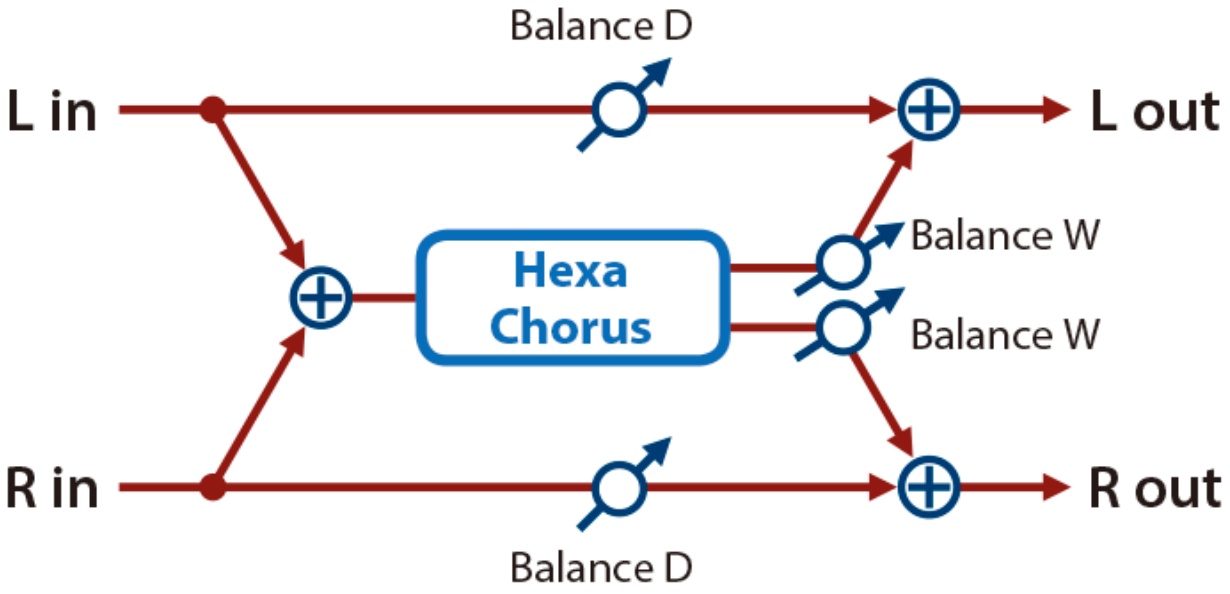
This is a stereo chorus. A filter is provided so that you can adjust the timbre of the chorus sound.



Parameter	Value	Explanation
Type	OFF, LPF, HPF	Filter type OFF: No filter is used LPF: Cuts the frequency range above the Cutoff Freq HPF: Cuts the frequency range below the Cutoff Freq
Cutoff	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Basic frequency of the filter
Pre Delay	0.0–100 [ms]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note(P.167)	
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

Hexa-Chorus

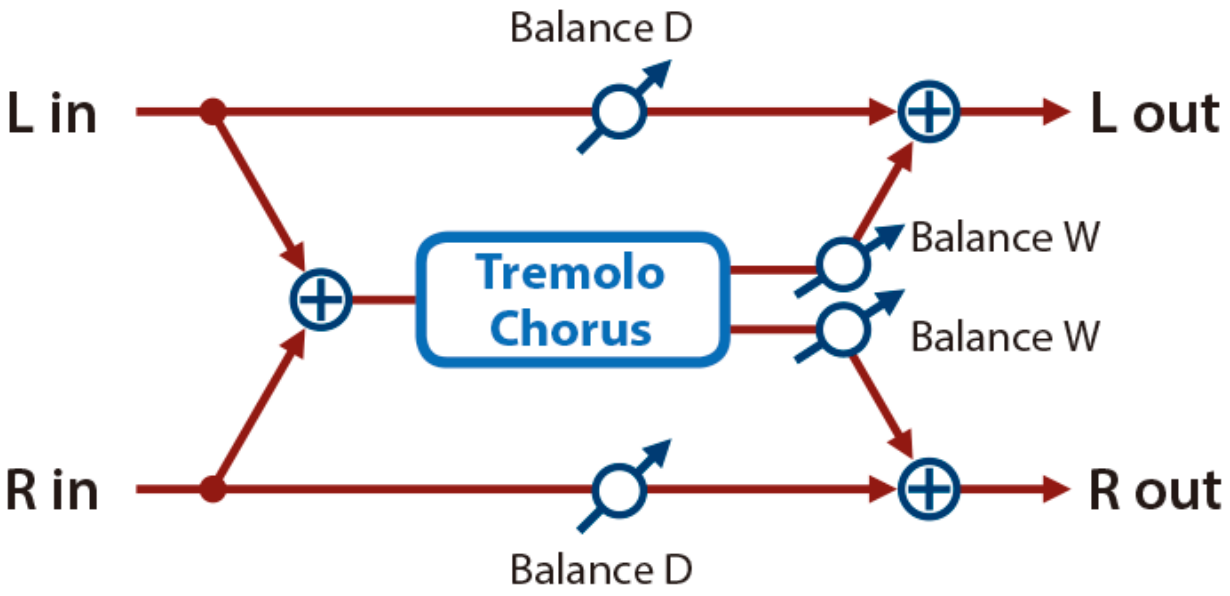
Uses a six-phase chorus (six layers of chorused sound) to give richness and spatial spread to the sound.



Parameter	Value	Explanation
Pre Delay	0.0–100 [ms]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note(P.167)	
Depth	0–127	Depth of modulation
PreDly Dev	0–20	Adjusts the differences in Pre Delay between each chorus sound.
Depth Dev	-20–+20	Adjusts the difference in modulation depth between each chorus sound.
Pan Dev	0–20	Adjusts the difference in stereo location between each chorus sound. 0: All chorus sounds will be in the center. 20: Each chorus sound will be spaced at 60 degree intervals relative to the center.
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

Trem Chorus (Tremolo Chorus)

This is a chorus effect with added Tremolo (cyclic modulation of volume).

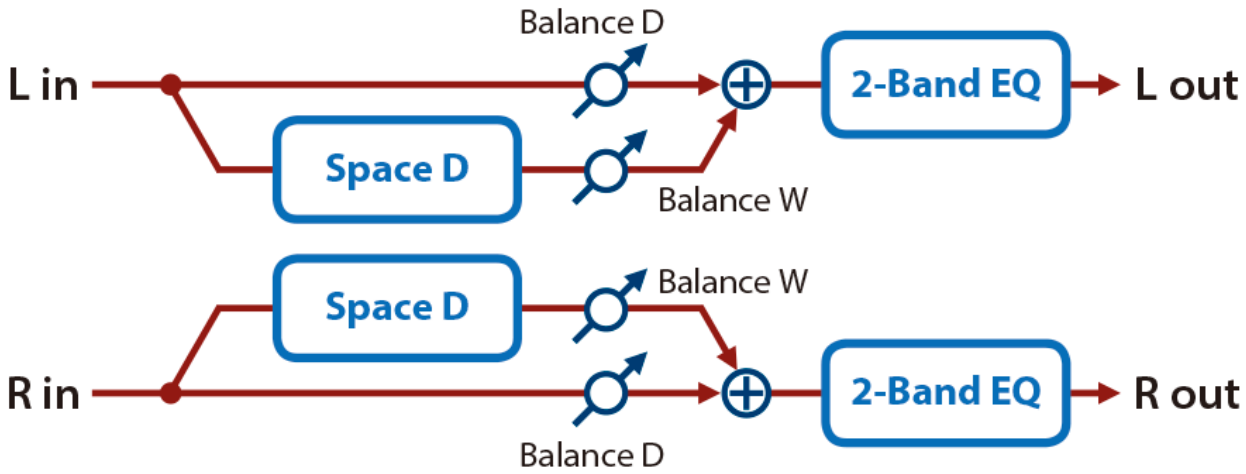


Parameter	Value	Explanation
Pre Delay	0.0–100 [ms]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Cho Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
C.Rate	0.05–10.00 [Hz]	Modulation frequency of the chorus effect
C.Rate Nt	Note(P.167)	
Cho Depth	0–127	Modulation depth of the chorus effect
Trm Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
T.Rate	0.05–10.00 [Hz]	Modulation frequency of the tremolo effect
T.Rate Nt	Note(P.167)	
Trm Separate	0–127	Depth of the tremolo effect
Trm Phase	0–180 [deg]	Spread of the tremolo effect
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the tremolo chorus sound (W)
Level	0–127	Output Level

Space-D

This is a multiple chorus that applies two-phase modulation in stereo.

It gives no impression of modulation, but produces a transparent chorus effect.

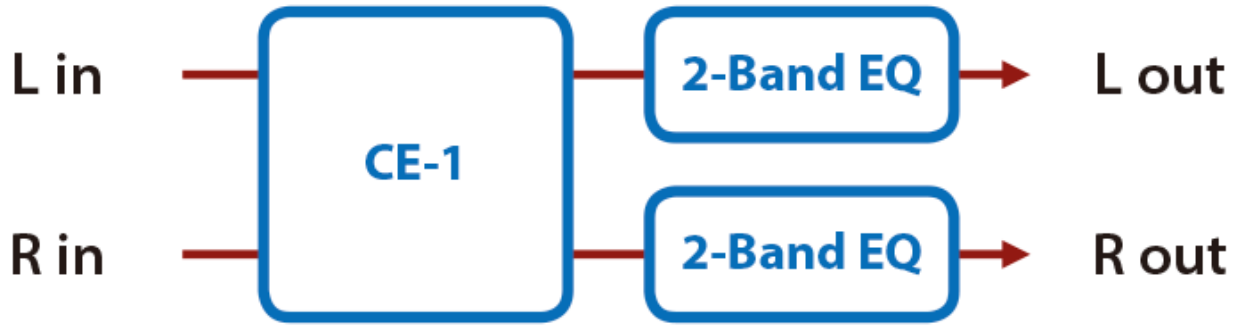


Parameter	Value	Explanation
Pre Delay	0.0–100 [ms]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note(P.167)	
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

CE-1 (Chorus)

This models the classic BOSS CE-1 chorus effect unit.

It provides a chorus sound with a distinctively analog warmth.

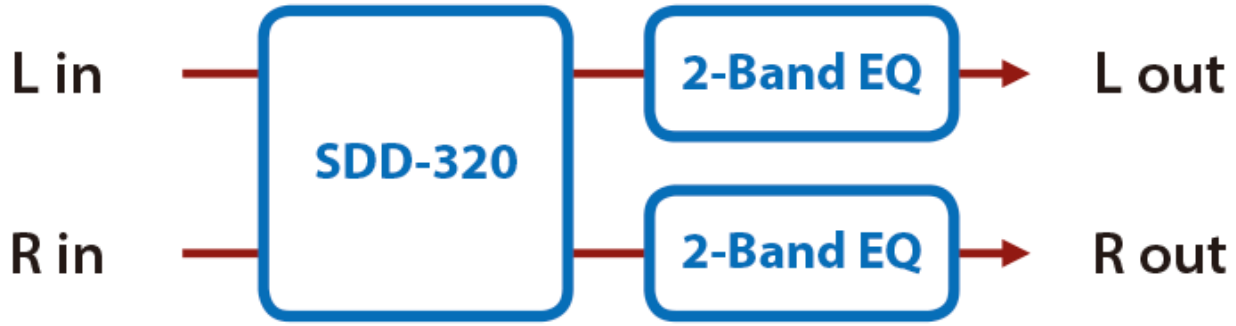


Parameter	Value	Explanation
Intensity	0–127	Chorus depth
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

SDD-320 (DIMENSION D)

This models Roland's DIMENSION D (SDD-320).

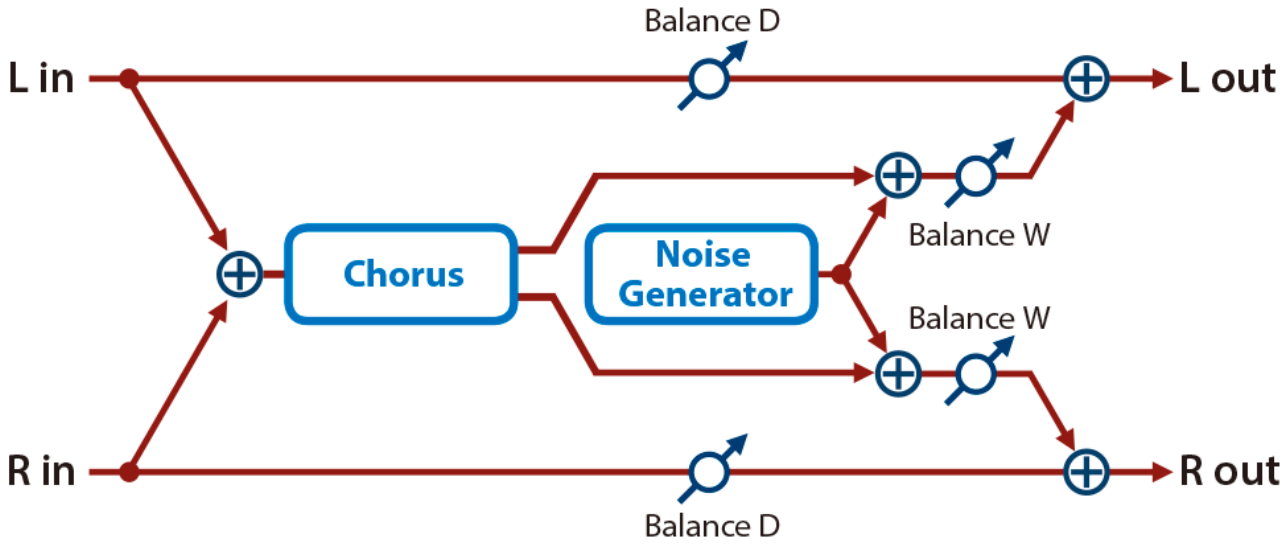
It provides a clear chorus sound.



Parameter	Value	Explanation
Mode	1, 2, 3, 4, 1+4, 2+4, 3+4	Switches the mode.
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

JUNO Chorus (JUNO-106Chorus)

This models the chorus effects of the Roland JUNO-106.



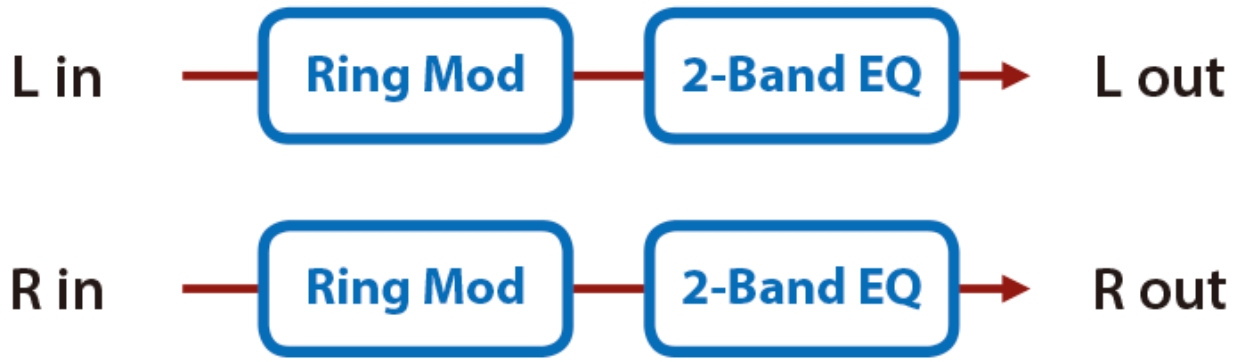
Parameter	Value	Explanation
Mode	I, II, I+II, JX I, JX II	Type of Chorus I+II: The state in which two buttons are pressed simultaneously.
Noise Lv	0–127	Volume of the noise produced by chorus
Balance	D100: 0W–D0: 100W	Volume balance between the dry sound (D) and effect sound (W)
Level	0–127	Output Level

Modulation Type

Ring Mod (Ring modulator)

This is an effect that applies amplitude modulation (AM) to the input signal, producing bell-like sounds.

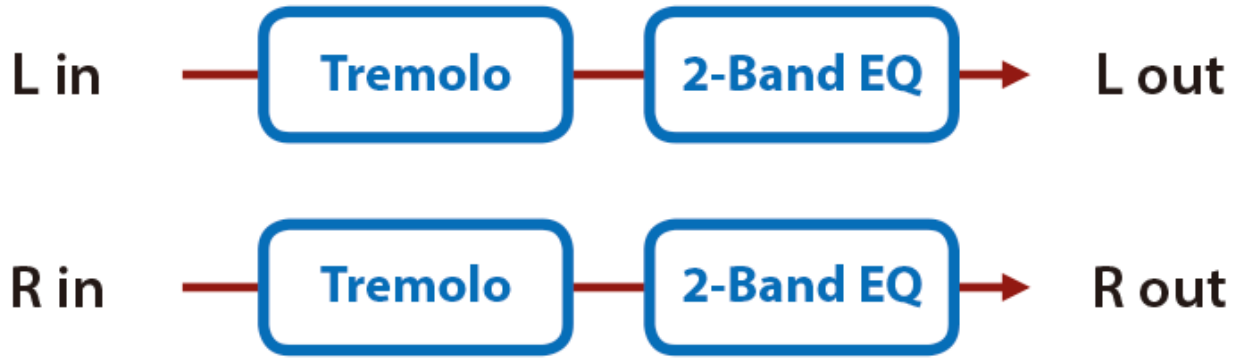
You can also change the modulation frequency in response to changes in the volume of the sound sent into the effect.



Parameter	Value	Explanation
Frequency	0–127	Adjusts the frequency at which modulation is applied.
Sens	0–127	Adjusts the amount of frequency modulation applied.
Polarity	UP, DOWN	Determines whether the frequency modulation moves towards higher frequencies or lower frequencies. UP: The filter will change toward a higher frequency. DOWN: The filter will change toward a lower frequency.
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output Level

Tremolo

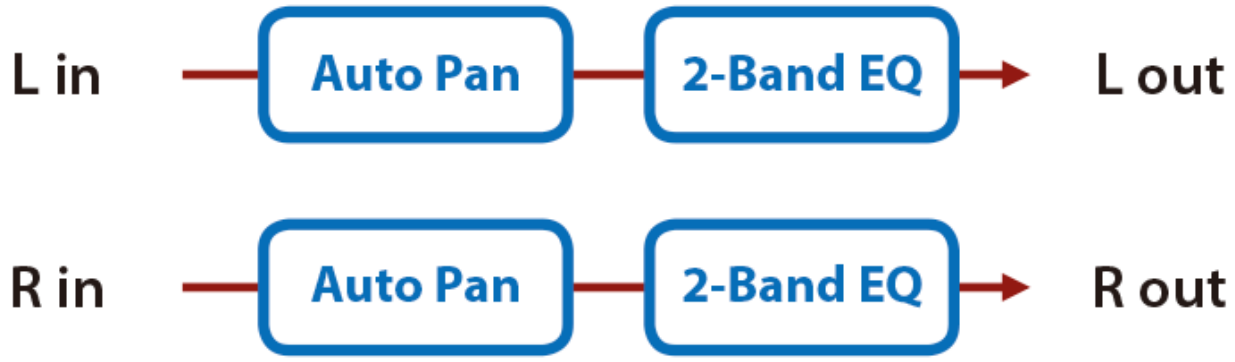
Cyclically changes the volume.



Parameter	Value	Explanation
Mod Wave	TRI, SQR, SIN, SAW1, SAW2, TRP	Modulation Wave TRI: Triangle wave SQR: Square wave SIN: Sine wave SAW1/2: Sawtooth wave TRP: Trapezoidal wave 
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of the change
Rate Note	Note(P.167)	
Depth	0–127	Depth to which the effect is applied
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Auto Pan

Cyclically modulates the stereo location of the sound.

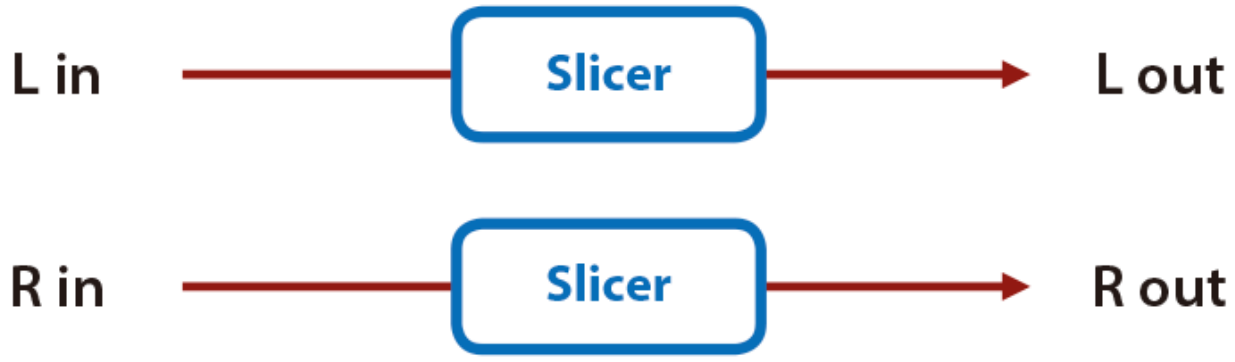


Parameter	Value	Explanation
Mod Wave	TRI, SQR, SIN, SAW1, SAW2, TRP	Modulation Wave TRI: Triangle wave SQR: Square wave SIN: Sine wave SAW1/2: Sawtooth wave TRP: Trapezoidal wave 
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of the change
Rate Note	Note(P.167)	
Depth	0–127	Depth to which the effect is applied
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Slicer

By applying successive cuts to the sound, this effect turns a conventional sound into a sound that appears to be played as a backing phrase.

This is especially effective when applied to sustain-type sounds.



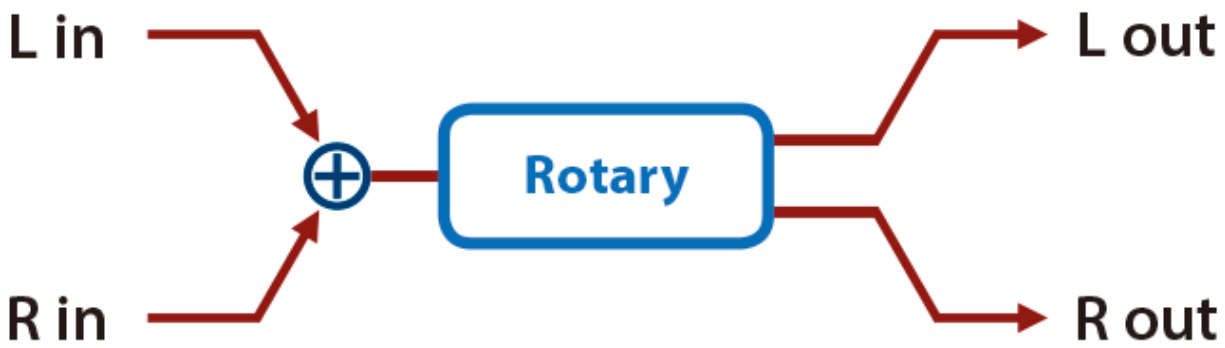
Parameter	Value	Explanation
Step 1–16	0–127	Level at each step
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)

Parameter	Value	Explanation
Rate	0.05–10.00 [Hz]	Rate at which the 16-step sequence will cycle
Rate Note	Note(P.167)	
Attack	0–127	Speed at which the level changes between steps
In Sync Sw	OFF, ON	Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF)
InSyncThres	0–127	Volume at which an input note will be detected
Mode	LEGATO, SLASH	Sets the manner in which the volume changes as one step progresses to the next. LEGATO: The change in volume from one step's level to the next remains unaltered. If the level of a following step is the same as the one preceding it, there is no change in volume. SLASH: The level is momentarily set to 0 before progressing to the level of the next step. This change in volume occurs even if the level of the following step is the same as the preceding step.
Shuffle	0–127	Timing of volume changes in levels for even-numbered steps (step 2, step 4, step 6...). The higher the value, the later the beat progresses.
Level	0–127	Output Level

Rotary

This simulates a classic rotary speaker of the past.

Since the operation of the high-frequency and low-frequency rotors can be specified independently, the distinctive modulation can be reproduced realistically. This is most effective on organ patches.

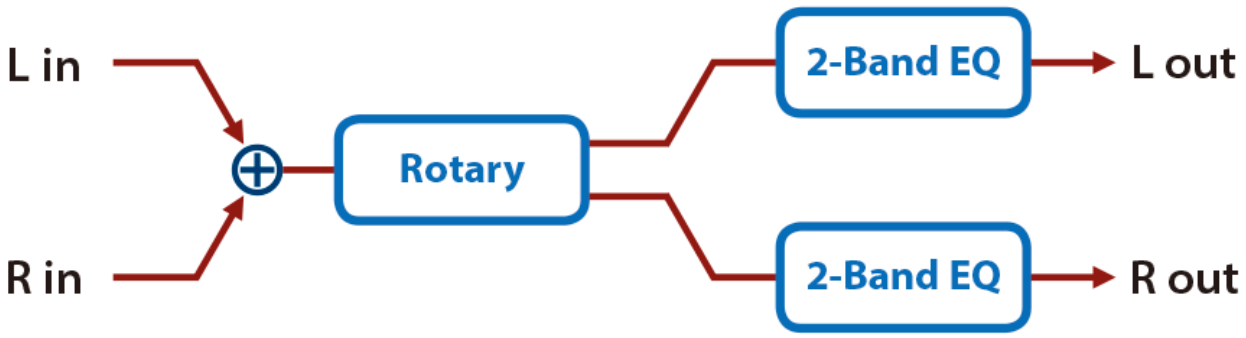


Parameter	Value	Explanation
Speed	SLOW, FAST	Simultaneously switch the rotational speed of the low frequency rotor and high frequency rotor. SLOW: Slows down the rotation to the Slow Rate. FAST: Speeds up the rotation to the Fast Rate.
Wf Slow	0.05–10.00 [Hz]	Slow speed (SLOW) of the low frequency rotor
Wf Fast	0.05–10.00 [Hz]	Fast speed (FAST) of the low frequency rotor
Wf Accel	0–15	Adjusts the time it takes the low frequency rotor to reach the newly selected speed when switching from fast to slow (or slow to fast) speed. Lower values will require longer times.
Wf Level	0–127	Volume of the low frequency rotor
Tw Slow	0.05–10.00 [Hz]	Settings of the high frequency rotor The parameters are the same as for the low frequency rotor.
Tw Fast	0.05–10.00 [Hz]	
Tw Accel	0–15	
Tw Level	0–127	
Separation	0–127	Spatial dispersion of the sound
Level	0–127	Output Level

VK Rotary

This type provides modified response for the rotary speaker, with the low end boosted further.

This effect features the same specifications as the VK-7's built-in rotary speaker.

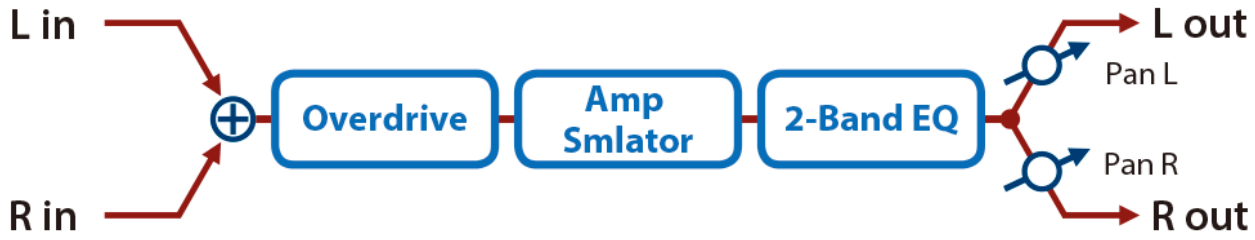


Parameter	Value	Explanation
Speed	SLOW, FAST	Rotational speed of the rotating speaker SLOW: Slow FAST: Fast
Brake	OFF, ON	Switches the rotation of the rotary speaker. When this is turned on, the rotation will gradually stop. When it is turned off, the rotation will gradually resume.
Wf Slow	0.05–10.00 [Hz]	Low-speed rotation speed of the woofer
Wf Fast	0.05–10.00 [Hz]	High-speed rotation speed of the woofer
Wf Trs Up	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Slow to Fast.
Wf Trs Dw	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Fast to Slow.
Wf Level	0–127	Volume of the woofer
Tw Slow	0.05–10.00 [Hz]	Settings of the tweeter The parameters are the same as for the woofer.
Tw Fast	0.05–10.00 [Hz]	
Tw Trs Up	0–127	
Tw Trs Dw	0–127	
Tw Level	0–127	
Spread	0–10	Sets the rotary speaker stereo image.
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level
OD Switch	OFF, ON	Overdrive on/off
OD Gain	0–127	Overdrive input level Higher values will increase the distortion.
OD Drive	0–127	Degree of distortion
OD Level	0–127	Volume of the overdrive

Drive / Amp

Overdrive

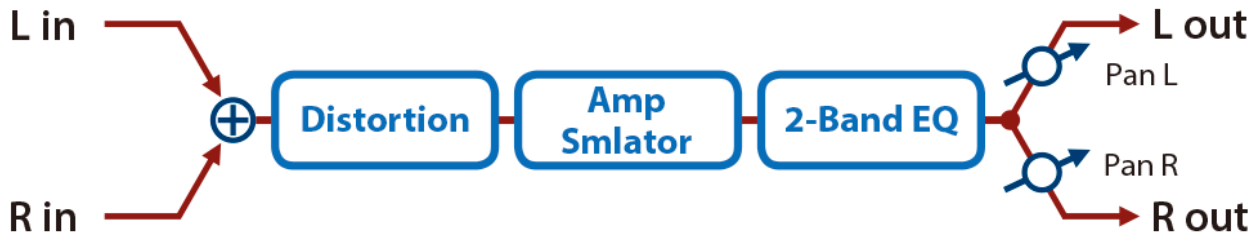
This is an overdrive that provides heavy distortion.



Parameter	Value	Explanation
Drive	0–127	Degree of distortion Also changes the volume.
Tone	0–127	Sound quality of the Overdrive effect
Amp Switch	OFF, ON	Turns the Amp Simulator on/off.
AmpType	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp SMALL: Small amp BUILT-IN: Single-unit type amp 2-STACK: Large double stack amp 3-STACK: Large triple stack amp
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Pan	L64–63R	Stereo location of the output sound
Level	0–127	Output Level

Distortion

Produces a more intense distortion than Overdrive.

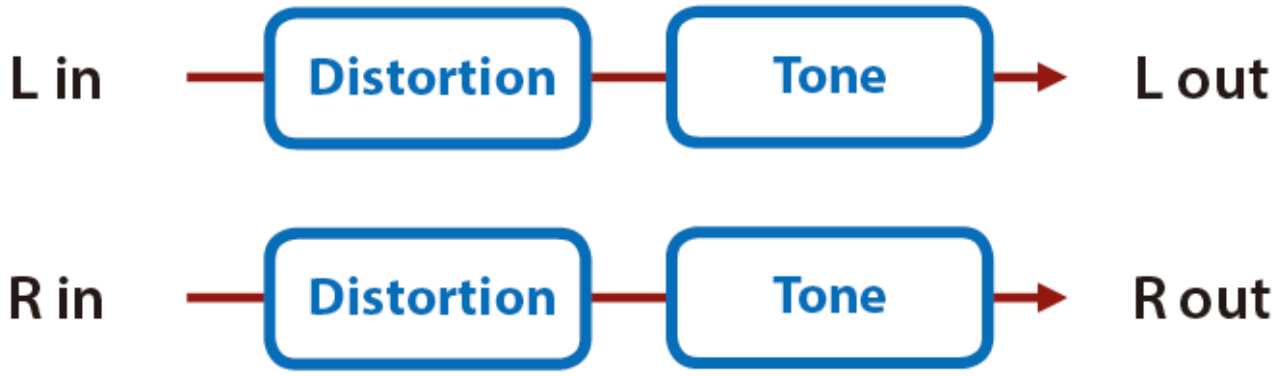


Parameter	Value	Explanation
Drive	0–127	Degree of distortion Also changes the volume.
Tone	0–127	Sound quality of the Overdrive effect
Amp Switch	OFF, ON	Turns the Amp Simulator on/off.
AmpType	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp SMALL: Small amp BUILT-IN: Single-unit type amp 2-STACK: Large double stack amp 3-STACK: Large triple stack amp
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Pan	L64–63R	Stereo location of the output sound
Level	0–127	Output Level

T-Scream

This models a classic analog overdrive.

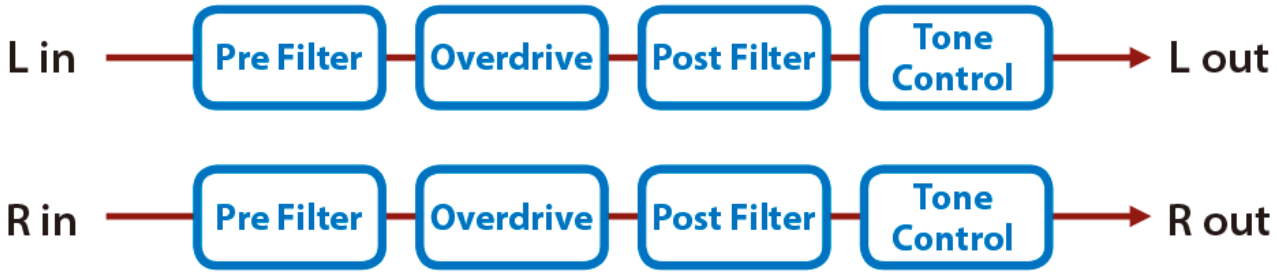
It is distinctive in adding an appropriate amount of overtones without muddying the sound.



Parameter	Value	Explanation
Distortion	0–127	Degree of distortion Also changes the volume.
Tone	0–127	Tonal character of the T-scream
Level	0–127	Output Level

Fuzz

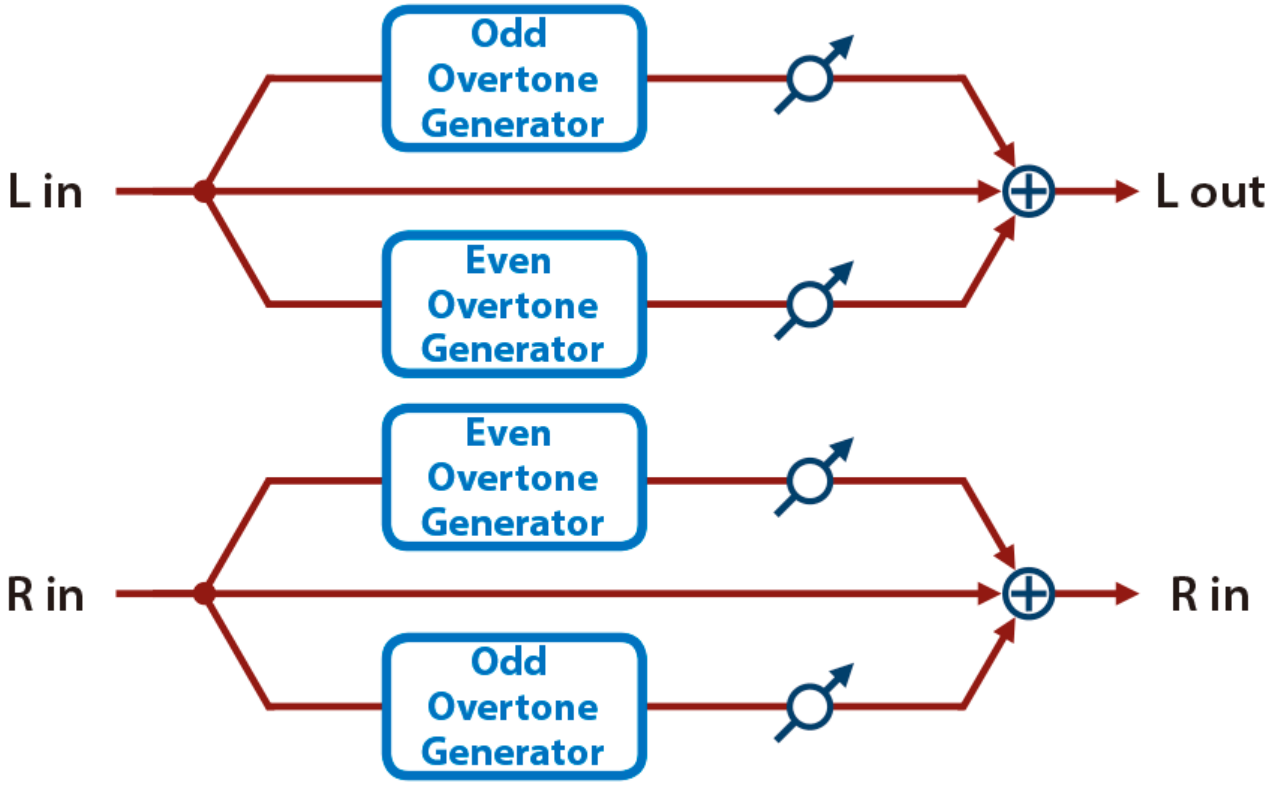
Adds overtones and intensely distorts the sound.



Parameter	Value	Explanation
Drive	0–127	Adjusts the depth of distortion. This also changes the volume.
Tone	0–100	Sound quality of the Fuzz effect
Level	0–127	Output Level

Fattener (Tone Fattener)

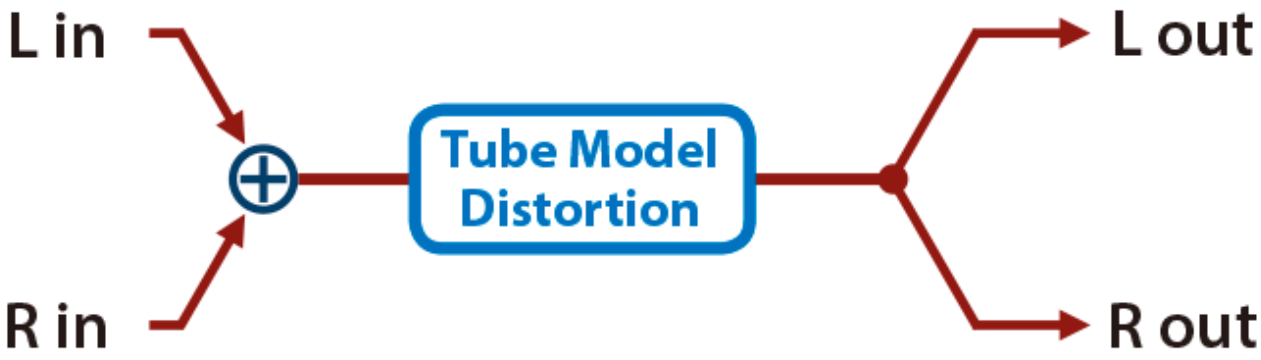
This effect applies distinctive distortion, adding overtones to give more depth to the sound.



Parameter	Value	Explanation
Odd Level	0–400 [%]	Raising the value adds odd-order overtones.
Even Level	0–400 [%]	Raising the value adds even-order overtones.
Level	0–127	Output Level

HMS Distort (HMS Distortion)

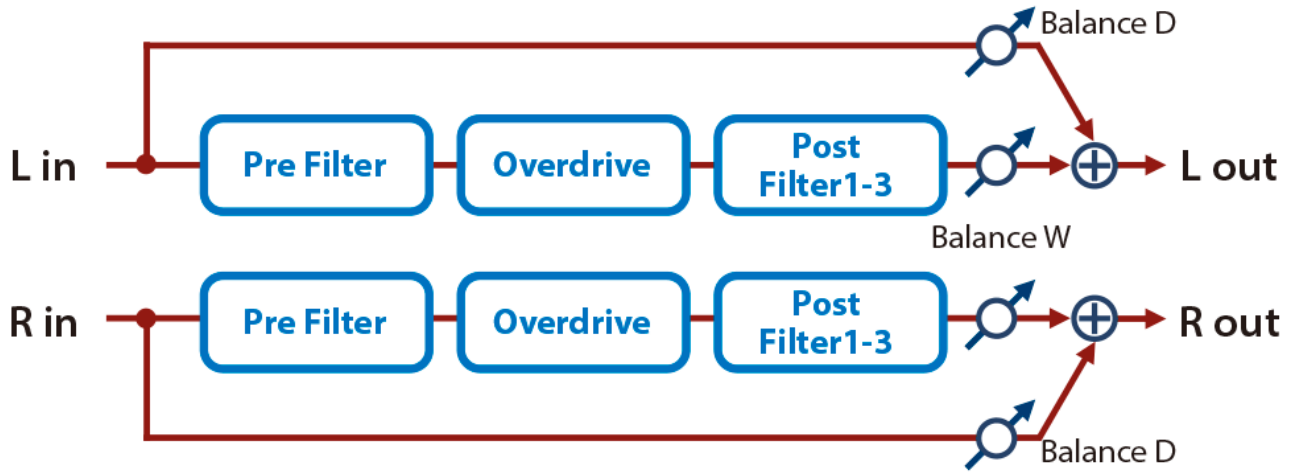
This is a distortion-type effect that models the vacuum tube amp section of a rotary speaker of the past.



Parameter	Value	Explanation
Dist	0–127	Strength of distortion
Level	0–127	Output Level

Saturator

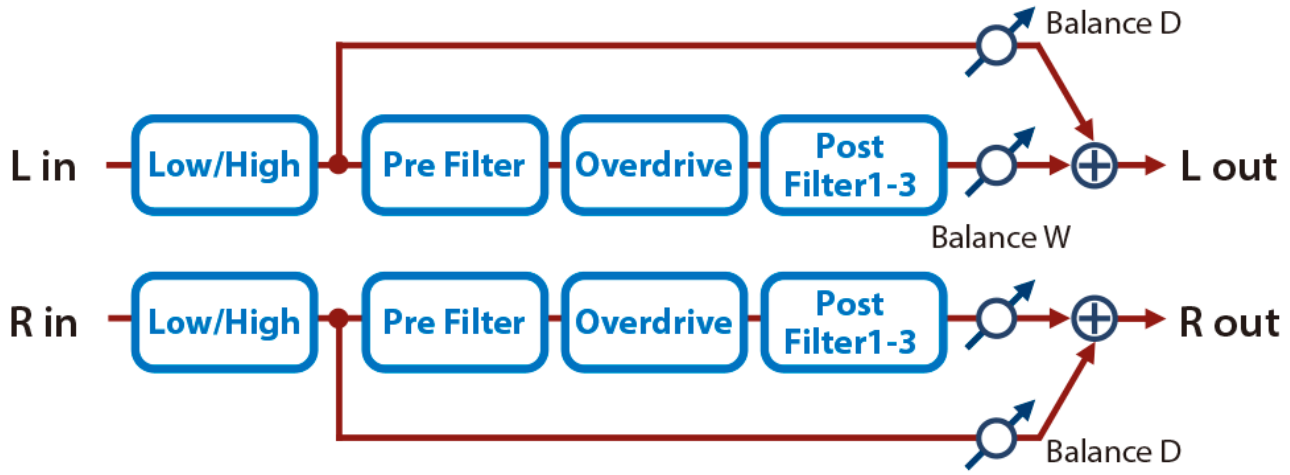
This effect combines overdrive and filter.



Parameter	Value	Explanation
Pre Type	THRU, LPF, HPF, LSV, HSV	Type of filter that precedes the distortion processing THRU: No filter is applied LPF: A filter that passes the sound below the specified frequency HPF: A filter that passes the sound above the specified frequency LSV: A filter that boosts/cuts the sound below the specified frequency HSV: A filter that boosts/cuts the sound above the specified frequency
Pre Freq	20–16000 [Hz]	Frequency at which the pre-distortion filter operates
Pre Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
Drive	0.0–48.0 [dB]	Strength of distortion
Post1 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 1 which follows the distortion processing
Post1Frq	20–16000 [Hz]	Frequency at which post-distortion filter 1 operates
Post1Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
Post2 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 2 which follows the distortion processing
Post2Frq	20–16000 [Hz]	Frequency at which post-distortion filter 2 operates
Post2Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
Post3 Type	THRU, LPF, HPF, BPF, PKG	Type of filter 3 which follows the distortion processing THRU: No filter is applied LPF: A filter that passes the sound below the specified frequency HPF: A filter that passes the sound above the specified frequency BPF: A filter that passes only the specified frequency PKG: A filter that boosts/cuts the specified frequency
Post3Frq	20–16000 [Hz]	Frequency at which post-distortion filter 3 operates
Post3Gain	-24.0–+24.0 [dB]	For the PKG type, the amount of boost/cut
Post3 Q	0.5–16.0	Width of the frequency range affected by the filter
Sense	-60.0–0.0 [dB]	Adjust this value so that the sound is not made louder when distortion is applied.
PostGain	-48.0 +12.0 [dB]	Gain following distortion processing
Balance	D100: 0W–D0: 100W	Volume balance between the dry sound (D) and effect sound (W)
Level	0–127	Output Level

W Saturator (Warm Saturator)

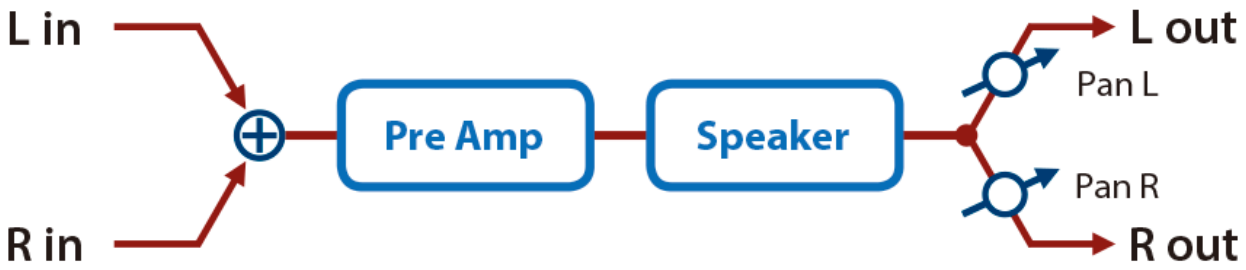
This is a variety of saturator, and is distinctive for its warmer sound.



Parameter	Value	Explanation
LowFreq	20–16000 [Hz]	Input filter (low range) Boosts/cuts the sound below the specified frequency.
LowGain	-24.0–+24.0 [dB]	Input filter (low range) Amount of boost/cut
Hi Slope	THRU, -12dB, -24dB	Amount of attenuation per octave THRU: No attenuation -12 dB: Gentle -24 dB: Steep
Hi Freq	20–16000 [Hz]	Input filter (high range) Boosts/cuts the sound above the specified frequency.
Pre1 Type	THRU, LPF, HPF, LSV, HSV	Types of filter that precedes the distortion processing THRU: No filter is applied LPF: A filter that passes the sound below the specified frequency HPF: A filter that passes the sound above the specified frequency LSV: A filter that boosts/cuts the sound below the specified frequency HSV: A filter that boosts/cuts the sound above the specified frequency
Pre1Freq	20–16000 [Hz]	Frequency at which the pre-distortion filter operates
Pre1Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
Drive	0.0–48.0 [dB]	Strength of distortion
Post1 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 1 which follows the distortion processing
Post1Frq	20–16000 [Hz]	Frequency at which post-distortion filter 1 operates
Post1Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
Post2 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 2 which follows the distortion processing
Post2Frq	20–16000 [Hz]	Frequency at which post-distortion filter 2 operates
Post2Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
Post3 Type	THRU, LPF, HPF, BPF, PKG	Type of filter 3 which follows the distortion processing THRU: No filter is applied LPF: A filter that passes the sound below the specified frequency HPF: A filter that passes the sound above the specified frequency BPF: A filter that passes only the specified frequency PKG: A filter that boosts/cuts the specified frequency
Post3Frq	20–16000 [Hz]	Frequency at which post-distortion filter 3 operates
Post3Gain	-24.0–+24.0 [dB]	For the PKG type, the amount of boost/cut
Post3 Q	0.5–16.0	Width of the frequency range affected by the filter
Sense	-60.0–0.0 [dB]	Adjust this value so that the sound is not made louder when distortion is applied.
PostGain	-48.0–+12.0 [dB]	Gain following distortion processing
Balance	D100: 0W–D0: 100W	Volume balance between the dry sound (D) and effect sound (W)
Level	0–127	Output Level

Gt Amp Sim (Guitar Amp Simulator)

This is an effect that simulates the sound of a guitar amplifier.



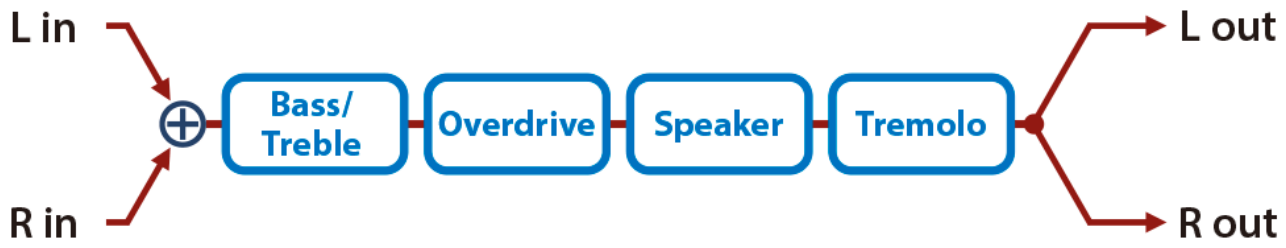
Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
ATyp	JC-120	This models the sound of the Roland JC-120.
	CLEAN TWIN	This models a Fender Twin Reverb.
	MATCH DRIVE	This models the sound input to left input on a Matchless D/C-30. A simulation of the latest tube amp widely used in styles from blues rock and fusion.
	BG LEAD	This models the lead sound of the MESA/ Boogie combo amp. The sound of a tube amp typical of the late '70s to '80s.
	MS1959I	This models the sound input to Input I on a Marshall 1959. This is a trebly sound suited to hard rock.
	MS1959II	This models the sound input to Input II on a Marshall 1959.
	MS1959I+II	The sound of connecting inputs I and II of the guitar amp in parallel, creating a sound with a stronger low end than I.
	SLDN LEAD	This models a Soldano SLO-100. This is the typical sound of the eighties.
	METAL 5150	This models the lead channel of a Peavey EVH 5150.
	METAL LEAD	This is distortion sound that is ideal for performances of heavy riffs.
	OD-1	This models the sound of the BOSS OD-1. This produces sweet, mild distortion.
	OD-2 TURBO	This is the high-gain overdrive sound of the BOSS OD-2.
	DISTORTION	This gives a basic, traditional distortion sound.
	FUZZ	A fuzz sound with rich harmonic content.
Drive	0–127	Volume and amount of distortion of the amp
Master	0–127	Volume of the entire pre-amp
Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Bass	0–127	Tone of the bass/mid/treble frequency range
Middle	0–127	
Treble	0–127	
Presence	0–127	Tone for the ultra-high frequency range
Bright	OFF, ON	Turning this "On" produces a sharper and brighter sound. * This parameter applies to the "JC-120," "CLEAN TWIN," "MATCH DRIVE," and "BG LEAD" Pre Amp Types.
Speaker Sw	OFF, ON	Selects whether the sound will be sent through the speaker simulation (ON) or not (OFF)

		Cabinet	Diameter (in inches) and number of the speaker	Microphone
STyp	SMALL 1	small open-back enclosure	10	dynamic
	SMALL 2	small open-back enclosure	10	dynamic
	MIDDLE	open back enclosure	12 x 1	dynamic
	JC-120	open back enclosure	12 x 2	dynamic
	BUILT-IN 1	open back enclosure	12 x 2	dynamic
	BUILT-IN 2	open back enclosure	12 x 2	condenser
	BUILT-IN 3	open back enclosure	12 x 2	condenser
	BUILT-IN 4	open back enclosure	12 x 2	condenser
	BUILT-IN 5	open back enclosure	12 x 2	condenser
	BG STACK 1	sealed enclosure	12 x 2	condenser
	BG STACK 2	large sealed enclosure	12 x 2	condenser
	MS STACK 1	large sealed enclosure	12 x 4	condenser
	MS STACK 2	large sealed enclosure	12 x 4	condenser

Parameter	Value	Explanation		
	METAL STACK	large double stack	12 x 4	condenser
	2-STACK	large double stack	12 x 4	condenser
	3-STACK	large triple stack	12 x 4	condenser
Mic Setting	1–3	Adjusts the location of the microphone that is recording the sound of the speaker. This can be adjusted in three steps, with the microphone becoming more distant in the order of 1, 2, and 3.		
Mic Level	0–127	Volume of the microphone		
Direct Level	0–127	Volume of the direct sound		
Pan	L64–63R	Stereo location of the output sound		
Level	0–127	Output Level		

EP Amp Sim (RD EP Amp Simulator)

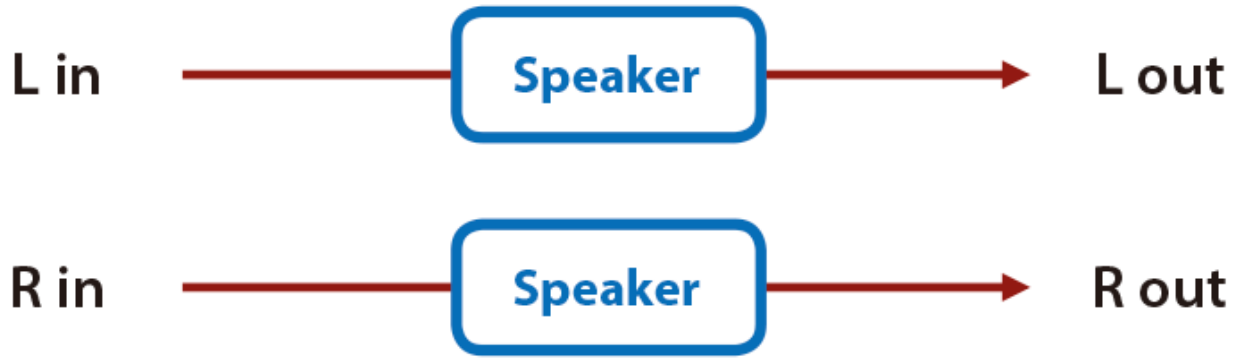
This is an effect that was developed for the RD series SuperNatural E.Piano.



Parameter	Value	Explanation
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Tremolo Sw	OFF, ON	Tremolo on/off
Type	OLDCASE MO	A standard electric piano sound of the early 70s (mono)
	OLDCASE ST	A standard electric piano sound of the early 70s (stereo)
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
	DYNO	A classic modified electric piano
	WURLY	A classic electric piano of the '60s
Speed Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Speed	0.05–10.00 [Hz]	Rate of the tremolo effect
Speed Nt	Note(P.167)	
Depth	0–127	Depth of the tremolo effect
Shape	0–20	Adjusts the waveform of the tremolo.
AMP	OFF, ON	Turns the speaker and distortion on/off
Speaker	LINE, OLD, NEW, WURLY, TWIN	Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation.
Drive	0–127	Degree of distortion Also changes the volume.
Level	0–127	Output Level

Speaker Sim (Speaker Simulator)

Simulates the speaker type and mic settings used to record the speaker sound.

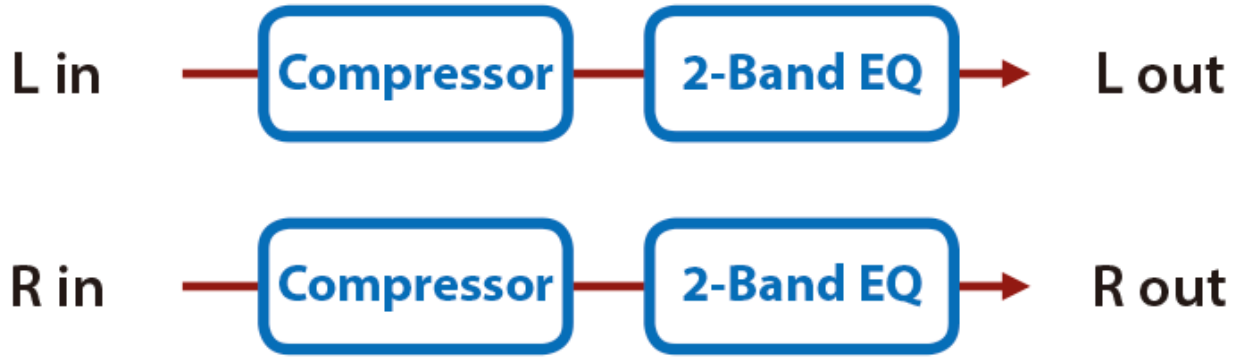


Parameter	Value	Explanation		
		Cabinet	**Speaker**	**Microphone**
Type	SMALL 1	small open-back enclosure	10	dynamic
	SMALL 2	small open-back enclosure	10	dynamic
	MIDDLE	open back enclosure	12 x 1	dynamic
	JC-120	open back enclosure	12 x 2	dynamic
	BUILT-IN 1	open back enclosure	12 x 2	dynamic
	BUILT-IN 2	open back enclosure	12 x 2	condenser
	BUILT-IN 3	open back enclosure	12 x 2	condenser
	BUILT-IN 4	open back enclosure	12 x 2	condenser
	BUILT-IN 5	open back enclosure	12 x 2	condenser
	BG STACK 1	sealed enclosure	12 x 2	condenser
	BG STACK 2	large sealed enclosure	12 x 2	condenser
	MS STACK 1	large sealed enclosure	12 x 4	condenser
	MS STACK 2	large sealed enclosure	12 x 4	condenser
	METAL STACK	large double stack	12 x 4	condenser
	2-STACK	large double stack	12 x 4	condenser
	3-STACK	large triple stack	12 x 4	condenser
Mic Setting	1–3	Adjusts the location of the microphone that is recording the sound of the speaker. This can be adjusted in three steps, with the microphone becoming more distant in the order of 1, 2, and 3.		
Mic Level	0–127	Volume of the microphone		
Direct Lv	0–127	Volume of the direct sound		
Level	0–127	Output Level		

Comp / Limiter

Compressor

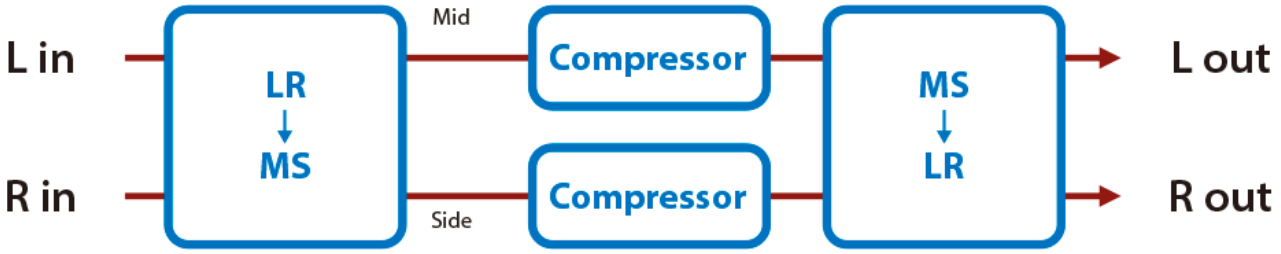
Flattens out high levels and boosts low levels, smoothing out fluctuations in volume.



Parameter	Value	Explanation
Attack	0–124	Sets the speed at which compression starts
Release	0–124	Adjusts the time after the signal volume falls below the Threshold Level until compression is no longer applied.
Threshold	-60–0 [dB]	Adjusts the volume at which compression begins
Knee	0–30 [dB]	This is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than Threshold. Higher values produce a smoother transition.
Ratio	1: 1, 1.5: 1, 2: 1, 4: 1, 16: 1, INF: 1	Compression ratio
Post Gain	0–+18 [dB]	Level of the output sound
Level	0–127	Output Level

M/S Comp (Mid-Side Compressor)

This effect allows the left/right signals that have similar phase to be adjusted to a different sense of volume than the left/right signals that have different phase.

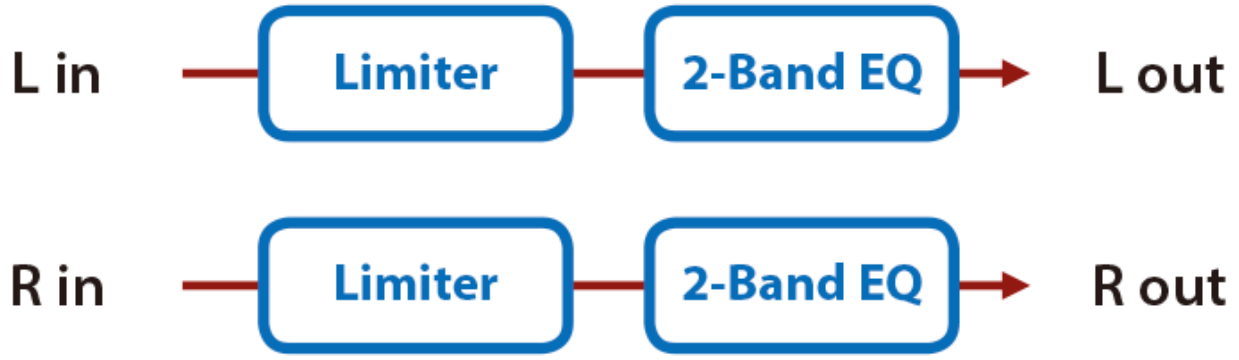


Parameter	Value	Explanation
M Comp Sw	OFF, ON	Switches whether to adjust the sense of volume for left/right input signals whose phase is similar (in phase).
M Attack	0–124	Sets the speed at which compression starts
M Release	0–124	Adjusts the time after the signal volume falls below the M Thres Level until compression is no longer applied.
M Thres	-60–0 [dB]	Adjusts the volume at which compression begins
M Knee	0–30 [dB]	This is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than M Thres. Higher values produce a smoother transition.
M Ratio	1: 1, 1.5: 1, 2: 1, 4: 1, 16: 1, INF: 1	Compression ratio
M Gain	0–+18 [dB]	Level of the output sound
S Comp Sw	OFF, ON	Switches whether to adjust the sense of volume for left/right input signals whose phase is distant (opposite phase).
S Attack	0–124	Sets the speed at which compression starts

Parameter	Value	Explanation
S Release	0–124	Adjusts the time after the signal volume falls below the S Thres Level until compression is no longer applied.
S Thres	-60–0 [dB]	Adjusts the volume at which compression begins
S Knee	0–30 [dB]	This is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than S Thres. Higher values produce a smoother transition.
S Ratio	1: 1, 1.5: 1, 2: 1, 4: 1, 16: 1, INF: 1	Compression ratio
S Gain	0–+18 [dB]	Level of the output sound
Level	0–127	Output Level

Limiter

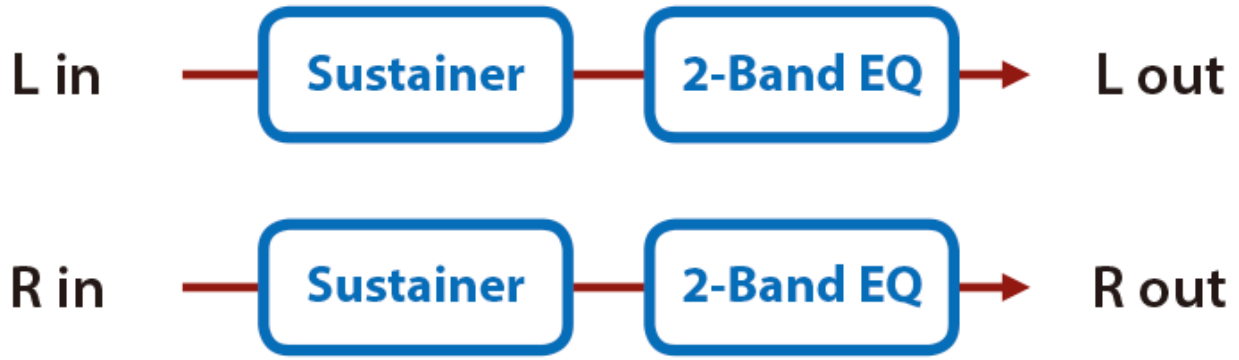
Compresses signals that exceed a specified volume level, preventing distortion from occurring.



Parameter	Value	Explanation
Release	0–127	Adjusts the time after the signal volume falls below the Threshold Level until compression is no longer applied.
Threshold	0–127	Adjusts the volume at which compression begins
Ratio	1.5: 1, 2: 1, 4: 1, 100: 1	Compression ratio
Post Gain	0–+18 [dB]	Level of the output sound
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Sustainer

By compressing loud input and boosting low input, this effect keeps the volume consistent to produce a sustain effect without distortion.

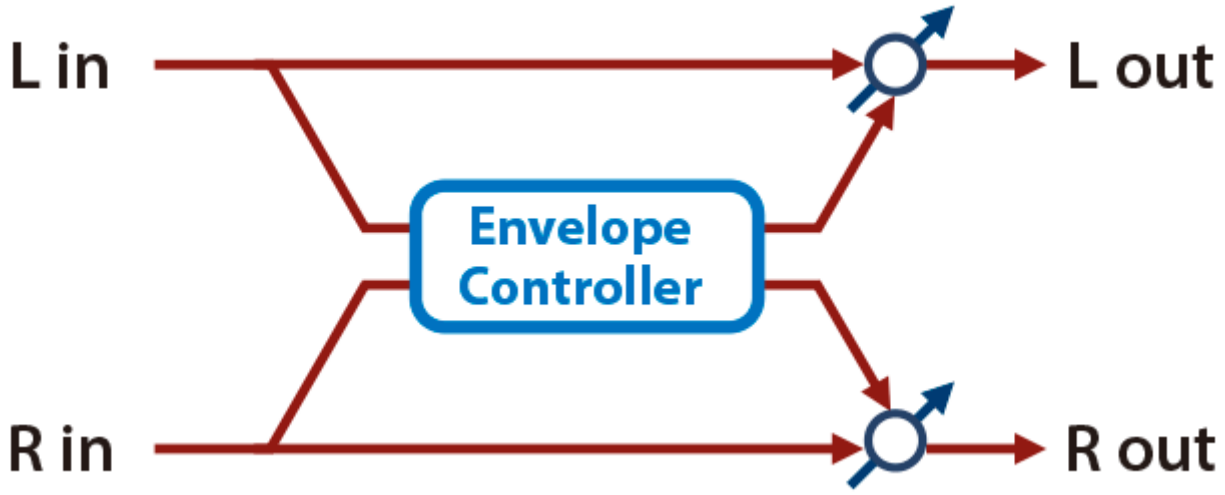


Parameter	Value	Explanation
Sustain	0–127	Adjusts the range in which a low input signal is boosted to a consistent volume. Higher values produce longer sustain.
Attack	0–127	Time until the volume is compressed
Release	0–127	Time until compression is removed

Parameter	Value	Explanation
Post Gain	-15–+15 [dB]	Level of the output sound
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Transient

This effect lets you control the way in which the sound attacks and decays.

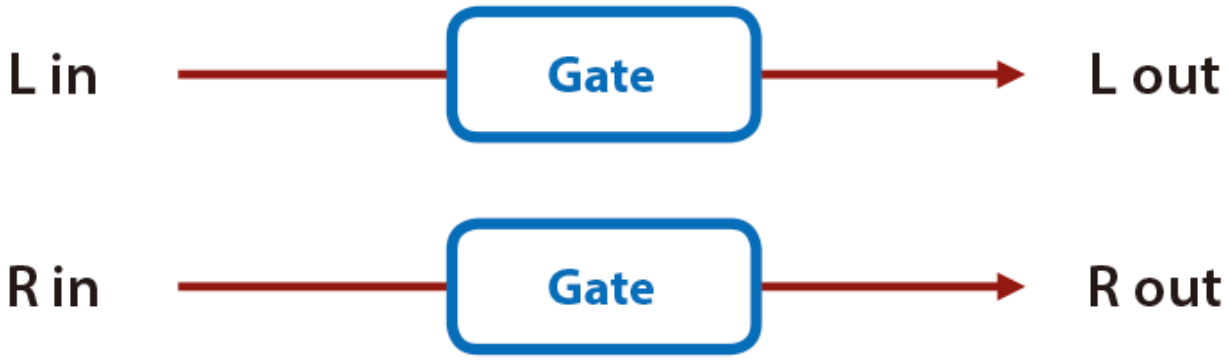


Parameter	Value	Explanation
Attack	-50–+50	Character of the attack. Higher values make the attack more aggressive; lower values make the attack milder.
Release	-50–+50	Character of the decay. Higher values make the sound linger; lower values make the sound cutoff quickly.
Out Gain	-24–+12 [dB]	Output gain
Sens	LOW, MID, HIGH	Quickness with which the attack is detected
Level	0–127	Output Level

Gate

Cuts the reverb's delay according to the volume of the sound sent into the effect.

Use this when you want to create an artificial-sounding decrease in the reverb's decay.



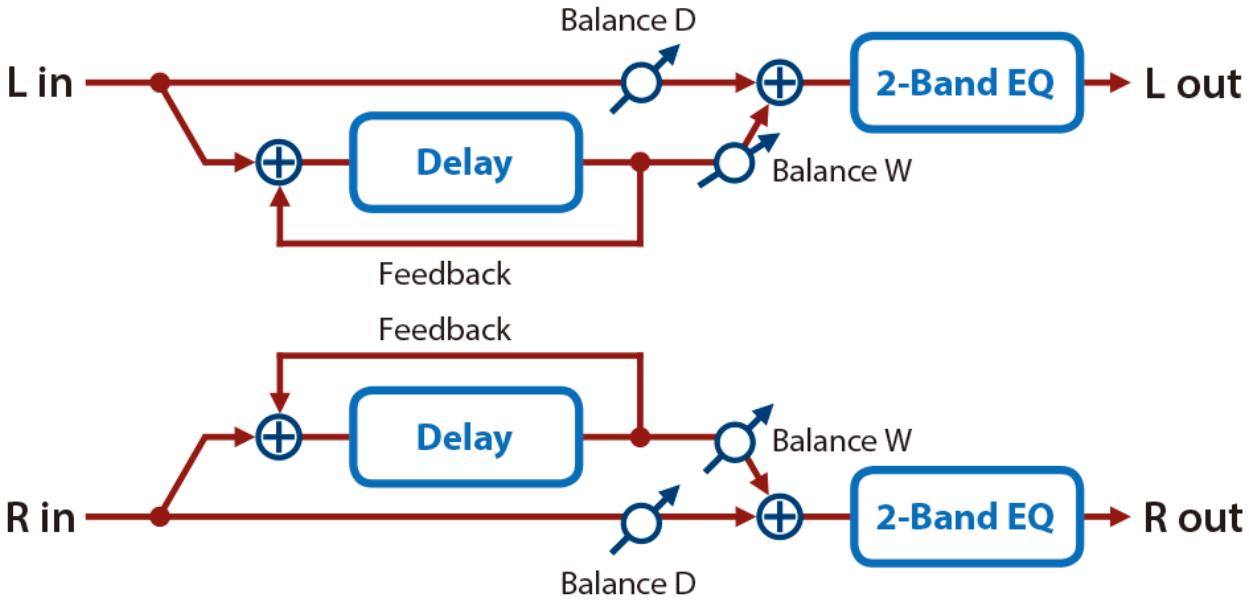
Parameter	Value	Explanation
Threshold	0–127	Volume level at which the gate begins to close
Mode	GATE, DUCK	Type of gate GATE: The gate will close when the volume of the original sound decreases, cutting the original sound. DUCK (Duking): The gate will close when the volume of the original sound increases, cutting the original sound.
Attack	0–127	Adjusts the time it takes for the gate to fully open after being triggered.
Hold	0–127	Adjusts the time it takes for the gate to start closing after the source sound falls beneath the Threshold.
Release	0–127	Adjusts the time it takes the gate to fully close after the hold time.
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output Level

Delay Type

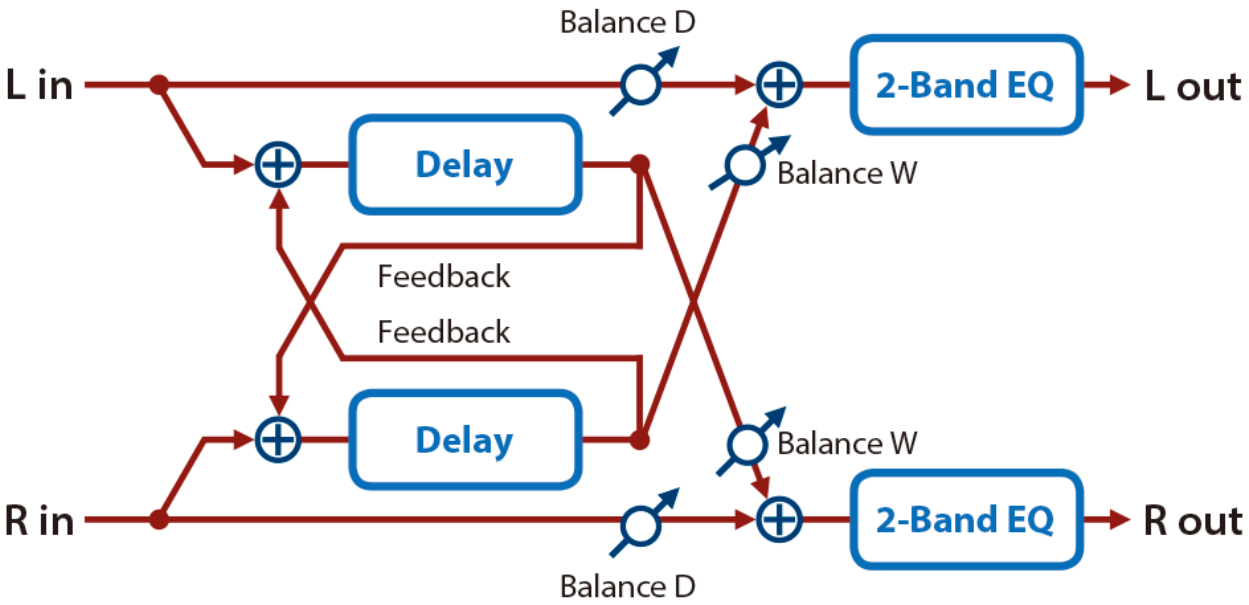
Delay

This is a stereo delay.

When Feedback Mode is NORMAL:



When Feedback Mode is CROSS:



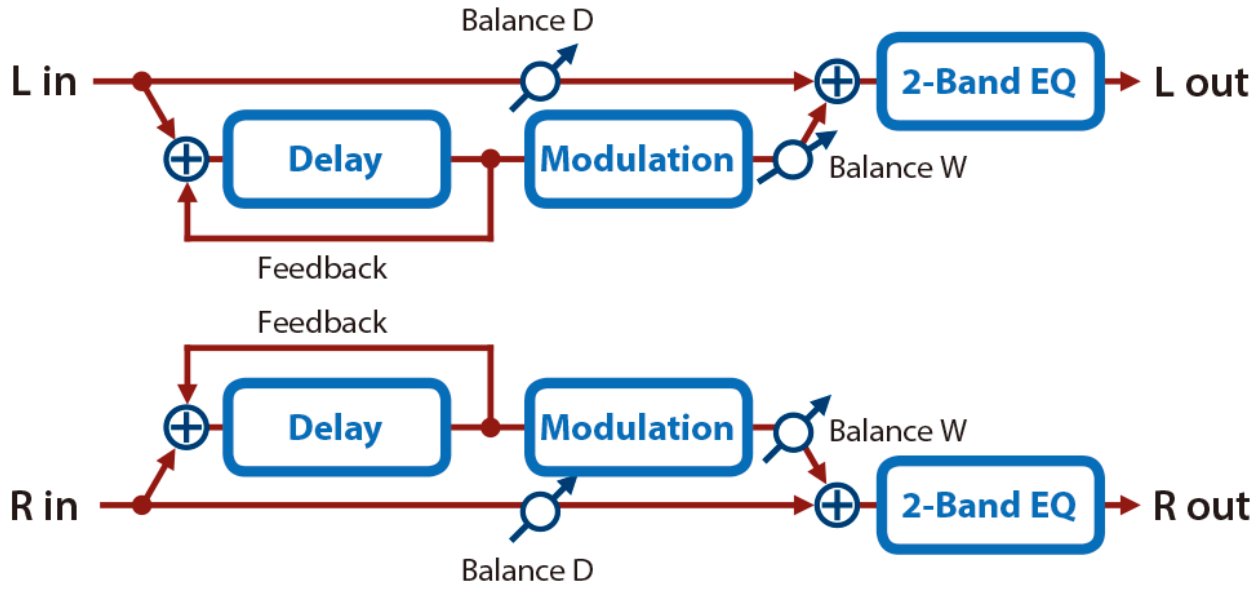
Parameter	Value	Explanation
Dly L Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
DL. Time	1–1300	Adjusts the time until the left delay sound is heard.
DLTime Nt	Note(P.167)	
Dly R Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
DR. Time	1–1300	Adjusts the time until the right delay sound is heard.

Parameter	Value	Explanation
DRTime Nt	Note(P.167)	
Phase L	NORMAL, INVERSE	Phase of left and right delay sound NORMAL: Non-inverted INVERT: Inverted
Phase R	NORMAL, INVERSE	
Fbk Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect. (See the figures above.)
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

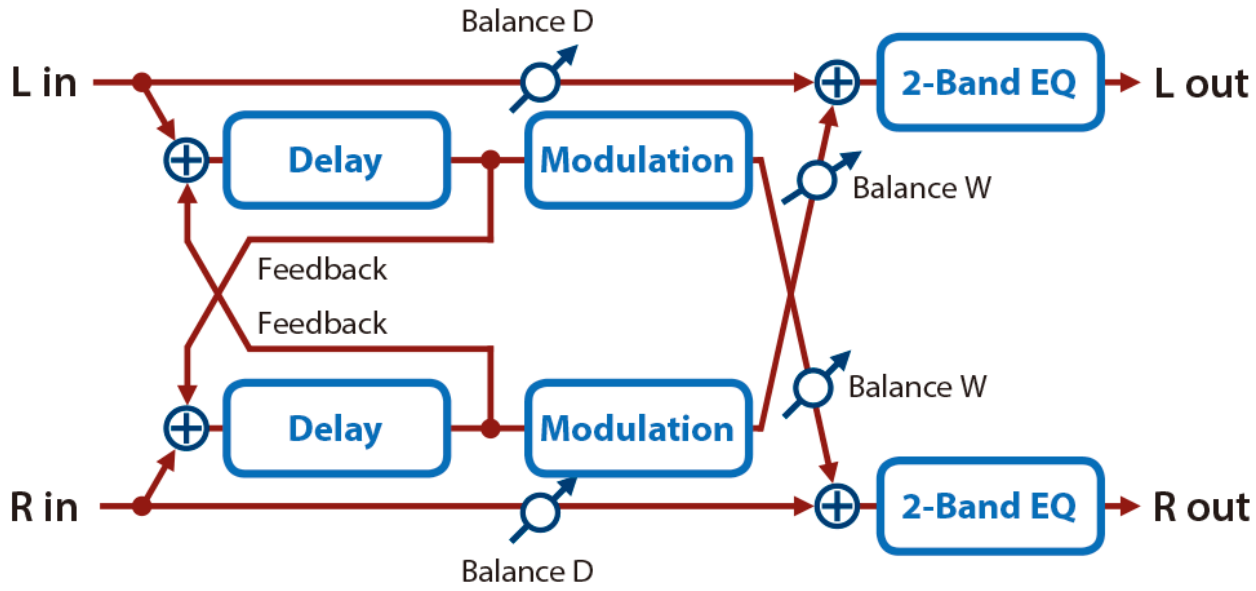
Mod Delay (Modulation Delay)

Adds modulation to the delayed sound.

When Feedback Mode is NORMAL:



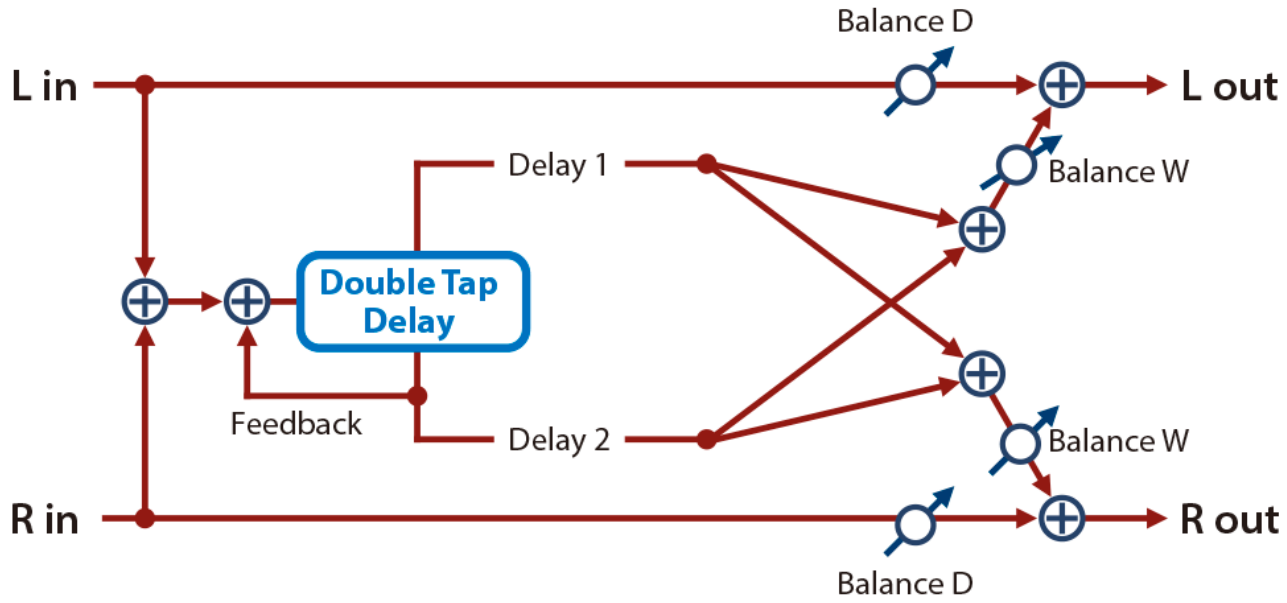
When Feedback Mode is CROSS:



Parameter	Value	Explanation
Dly L Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
DL. Time	1–1300	Adjusts the time until the left delay sound is heard.
DLTime Nt	Note(P.167)	
Dly R Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
DR. Time	1–1300	Adjusts the time until the right delay sound is heard.
DRTime Nt	Note(P.167)	
Fbk Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect. (See the figures above.)
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Frequency of modulation
Rate Note	Note(P.167)	
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range

Parameter	Value	Explanation
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

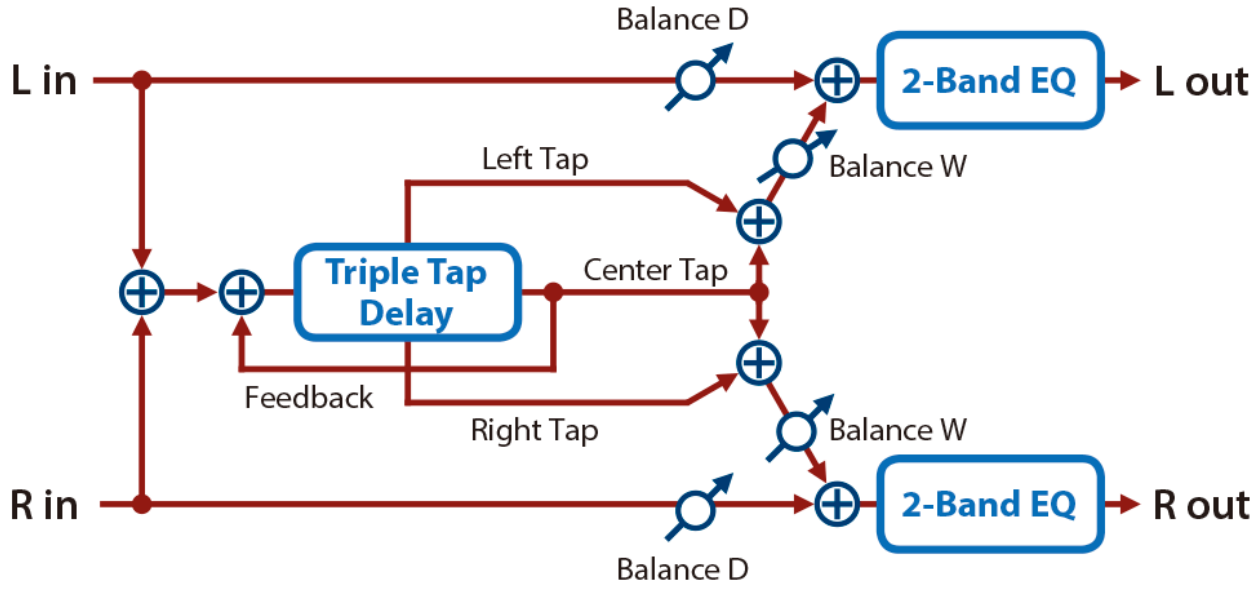
2Tap PanDly (2 Tap Pan Delay)



Parameter	Value	Explanation
Delay Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
D. Time (ms)	1–2600	Adjusts the time until the second delay sound is heard.
D.Time (Nt)	Note(P.167)	
Delay Fbk	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Dly HF	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Dly1 Pan	L64–63R	Adjusts the stereo location of delay 1.
Dly2 Pan	L64–63R	Adjusts the stereo location of delay 2.
Dly1 Lv	0–127	Adjusts the volume of delay 1.
Dly2 Lv	0–127	Adjusts the volume of delay 2.
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

3Tap PanDly (3 Tap Pan Delay)

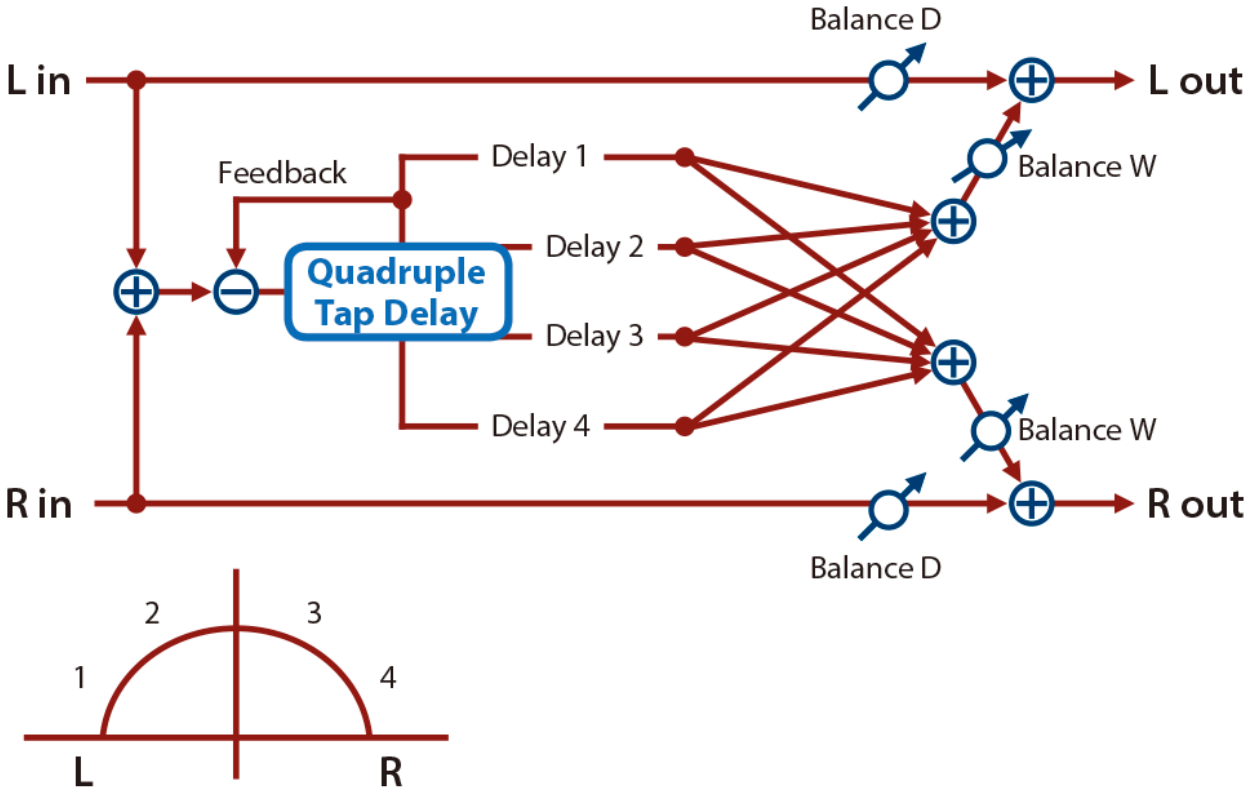
Produces three delay sounds; center, left and right.



Parameter	Value	Explanation
Dly L Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
DL. Time	1–2600	Adjusts the time until the left delay sound is heard.
DLTime Nt	Note(P.167)	
Dly R Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
DR.Time	1–2600	Adjusts the time until the right delay sound is heard.
DRTime Nt	Note(P.167)	
Dly C Sync	OFF、ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
DC. Time	1–2600	Adjusts the time until the center delay sound is heard.
DCTime Nt	Note(P.167)	
C Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Left Lv	0–127	Volume of each delay sound
Right Lv	0–127	
Center Lv	0–127	
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100：0W～D0：100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

4Tap PanDly (4 Tap Pan Delay)

This effect has four delays.



Parameter	Value	Explanation
Dly1 Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D1.Time	1–2600	Adjusts the time from the original sound until delay 1 sounds is heard.
D1Time Nt	Note(P.167)	
Dly2 Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D2.Time	1–2600	Adjusts the time from the original sound until delay 2 sounds is heard.
D2Time Nt	Note(P.167)	
Dly3 Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D3.Time	1–2600	Adjusts the time from the original sound until delay 3 sounds is heard.
D3Time Nt	Note(P.167)	
Dly4 Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D4.Time	1–2600	Adjusts the time from the original sound until delay 4 sounds is heard.
D4Time Nt	Note(P.167)	
Dly1 Fbk	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Dly1 Lv	0–127	Volume of each delay
Dly2 Lv	0–127	

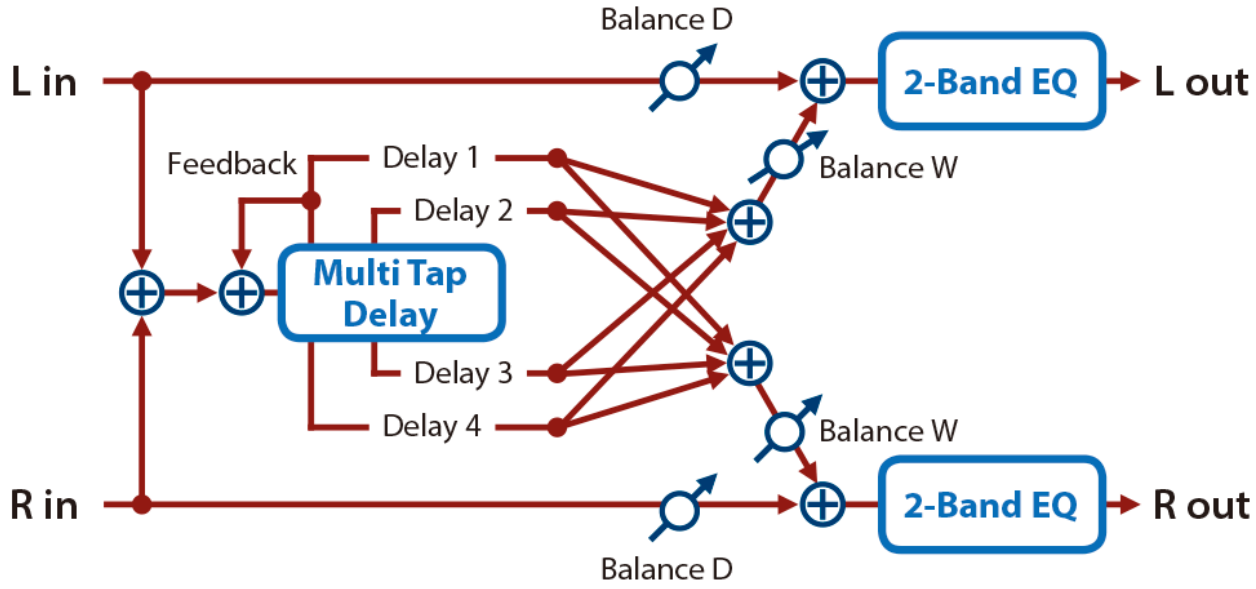
Parameter	Value	Explanation
Dly3 Lv	0–127	
Dly4 Lv	0–127	
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

MultiTapDly (Multi Tap Delay)

This effect has four delays.

Each of the Delay Time parameters can be set to a note length based on the selected tempo.

You can also set the panning and level of each delay sound.



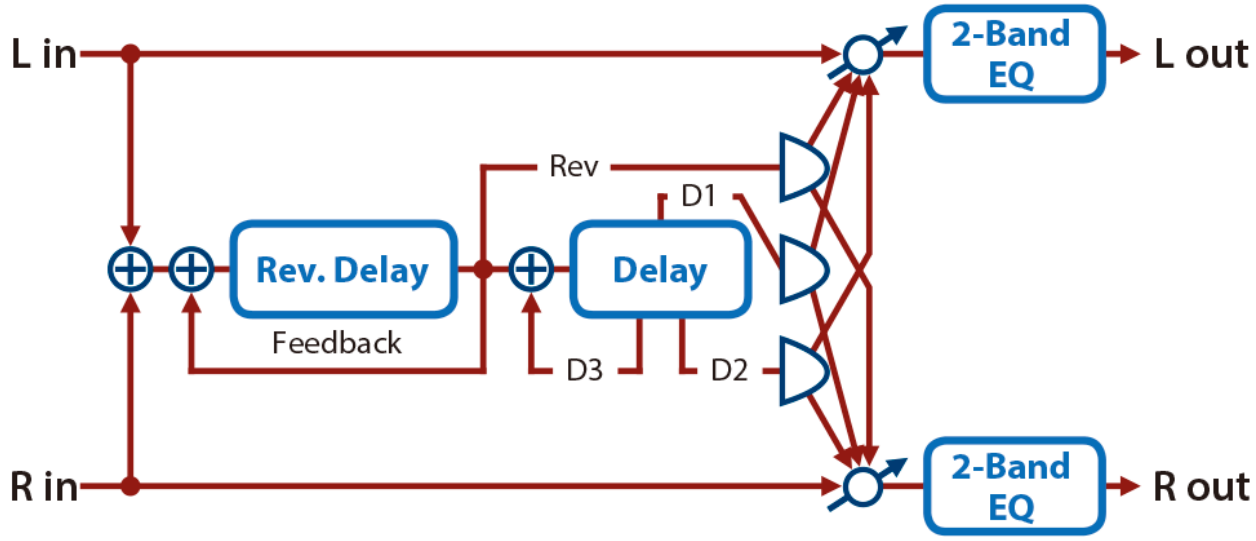
Parameter	Value	Explanation
Dly1 Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D1.Time	1–2600	Adjusts the time from the original sound until delay 1 sounds is heard.
D1Time Nt	Note(P.167)	
Dly2 Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D2.Time	1–2600	Adjusts the time from the original sound until delay 2 sounds is heard.
D2Time Nt	Note(P.167)	
Dly3 Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D3.Time	1–2600	Adjusts the time from the original sound until delay 3 sounds is heard.
D3Time Nt	Note(P.167)	
Dly4 Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D4.Time	1–2600	Adjusts the time from the original sound until delay 4 sounds is heard.
D4Time Nt	Note(P.167)	

Parameter	Value	Explanation
Dly1 Fbk	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Dly1 Pan	L64–63R	Stereo location of Delays 1–4
Dly2 Pan	L64–63R	
Dly3 Pan	L64–63R	
Dly4 Pan	L64–63R	
Dly1 Lv	0–127	Volume of each delay
Dly2 Lv	0–127	
Dly3 Lv	0–127	
Dly4 Lv	0–127	
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output Level

Reverse Dly (Reverse Delay)

This is a reverse delay that adds a reversed and delayed sound to the input sound.

A tap delay is connected immediately after the reverse delay.

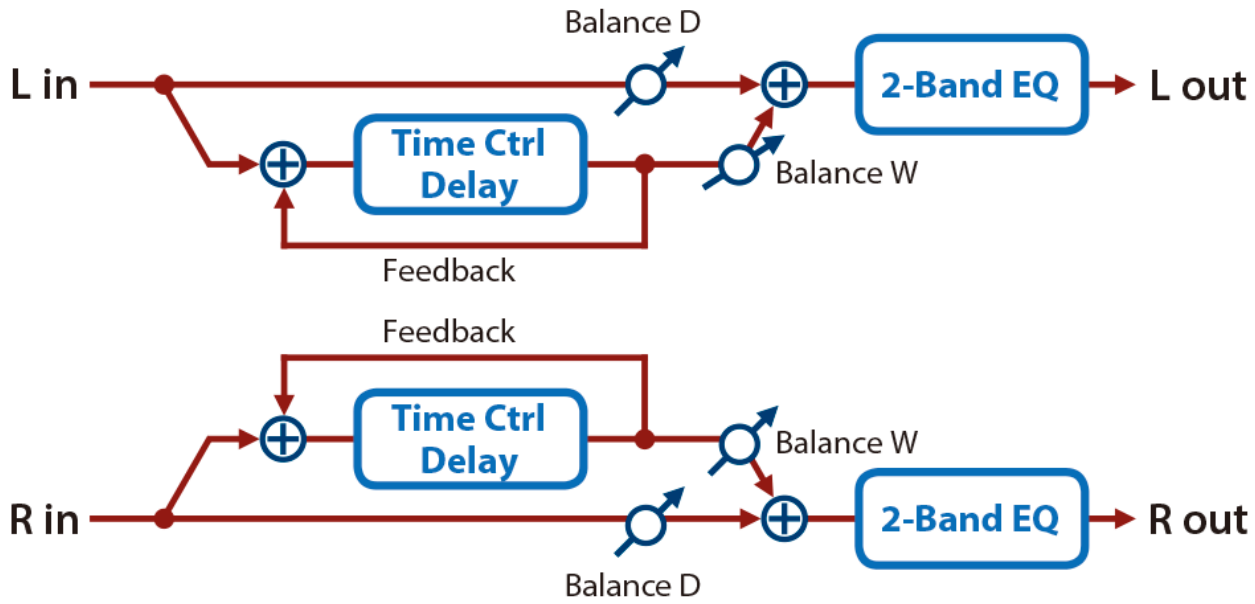


Parameter	Value	Explanation
Threshold	0–127	Volume at which the reverse delay will begin to be applied
RDly Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
RD. Time	1–1300	Delay time from when sound is input into the reverse delay until the delay sound is heard
RD.Time Nt	Note(P.167)	
RDly Fbk	-98–+98 [%]	Proportion of the delay sound that is to be returned to the input of the reverse delay negative (-) values invert the phase)
RDly HF	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Frequency at which the high-frequency content of the reverse-delayed sound will be cut (BYPASS: no cut)
RDly Pan	L64–63R	Panning of the reverse delay sound
RDly Level	0–127	Volume of the reverse delay sound

Parameter	Value	Explanation
Dly1 Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D1. Time	1–1300	Delay time from when sound is input into the tap delay until the delay sound is heard
D1Time Nt	Note(P.167)	
Dly2 Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D2. Time	1–1300	Delay time from when sound is input into the tap delay until the delay sound is heard
D2Time Nt	Note(P.167)	
Dly3 Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D3. Time	1–1300	Delay time from when sound is input into the tap delay until the delay sound is heard
D3Time Nt	Note(P.167)	
Dly3 Fbk	-98–+98 [%]	Proportion of the delay sound that is to be returned to the input of the tap delay (negative (-) values invert the phase)
Dly HF	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Frequency at which the hi-frequency content of the tap delay sound will be cut (BYPASS: no cut)
Dly1 Pan	L64–63R	Panning of the tap delay sounds
Dly2 Pan	L64–63R	
Dly1 Lv	0–127	Volume of the tap delay sounds
Dly2 Lv	0–127	
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

TimeCtrlDly (Time Control Delay)

A stereo delay in which the delay time can be varied smoothly.



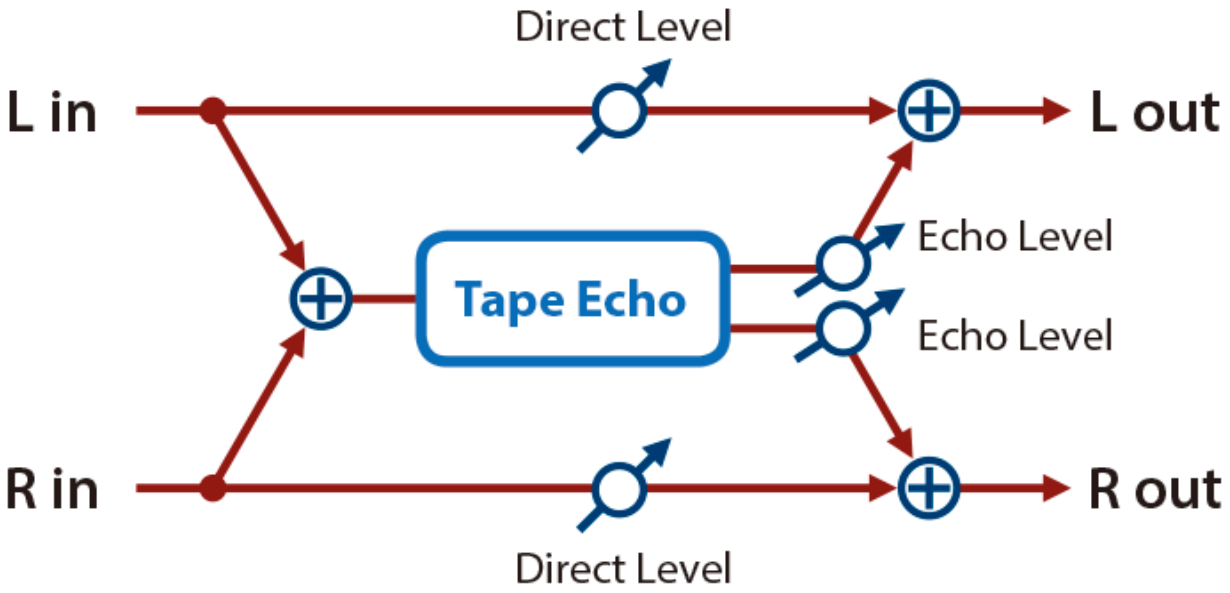
Parameter	Value	Explanation
Delay Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)

Parameter	Value	Explanation
D.Time	1–1300	Delay time from when the original sound is heard to when the delay sound is heard
D.Time Nt	Note(P.167)	
Acceleration	0–15	Adjusts the speed which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change.
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

Tape Echo

A virtual tape echo that produces a realistic tape delay sound.

This simulates the tape echo section of a Roland RE-201 Space Echo.

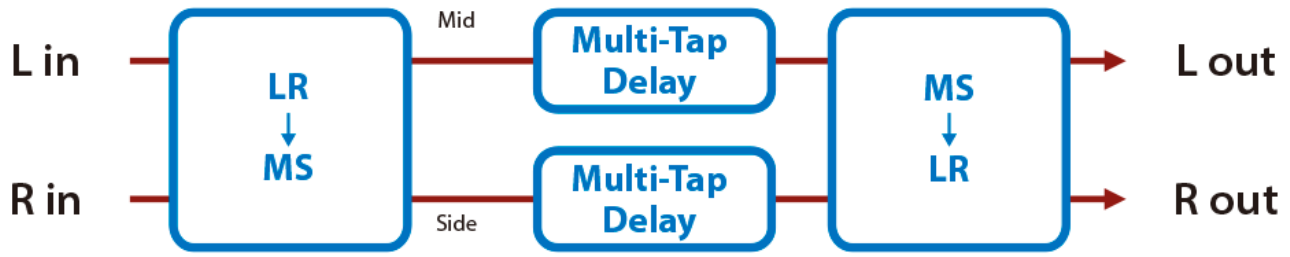


Parameter	Value	Explanation
Mode	S, M, L, S+M, S+L, M+L, S+M+L	Combination of playback heads to use Select from three different heads with different delay times. S: short M: middle L: long
Repeat Rate	0–127	Tape speed Increasing this value will shorten the spacing of the delayed sounds.
Intensity	0–127	Amount of delay repeats
Bass	-15–+15 [dB]	Boost/cut for the lower range of the echo sound
Treble	-15–+15 [dB]	Boost/cut for the upper range of the echo sound
Head S Pan	L64–63R	Independent panning for the short, middle, and long playback heads
Head M Pan	L64–63R	
Head L Pan	L64–63R	

Parameter	Value	Explanation
Distortion	0–5	Amount of tape-dependent distortion to be added This simulates the slight tonal changes that can be detected by signal-analysis equipment. Increasing this value will increase the distortion.
Wf Rate	0–127	Speed of wow/flutter (complex variation in pitch caused by tape wear and rotational irregularity)
Wf Depth	0–127	Depth of wow/flutter
Echo Level	0–127	Volume of the echo sound
Direct Lv	0–127	Volume of the original sound
Level	0–127	Output Level

M/S Delay (Mid-Side Delay)

This effect applies different amounts of delay to left/right signals of similar phase and differing phase.



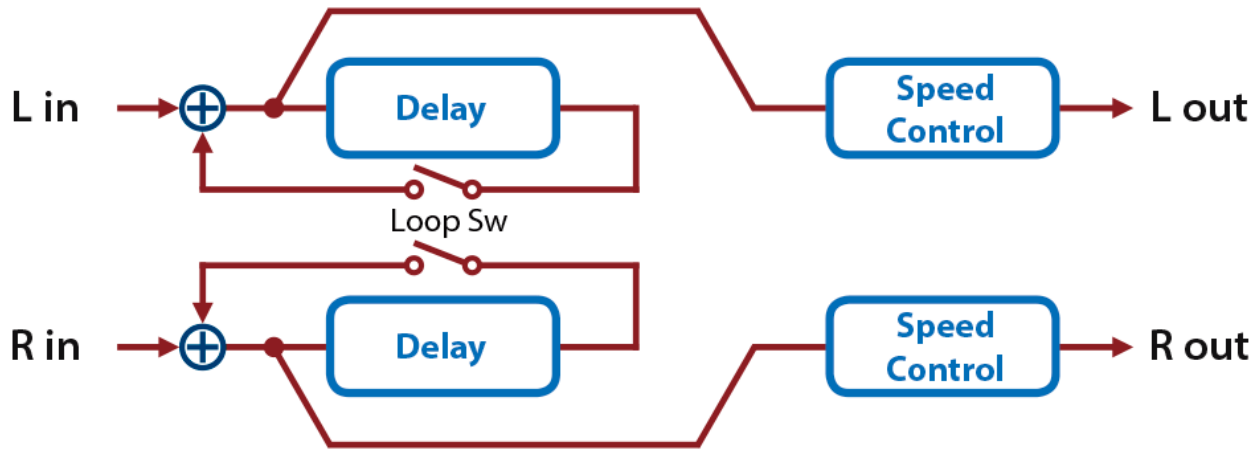
Parameter	Value	Explanation
MD Level	0–127	Delay volume of left/right input signals whose phase is similar (in phase)
MD Mode	2TAP, 3TAP, 4TAP	Delay divisions for the input signals whose left/right phase is similar (identical phase)
MD Tm Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
MD. Time	1–1300	Adjusts the time from the original sound until the delay sound is heard.
MDTime Nt	Note(P.167)	
MD Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
MD HFDamp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
MD1 Pan	L64–63R	Panning of the first delay sound
MD2 Pan	L64–63R	Panning of the second delay sound
MD3 Pan	L64–63R	Panning of the third delay sound
MD4 Pan	L64–63R	Panning of the fourth delay sound
SD Level	0–127	Delay volume of left/right input signals whose phase is distant (opposite phase)
SD Mode	2TAP, 3TAP, 4TAP	Delay divisions for the input signals whose left/right phase is distant (reverse phase)
SD Tm Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
SD Time	1–1300	Adjusts the time from the original sound until the delay sound is heard.
SDTime Nt	Note(P.167)	
SD Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
SD HFDamp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
SD1 Pan	L64–63R	Panning of the first delay sound
SD2 Pan	L64–63R	Panning of the second delay sound
SD3 Pan	L64–63R	Panning of the third delay sound
SD4 Pan	L64–63R	Panning of the fourth delay sound
Level	0–127	Output Level

Looper

DJFX Looper

Loops a short portion of the input sound.

You can vary the playback direction and playback speed of the input sound to add turntable-type effects.

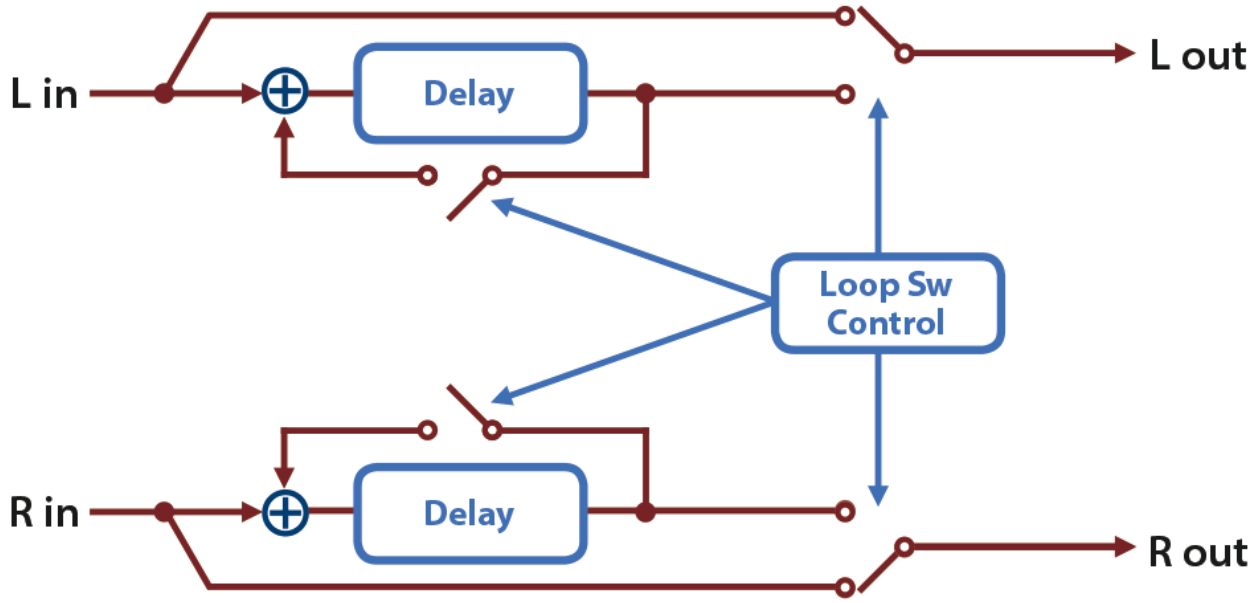


Parameter	Value	Explanation
Length	230–23 (not straight)	Specifies the length of the loop.
Speed	-1.00–+1.00	Specifies the playback direction and playback speed. - direction: Reverse playback + direction: Normal playback 0: Stop playback As the value moves away from 0, the playback speed becomes faster.
Loop Sw	OFF, ON	If you turn this on while the sound is heard, the sound at that point will be looped. Turn this off to cancel the loop. * If the effect is recalled with this ON, this parameter must be turned OFF and then turned ON again in order to make the loop operate.
Level	0–127	Output Level

BPM Looper

Loops a short portion of the input sound.

This can automatically turn the loop on/off in synchronization with the rhythm.

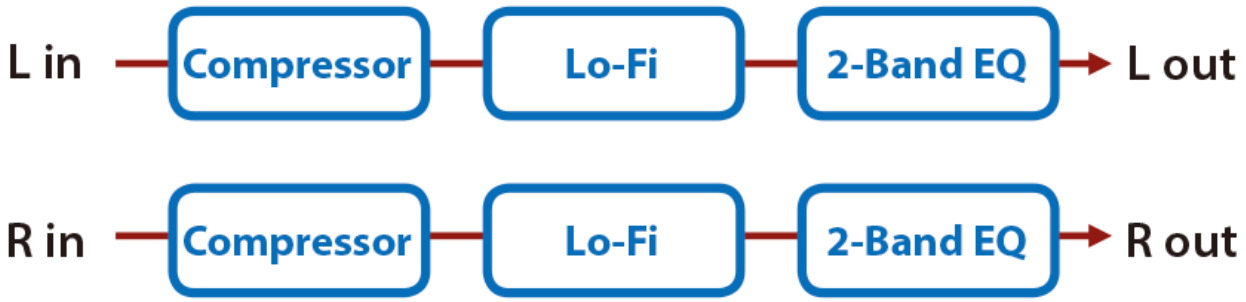


Parameter	Value	Explanation
Length	230–23 (not straight)	Specifies the length of the loop.
Rate Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
Rate	0.05–10.00 [Hz]	Cycle at which the loop automatically turns on/off
Rate Note	Note(P.167)	
Timing	1–8	Specifies the timing within the cycle at which the loop automatically starts (which step of the eight timing divisions at which the sound is heard).
Lenth	1–8	Specifies the length at which the loop automatically ends within the cycle (the number of times that the 1/8-length of sound is heard).
Loop Mode	OFF, AUTO, ON	If this is AUTO, the loop automatically turns on/off in synchronization with the rhythm. * If the effect is recalled with this ON, this parameter must first be set to something other than ON in order to make the loop operate.
Level	0–127	Output Level

Lo-fi

LOFI Comp (Lo-Fi Compressor)

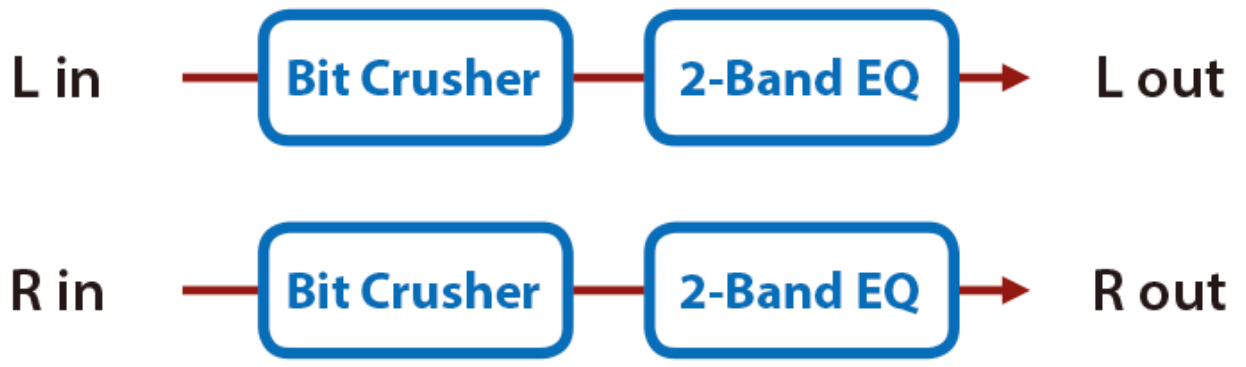
Degrades the sound quality.



Parameter	Value	Explanation
Pre Filter	1–6	Selects the type of filter applied to the sound before it passes through the Lo-Fi effect. 1: Compressor off 2–6: Compressor on
LoFi Type	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter	OFF, LPF, HPF	Selects the type of filter applied to the sound after it passes through the Lo-Fi effect. OFF: No filter is used LPF: Cuts the frequency range above the Cutoff Freq HPF: Cuts the frequency range below the Cutoff Freq
Cutoff	200–8000 [Hz]	Basic frequency of the Post Filter
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output Level

Bit Crusher

Produces an extreme lo-fi effect.

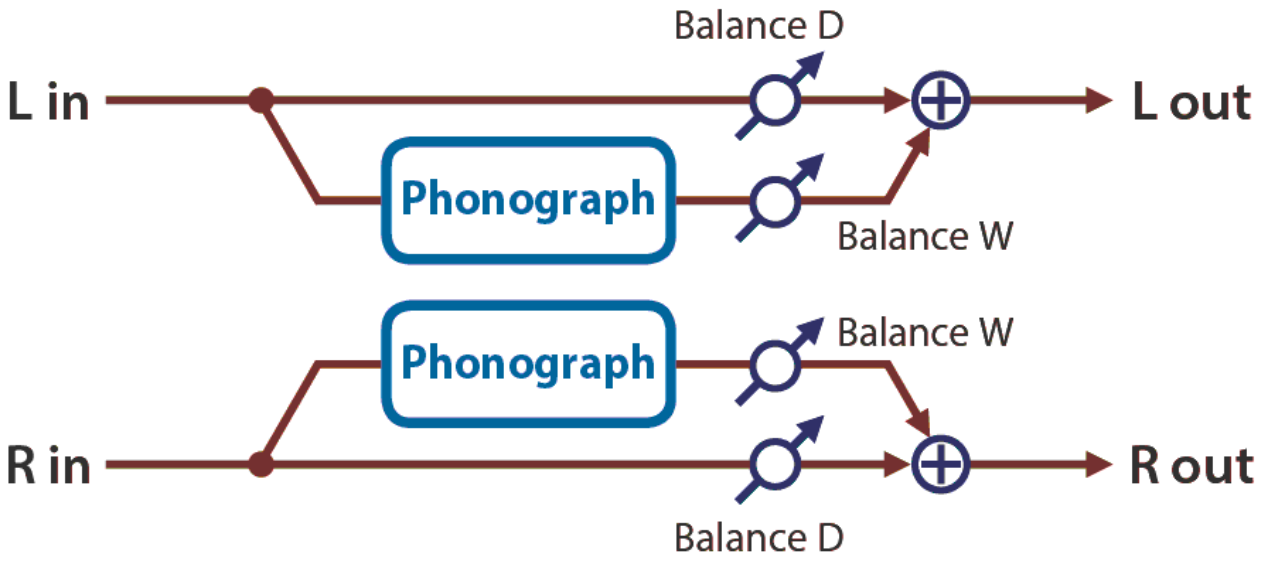


Parameter	Value	Explanation
Sample Rate	0–127	Adjusts the sample rate.
Bit Down	0–20	Adjusts the bit depth.
Filter	0–127	Adjusts the filter depth.
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

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.

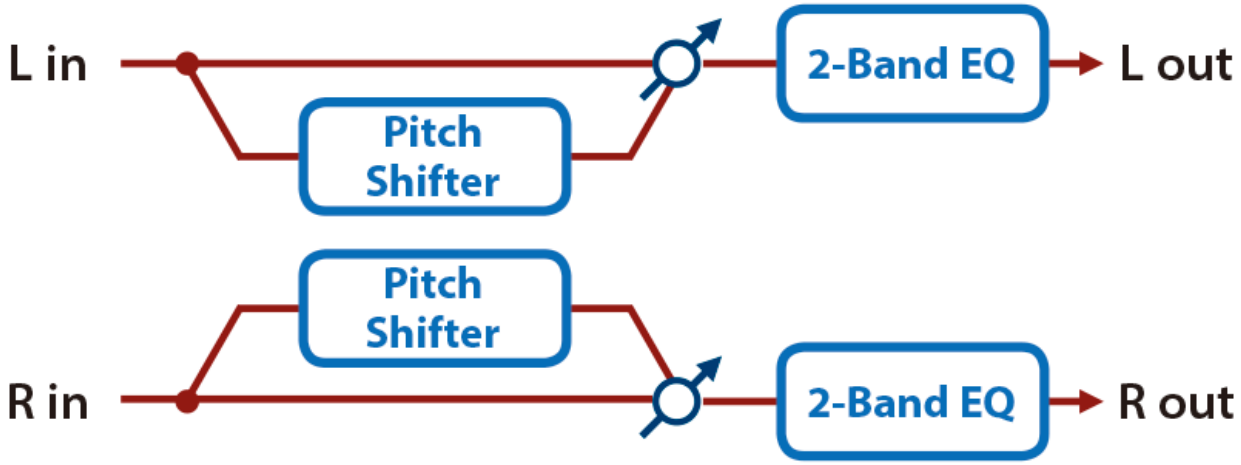


Parameter	Value	Explanation
Signal Dist	0–127	Sets the amount of distortion.
Frequency Range	0–127	Sets the frequency characteristics of the playback system. Smaller values create the feeling of an older system with narrow frequency bands.
Disc Type	LP, EP, SP	Sets the turntable rotation speed. This has an effect on the scratch noise cycle.
Scratch NZ Lev	0–127	Sets the volume of noise created by scratches in the record.
Dust NZ Lev	0–127	Sets the volume of noise created by dust on the record.
Hiss NZ Lev	0–127	Sets the volume of continuous hiss noise.
Total NZ 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.

Pitch

PitchShiftr (Pitch Shifter)

A stereo pitch shifter.

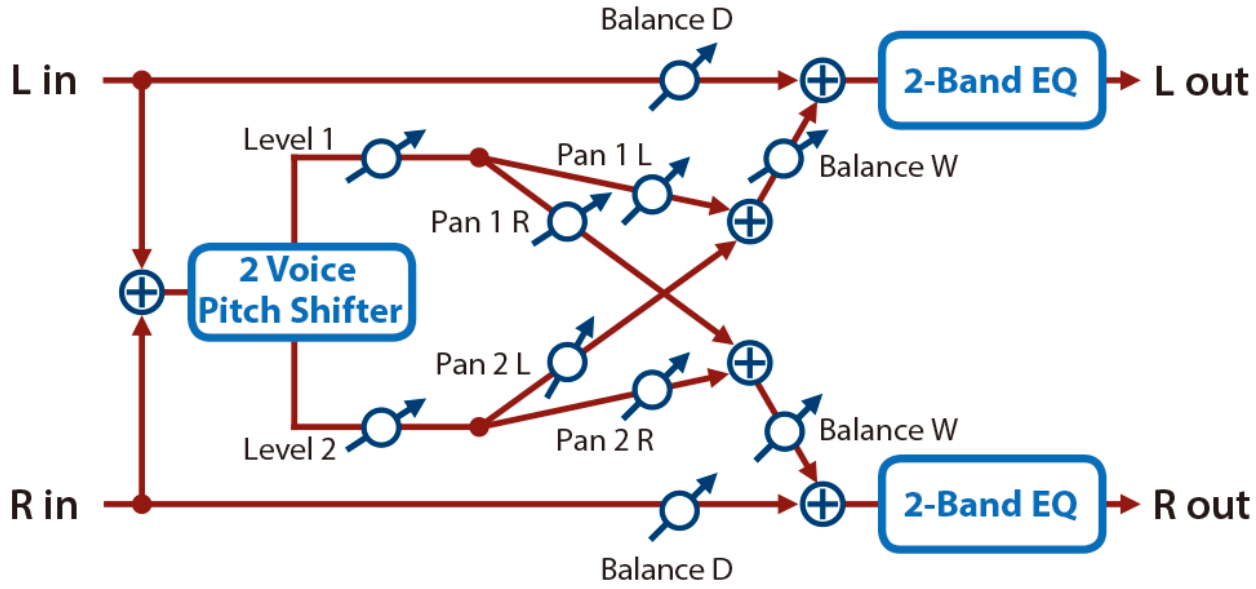


Parameter	Value	Explanation
Coarse	-24–+12 [sem]	Adjusts the pitch of the pitch shifted sound in semitone steps.
Fine	-100–+100	Adjusts the pitch of the pitch shifted sound in 2-cent steps.
Delay Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D. Time	1–1300	Adjusts the delay time from the direct sound until the pitch shifted sound is heard.
D.Time Nt	Note(P.167)	
Feedback	-98–+98 [%]	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0–127	Output Level

2V PShifter (2 Voice Pitch Shifter)

Shifts the pitch of the original sound.

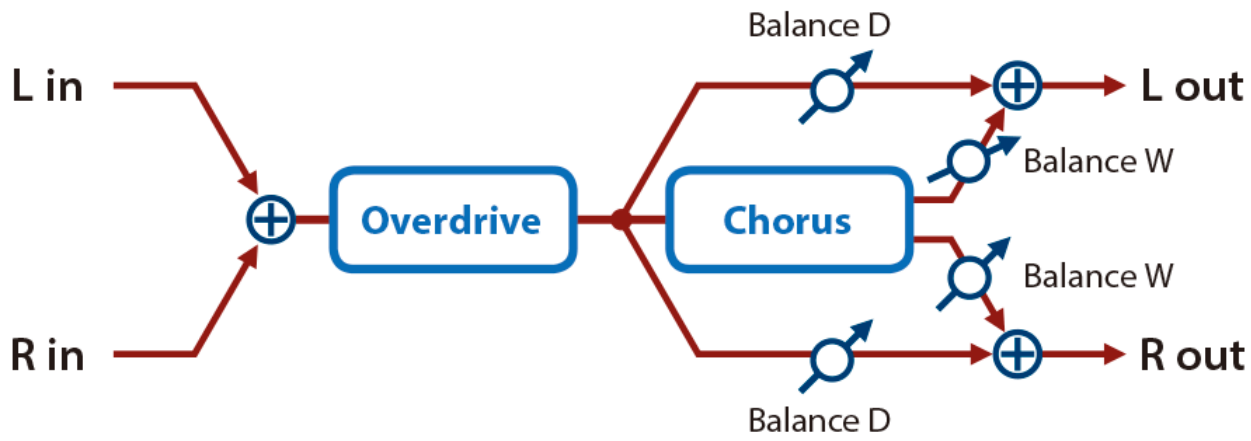
This 2-voice pitch shifter has two pitch shifters, and can add two pitch shifted sounds to the original sound.



Parameter	Value	Explanation
P1Coarse	-24–+12 [sem]	Adjusts the pitch of Pitch Shift 1 in semitone steps.
P1 Fine	-100–+100	Adjusts the pitch of Pitch Shift Pitch 1 in 2-cent steps.
P1 Dly Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
P1D.Time	1–1300	Adjusts the delay time from the direct sound until the Pitch Shift 1 sound is heard.
P1DRate Nt	Note(P.167)	
P1 Feedback	-98–+98 [%]	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
P1 Pan	L64–63R	Stereo location of the Pitch Shift 1 sound
P1 Level	0–127	Volume of the Pitch Shift 1 sound
P2Coarse	-24–+12 [sem]	Settings of the Pitch Shift 2 sound. The parameters are the same as for the Pitch Shift 1 sound.
P2 Fine	-100–+100	
P2 Dly Sync	OFF, ON	
P2D.Time	1–1300	
P2DRate Nt	Note	
P2 Feedback	-98–+98 [%]	
P2 Pan	L64–63R	
P2 Level	0–127	
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Balance	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0–127	Output Level

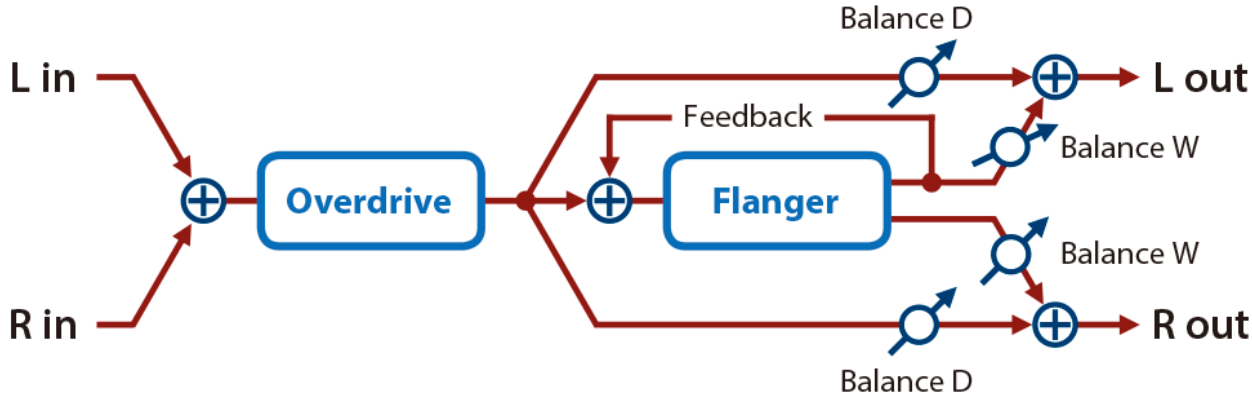
Combination

OD -> Chorus (Overdrive -> Chorus)



Parameter	Value	Explanation
OD Drive	0–127	Degree of distortion Also changes the volume.
OD Pan	L64–63R	Stereo location of the overdrive sound
Cho PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Cho Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
C.Rate	0.05–10.00 [Hz]	Frequency of modulation
C.Rate Nt	Note(P.167)	
Cho Depth	0–127	Depth of modulation
Cho Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0–127	Output Level

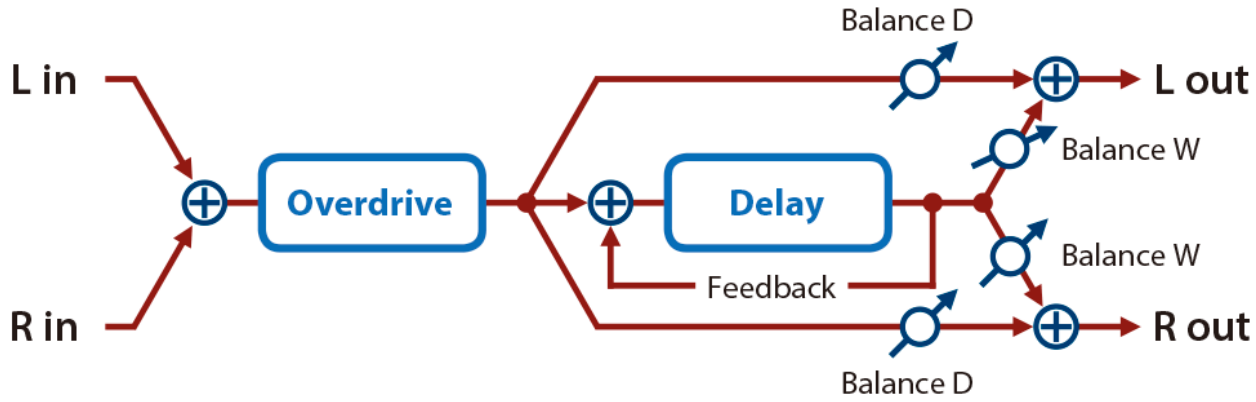
OD -> Flanger (Overdrive -> Flanger)



Parameter	Value	Explanation
OD Drive	0–127	Degree of distortion Also changes the volume.
OD Pan	L64–63R	Stereo location of the overdrive sound
Flg PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flg Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
F.Rate	0.05–10.00 [Hz]	Frequency of modulation

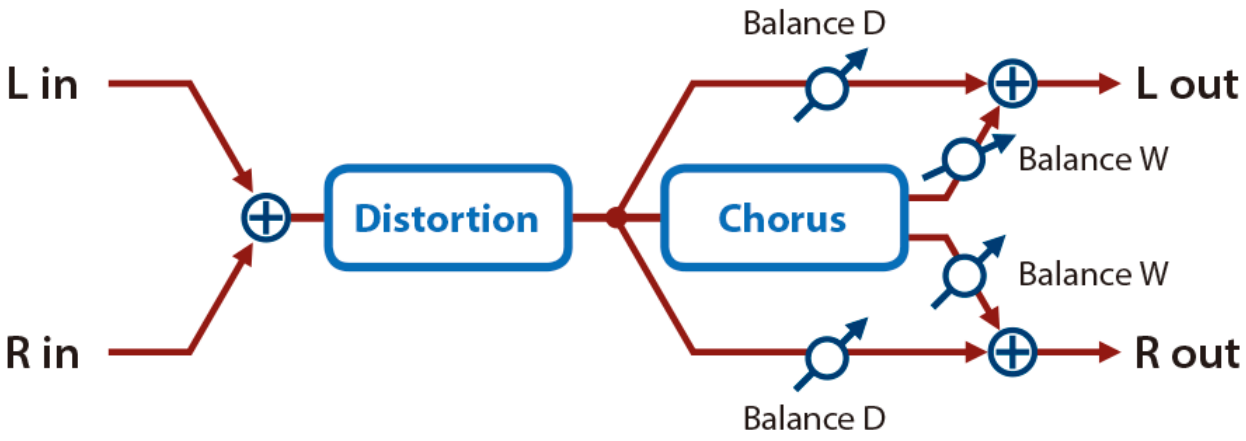
Parameter	Value	Explanation
F.Rate Nt	Note(P.167)	
Flg Depth	0–127	Depth of modulation
Flg Fbk	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flg Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

OD -> Delay (Overdrive -> Delay)



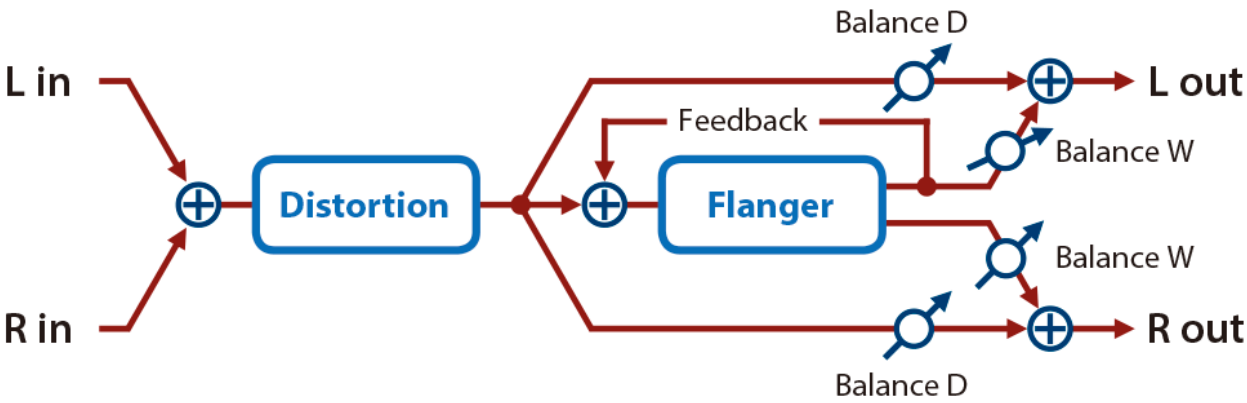
Parameter	Value	Explanation
OD Drive	0–127	Degree of distortion Also changes the volume.
OD Pan	L64–63R	Stereo location of the overdrive sound
Delay Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D. Time	1–2600	Delay time from when the original sound is heard to when the delay sound is heard
D.Time Nt	Note(P.167)	
Delay Fbk	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Dly HF	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Dly Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

DS -> Chorus (Distortion -> Chorus)



Parameter	Value	Explanation
Dist Drive	0–127	Degree of distortion Also changes the volume.
Dist Pan	L64–63R	Stereo location of the distortion sound
Cho PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Cho Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
C. Rate	0.05–10.00 [Hz]	Frequency of modulation
C.Rate Nt	Note(P.167)	
Cho Depth	0–127	Depth of modulation
Cho Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0–127	Output Level

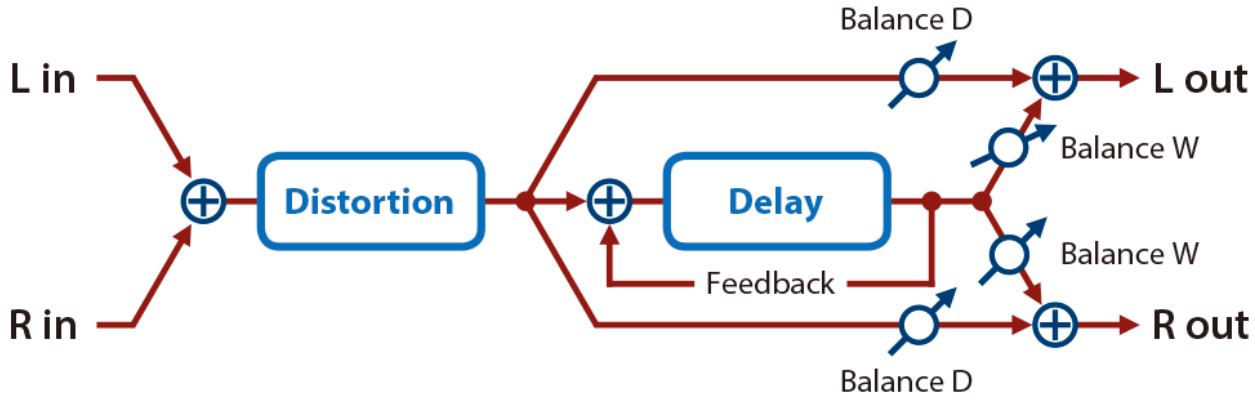
DS -> Flanger (Distortion -> Flanger)



Parameter	Value	Explanation
Dist Drive	0–127	Degree of distortion Also changes the volume.
Dist Pan	L64–63R	Stereo location of the distortion sound
Flg PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flg Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
F. Rate	0.05–10.00 [Hz]	Frequency of modulation
F.Rate Nt	Note(P.167)	
Flg Depth	0–127	Depth of modulation

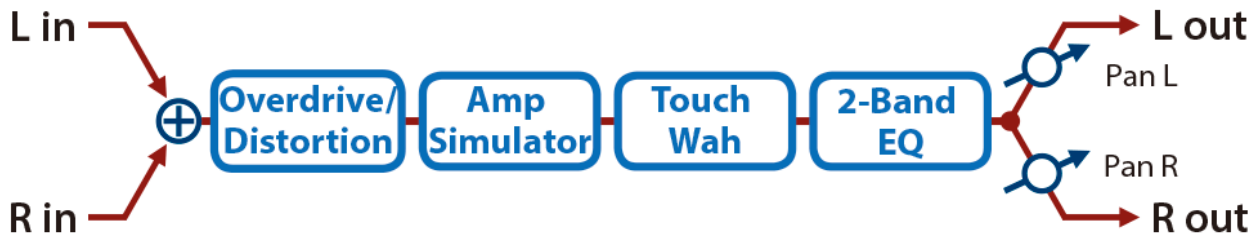
Parameter	Value	Explanation
Flg Fbk	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flg Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

DS -> Delay (Distortion -> Delay)



Parameter	Value	Explanation
Dist Drive	0–127	Degree of distortion Also changes the volume.
Dist Pan	L64–63R	Stereo location of the distortion sound
Delay Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D. Time	1–2600	Delay time from when the original sound is heard to when the delay sound is heard
D.Time Nt	Note(P.167)	
Delay Fbk	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Dly HF	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Dly Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

OD/DS -> T. Wah (Overdrive/Distortion -> Touch Wah)



Parameter	Value	Explanation
Drive Switch	OFF, ON	Turns overdrive/distortion on/off
D. Type	OVERDRIVE, DISTORTION	Type of distortion
Drive	0–127	Degree of distortion Also changes the volume.
Tone	0–127	Sound quality of the Overdrive effect
Amp Switch	OFF, ON	Turns the Amp Simulator on/off.

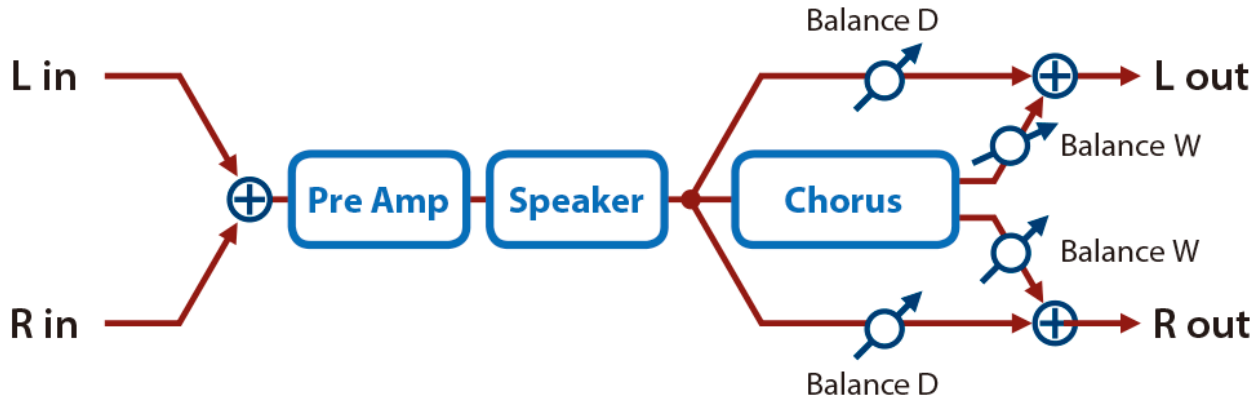
Parameter	Value	Explanation
AmpType	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp SMALL: Small amp BUILT-IN: Single-unit type amp 2-STACK: Large double stack amp 3-STACK: Large triple stack amp
TWah Switch	OFF, ON	Wah on/off
TWah Mode	LPF, BPF	Filter type LPF: The wah effect will be applied over a wide frequency range. BPF: The wah effect will be applied over a narrow frequency range.
TWah Polar	DOWN, UP	Direction in which the filter will move DOWN: The filter will change toward a lower frequency. UP: The filter will change toward a higher frequency.
TWah Sens	0–127	Sensitivity with which the filter is modified
TWah Manual	0–127	Center frequency at which the wah effect is applied
TWah Peak	0–127	Width of the frequency region at which the wah effect is applied Increasing this value will make the frequency region narrower.
TWah Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the wah (W) and the sound that is not sent through the wah (D).
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

OD/DS -> A. Wah (Overdrive/Distortion -> Auto Wah)

Parameter	Value	Explanation
Drive Switch	OFF, ON	Turns overdrive/distortion on/off
D. Type	OVERDRIVE, DISTORTION	Type of distortion
Drive	0–127	Degree of distortion Also changes the volume.
Tone	0–127	Sound quality of the Overdrive effect
Amp Switch	OFF, ON	Turns the Amp Simulator on/off.
AmpType	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp SMALL: Small amp BUILT-IN: Single-unit type amp 2-STACK: Large double stack amp 3-STACK: Large triple stack amp
AWah Switch	OFF, ON	Wah on/off
AWah Mode	LPF, BPF	Filter type LPF: The wah effect will be applied over a wide frequency range. BPF: The wah effect will be applied over a narrow frequency range.
AWah Manual	0–127	Center frequency at which the wah effect is applied
AWah Peak	0–127	Width of the frequency region at which the wah effect is applied Increasing this value will make the frequency region narrower.
AWah Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
AWRate	0.05–10.00 [Hz]	Frequency of modulation
AWRate Nt	Note(P.167)	
AWah Depth	0–127	Depth at which the wah effect is modulated

Parameter	Value	Explanation
AWah Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the wah (W) and the sound that is not sent through the wah (D).
Low Gain	-15–+15 [dB]	Amount of boost/cut for the low-frequency range
High Gain	-15–+15 [dB]	Amount of boost/cut for the high-frequency range
Level	0–127	Output Level

Gt -> Chorus (Guitar Amp Simulator -> Chorus)

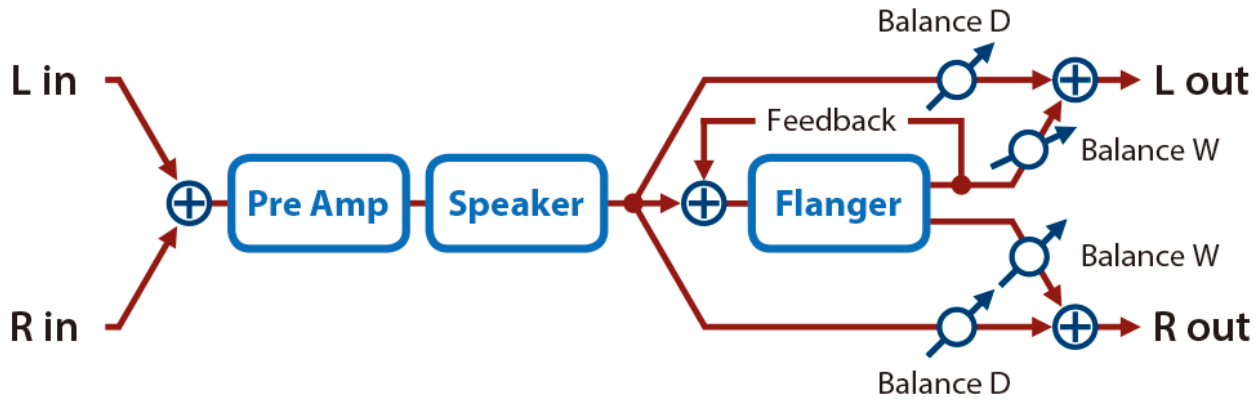


Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
ATyp		**Type of guitar amp**
	JC-120	This models the sound of the Roland JC-120.
	CLEAN TWIN	This models a Fender Twin Reverb.
	MATCH DRIVE	This models the sound input to left input on a Matchless D/C-30. A simulation of the latest tube amp widely used in styles from blues and rock.
	BG LEAD	This models the lead sound of the MESA/ Boogie combo amp. The sound of a tube amp typical of the late '70s to '80s.
	MS1959I	This models the sound input to Input I on a Marshall 1959. This is a trebly sound suited to hard rock.
	MS1959II	This models the sound input to Input II on a Marshall 1959.
	MS1959I+II	The sound of connecting inputs I and II of the guitar amp in parallel, creating a sound with a stronger low end than I.
	SLDN LEAD	This models a Soldano SLO-100. This is the typical sound of the eighties.
	METAL 5150	This models the lead channel of a Peavey EVH 5150.
	METAL LEAD	This is distortion sound that is ideal for performances of heavy riffs.
	OD-1	This models the sound of the BOSS OD-1. This produces sweet, mild distortion.
	OD-2 TURBO	This is the high-gain overdrive sound of the BOSS OD-2.
	DISTORTION	This gives a basic, traditional distortion sound.
	FUZZ	A fuzz sound with rich harmonic content.
Drive	0–127	Volume and amount of distortion of the amp
Master	0–127	Volume of the entire pre-amp
Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Bass	0–127	Tone of the bass/mid/treble frequency range
Middle	0–127	
Treble	0–127	
Speaker Sw	OFF, ON	Selects whether the sound will be sent through the speaker simulation (ON) or not (OFF).

		Cabinet	Diameter (in inches) and number of the speaker	Microphone
STyp	SMALL 1	small open-back enclosure	10	dynamic
	SMALL 2	small open-back enclosure	10	dynamic
	MIDDLE	open back enclosure	12 x 1	dynamic
	JC-120	open back enclosure	12 x 2	dynamic
	BUILT-IN 1	open back enclosure	12 x 2	dynamic
	BUILT-IN 2	open back enclosure	12 x 2	condenser

Parameter	Value	Explanation		
	BUILT-IN 3	open back enclosure	12 x 2	condenser
	BUILT-IN 4	open back enclosure	12 x 2	condenser
	BUILT-IN 5	open back enclosure	12 x 2	condenser
	BG STACK 1	sealed enclosure	12 x 2	condenser
	BG STACK 2	large sealed enclosure	12 x 2	condenser
	MS STACK 1	large sealed enclosure	12 x 4	condenser
	MS STACK 2	large sealed enclosure	12 x 4	condenser
	METAL STACK	large double stack	12 x 4	condenser
	2-STACK	large double stack	12 x 4	condenser
	3-STACK	large triple stack	12 x 4	condenser
Chorus Sw	OFF, ON	Chorus on/off		
Cho PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the chorus sound is heard.		
C. Rate	0.05–10.00 [Hz]	Frequency of modulation		
Cho Depth	0–127	Depth of modulation		
Cho Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).		
Level	0–127	Output Level		

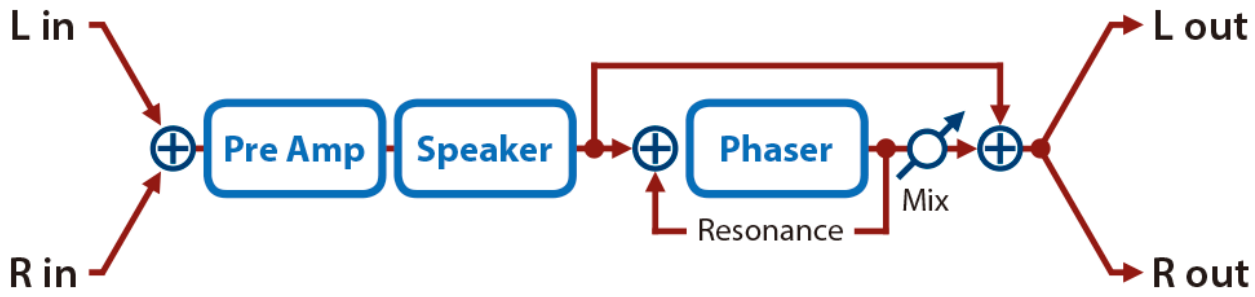
Gt -> Flanger (Guitar Amp Simulator -> Flanger)



Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
ATyp		**Type of guitar amp**
	JC-120	This models the sound of the Roland JC-120.
	CLEAN TWIN	This models a Fender Twin Reverb.
	MATCH DRIVE	This models the sound input to left input on a Matchless D/C-30. A simulation of the latest tube amp widely used in styles from blues and rock.
	BG LEAD	This models the lead sound of the MESA/ Boogie combo amp. The sound of a tube amp typical of the late '70s to '80s.
	MS1959I	This models the sound input to Input I on a Marshall 1959. This is a trebly sound suited to hard rock.
	MS1959II	This models the sound input to Input II on a Marshall 1959.
	MS1959I+II	The sound of connecting inputs I and II of the guitar amp in parallel, creating a sound with a stronger low end than I.
	SLDN LEAD	This models a Soldano SLO-100. This is the typical sound of the eighties.
	METAL 5150	This models the lead channel of a Peavey EVH 5150.
	METAL LEAD	This is distortion sound that is ideal for performances of heavy riffs.
	OD-1	This models the sound of the BOSS OD-1. This produces sweet, mild distortion.
	OD-2 TURBO	This is the high-gain overdrive sound of the BOSS OD-2.
	DISTORTION	This gives a basic, traditional distortion sound.
	FUZZ	A fuzz sound with rich harmonic content.
Drive	0–127	Volume and amount of distortion of the amp
Master Lv	0–127	Volume of the entire pre-amp
Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion

Parameter	Value	Explanation		
Bass	0–127	Tone of the bass/mid/treble frequency range		
Middle	0–127			
Treble	0–127			
Speaker Sw	OFF, ON	Selects whether the sound will be sent through the speaker simulation (ON) or not (OFF).		
STyp		**Cabinet**	**Diameter (in inches) and number of the speaker**	**Microphone**
	SMALL 1	small open-back enclosure	10	dynamic
	SMALL 2	small open-back enclosure	10	dynamic
	MIDDLE	open back enclosure	12 x 1	dynamic
	JC-120	open back enclosure	12 x 2	dynamic
	BUILT-IN 1	open back enclosure	12 x 2	dynamic
	BUILT-IN 2	open back enclosure	12 x 2	condenser
	BUILT-IN 3	open back enclosure	12 x 2	condenser
	BUILT-IN 4	open back enclosure	12 x 2	condenser
	BUILT-IN 5	open back enclosure	12 x 2	condenser
	BG STACK 1	sealed enclosure	12 x 2	condenser
	BG STACK 2	large sealed enclosure	12 x 2	condenser
	MS STACK 1	large sealed enclosure	12 x 4	condenser
	MS STACK 2	large sealed enclosure	12 x 4	condenser
	METAL STACK	large double stack	12 x 4	condenser
	2-STACK	large double stack	12 x 4	condenser
	3-STACK	large triple stack	12 x 4	condenser
Flg Switch	OFF, ON	Flanger on/off		
Flg PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the flanger sound is heard.		
F. Rate	0.05–10.00 [Hz]	Frequency of modulation		
Flg Depth	0–127	Depth of modulation		
Flg Fbk	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.		
Flg Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).		
Level	0–127	Output Level		

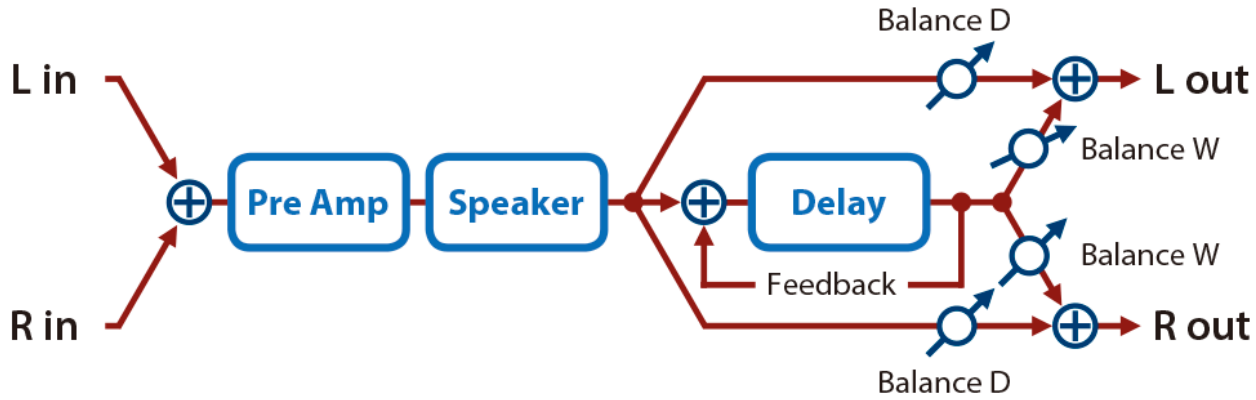
Gt -> Phaser (Guitar Amp Simulator -> Phaser)



Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
AType		**Type of guitar amp**
	JC-120	This models the sound of the Roland JC-120.
	CLEAN TWIN	This models a Fender Twin Reverb.
	MATCH DRIVE	This models the sound input to left input on a Matchless D/C-30. A simulation of the latest tube amp widely used in styles from blues and rock.
	BG LEAD	This models the lead sound of the MESA/ Boogie combo amp. The sound of a tube amp typical of the late '70s to '80s.
	MS1959I	This models the sound input to Input I on a Marshall 1959. This is a trebly sound suited to hard rock.
	MS1959II	This models the sound input to Input II on a Marshall 1959.
	MS1959I+II	The sound of connecting inputs I and II of the guitar amp in parallel, creating a sound with a stronger low end than I.
	SLDN LEAD	This models a Soldano SLO-100. This is the typical sound of the eighties.

Parameter	Value	Explanation		
	METAL 5150	This models the lead channel of a Peavey EVH 5150.		
	METAL LEAD	This is distortion sound that is ideal for performances of heavy riffs.		
	OD-1	This models the sound of the BOSS OD-1. This produces sweet, mild distortion.		
	OD-2 TURBO	This is the high-gain overdrive sound of the BOSS OD-2.		
	DISTORTION	This gives a basic, traditional distortion sound.		
	FUZZ	A fuzz sound with rich harmonic content.		
Drive	0–127	Volume and amount of distortion of the amp		
Master	0–127	Volume of the entire pre-amp		
Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion		
Bass	0–127	Tone of the bass/mid/treble frequency range		
Middle	0–127			
Treble	0–127			
Speaker Sw	OFF, ON	Selects whether the sound will be sent through the speaker simulation (ON) or not (OFF).		
STyp		**Cabinet**	**Diameter (in inches) and number of the speaker**	**Microphone**
	SMALL 1	small open-back enclosure	10	dynamic
	SMALL 2	small open-back enclosure	10	dynamic
	MIDDLE	open back enclosure	12 x 1	dynamic
	JC-120	open back enclosure	12 x 2	dynamic
	BUILT-IN 1	open back enclosure	12 x 2	dynamic
	BUILT-IN 2	open back enclosure	12 x 2	condenser
	BUILT-IN 3	open back enclosure	12 x 2	condenser
	BUILT-IN 4	open back enclosure	12 x 2	condenser
	BUILT-IN 5	open back enclosure	12 x 2	condenser
	BG STACK 1	sealed enclosure	12 x 2	condenser
	BG STACK 2	large sealed enclosure	12 x 2	condenser
	MS STACK 1	large sealed enclosure	12 x 4	condenser
	MS STACK 2	large sealed enclosure	12 x 4	condenser
	METAL STACK	large double stack	12 x 4	condenser
	2-STACK	large double stack	12 x 4	condenser
	3-STACK	large triple stack	12 x 4	condenser
Phaser Sw	OFF, ON	Phaser on/off		
P. Rate	0.05–10.00 [Hz]	Frequency of modulation		
Phs Manual	0–127	Adjusts the basic frequency from which the sound will be modulated.		
Phs Depth	0–127	Depth of modulation		
Phs Reso	0–127	Amount of feedback		
Phs Mix	0–127	Level of the phase-shifted sound		
Level	0–127	Output Level		

Gt -> Delay (Guitar Amp Simulator -> Delay)

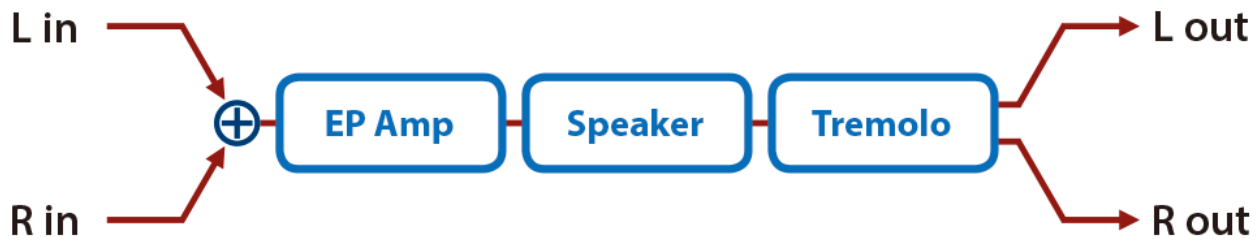


Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
ATyp		**Type of guitar amp**

Parameter	Value	Explanation		
	JC-120	This models the sound of the Roland JC-120.		
	CLEAN TWIN	This models a Fender Twin Reverb.		
	MATCH DRIVE	This models the sound input to left input on a Matchless D/C-30. A simulation of the latest tube amp widely used in styles from blues and rock.		
	BG LEAD	This models the lead sound of the MESA/ Boogie combo amp. The sound of a tube amp typical of the late '70s to '80s.		
	MS1959I	This models the sound input to Input I on a Marshall 1959. This is a trebly sound suited to hard rock.		
	MS1959II	This models the sound input to Input II on a Marshall 1959.		
	MS1959I+II	The sound of connecting inputs I and II of the guitar amp in parallel, creating a sound with a stronger low end than I.		
	SLDN LEAD	This models a Soldano SLO-100. This is the typical sound of the eighties.		
	METAL 5150	This models the lead channel of a Peavey EVH 5150.		
	METAL LEAD	This is distortion sound that is ideal for performances of heavy riffs.		
	OD-1	This models the sound of the BOSS OD-1. This produces sweet, mild distortion.		
	OD-2 TURBO	This is the high-gain overdrive sound of the BOSS OD-2.		
	DISTORTION	This gives a basic, traditional distortion sound.		
	FUZZ	A fuzz sound with rich harmonic content.		
Drive	0–127	Volume and amount of distortion of the amp		
Master	0–127	Volume of the entire pre-amp		
Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion		
Bass	0–127	Tone of the bass/mid/treble frequency range		
Middle	0–127			
Treble	0–127			
Speaker Sw	OFF, ON	Selects whether the sound will be sent through the speaker simulation (ON) or not (OFF).		
STyp		**Cabinet**	**Diameter (in inches) and number of the speaker**	**Microphone**
	SMALL 1	small open-back enclosure	10	dynamic
	SMALL 2	small open-back enclosure	10	dynamic
	MIDDLE	open back enclosure	12 x 1	dynamic
	JC-120	open back enclosure	12 x 2	dynamic
	BUILT-IN 1	open back enclosure	12 x 2	dynamic
	BUILT-IN 2	open back enclosure	12 x 2	condenser
	BUILT-IN 3	open back enclosure	12 x 2	condenser
	BUILT-IN 4	open back enclosure	12 x 2	condenser
	BUILT-IN 5	open back enclosure	12 x 2	condenser
	BG STACK 1	sealed enclosure	12 x 2	condenser
	BG STACK 2	large sealed enclosure	12 x 2	condenser
	MS STACK 1	large sealed enclosure	12 x 4	condenser
	MS STACK 2	large sealed enclosure	12 x 4	condenser
	METAL STACK	large double stack	12 x 4	condenser
	2-STACK	large double stack	12 x 4	condenser
	3-STACK	large triple stack	12 x 4	condenser
Delay Sw	OFF, ON	Delay on/off		
Dly Time	1–1300	Delay time from when the original sound is heard to when the delay sound is heard		
Delay Fbk	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect.		

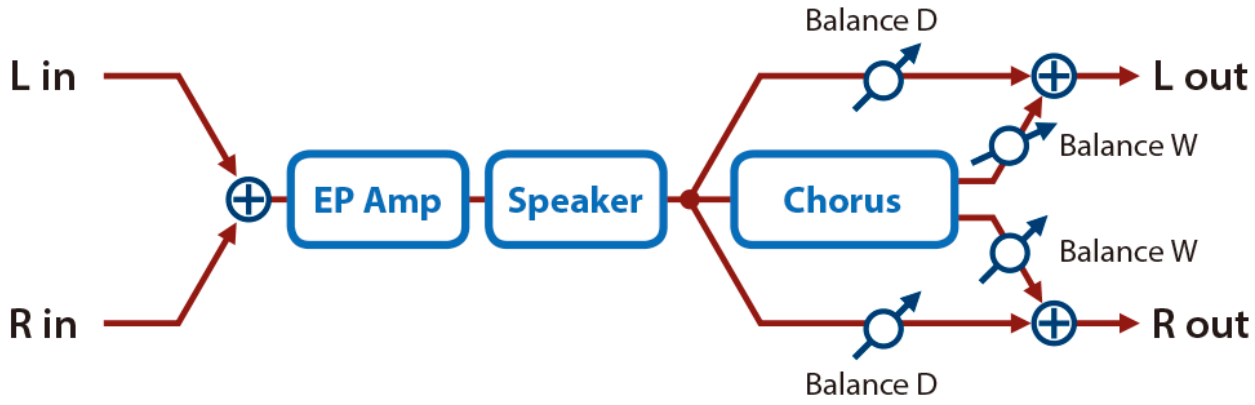
Parameter	Value	Explanation
		Negative (-) settings will invert the phase.
Dly HF	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Frequency at which the high-frequency portion of the delay sound will be cut (BYPASS: no cut)
Dly Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

EP -> Tremolo (EP Amp Simulator -> Tremolo)



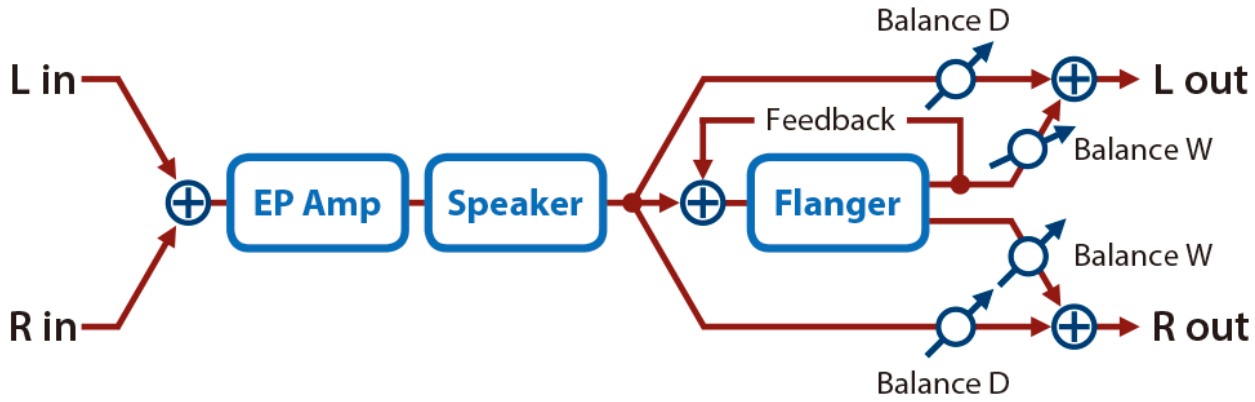
Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
	WURLY	A standard electric piano sound of the 60s
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Tremolo Sw	OFF, ON	Tremolo on/off
Tremolo Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
T. Speed	0.05–10.00 [Hz]	Rate of the tremolo effect
T.Spd Nt	Note(P.167)	
Trm Depth	0–127	Depth of the tremolo effect
Trm Duty	-10–+10	Adjusts the duty cycle of the LFO waveform used to apply tremolo.
Sp Type	LINE, OLD, NEW, WURLY, TWIN	Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation.
OD Switch	OFF, ON	Overdrive on/off
OD Gain	0–127	Overdrive input level
OD Drive	0–127	Degree of distortion Also changes the volume.
Level	0–127	Output Level

EP -> Chorus (EP Amp Simulator -> Chorus)



Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Cho Switch	OFF, ON	Chorus on/off
Cho PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Cho Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
C. Rate	0.05–10.00 [Hz]	Frequency of modulation
C.Rate Nt	Note(P.167)	
Cho Depth	0–127	Depth of modulation
Cho Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Sp Type	LINE, OLD, NEW, WURLY, TWIN	Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation.
OD Switch	OFF, ON	Overdrive on/off
OD Gain	0–127	Overdrive input level
OD Drive	0–127	Degree of distortion Also changes the volume.
Level	0–127	Output Level

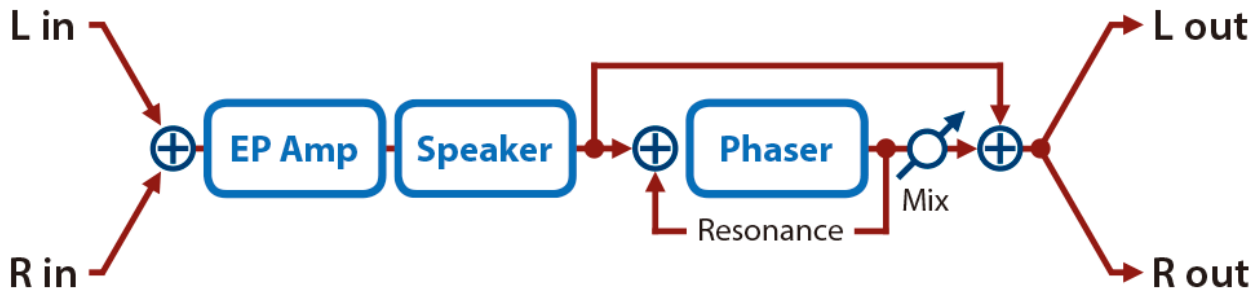
EP -> Flanger (EP Amp Simulator -> Flanger)



Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s

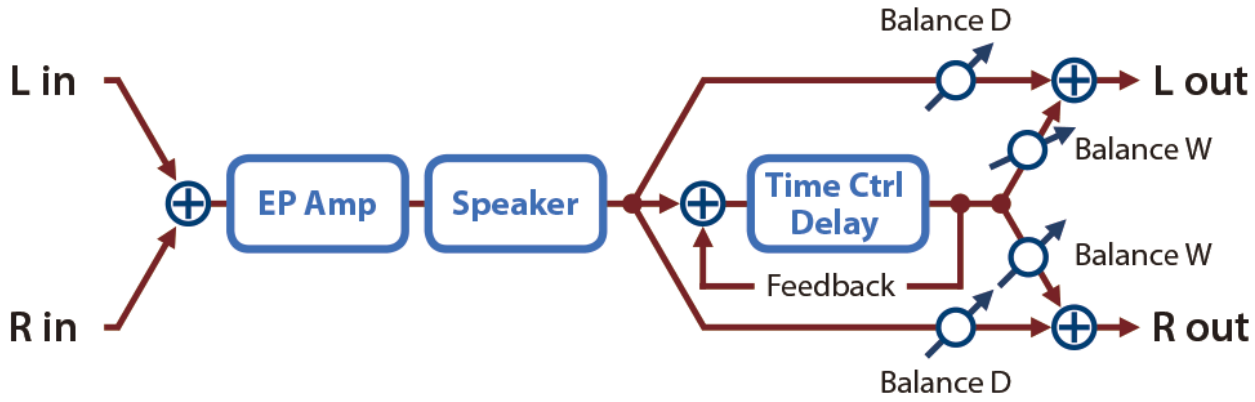
Parameter	Value	Explanation
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Flg Switch	OFF, ON	Flanger on/off
Flg PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flg Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
F. Rate	0.05–10.00 [Hz]	Frequency of modulation
F.Rate Nt	Note(P.167)	
Flg Depth	0–127	Depth of modulation
Flg Fbk	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flg Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Sp Type	LINE, OLD, NEW, WURLY, TWIN	Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation.
OD Switch	OFF, ON	Overdrive on/off
OD Gain	0–127	Overdrive input level
OD Drive	0–127	Degree of distortion Also changes the volume.
Level	0–127	Output Level

EP -> Phaser (EP Amp Simulator -> Phaser)



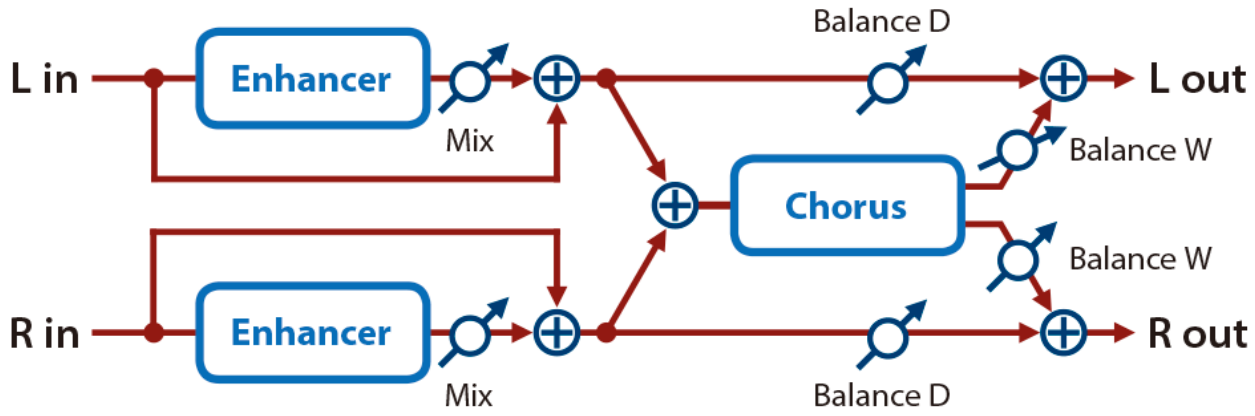
Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Phs Switch	OFF, ON	Phaser on/off
Phs Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
P. Rate	0.05–10.00 [Hz]	Frequency of modulation
P.Rate Nt	Note(P.167)	
Phs Manual	0–127	Adjusts the basic frequency from which the sound will be modulated.
Phs Depth	0–127	Depth of modulation
Phs Reso	0–127	Amount of feedback
Phs Mix	0–127	Level of the phase-shifted sound
Sp Type	LINE, OLD, NEW, WURLY, TWIN	Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation.
OD Switch	OFF, ON	Overdrive on/off
OD Gain	0–127	Overdrive input level
OD Drive	0–127	Degree of distortion Also changes the volume.
Level	0–127	Output Level

EP -> Delay (EP Amp Simulator -> Delay)



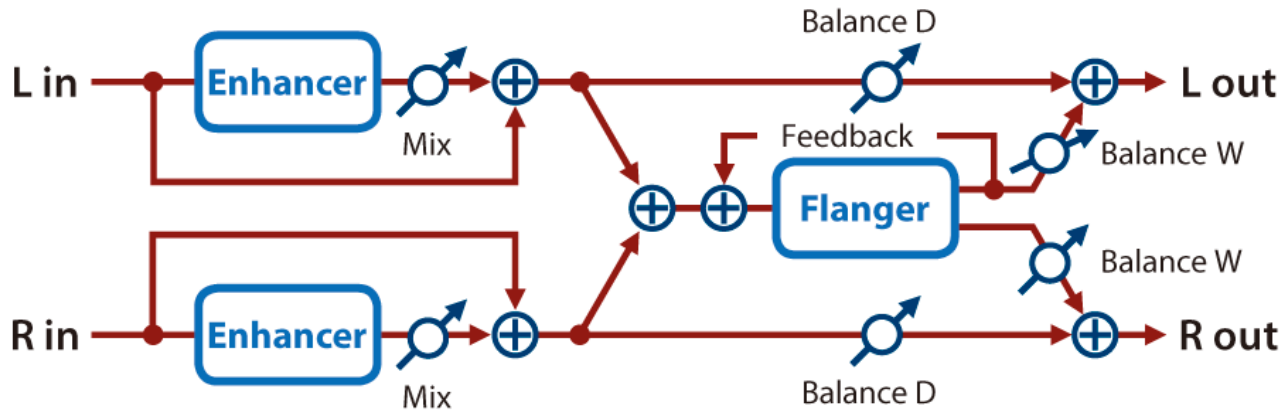
Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Dly Switch	OFF, ON	Delay on/off
Delay Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D. Time	1–1300	Delay time from when the original sound is heard to when the delay sound is heard
D.Time Nt	Note(P.167)	
Dly Accel	0–15	Speed at which the current delay time changes to the specified delay time when you change the delay time. The speed of the pitch change will change simultaneously with the delay time.
Delay Fbk	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Dly HF	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Frequency at which the high-frequency portion of the delay sound will be cut (BYPASS: no cut)
Dly Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Sp Type	LINE, OLD, NEW, WURLY, TWIN	Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation.
OD Switch	OFF, ON	Overdrive on/off
OD Gain	0–127	Overdrive input level
OD Drive	0–127	Degree of distortion Also changes the volume.
Level	0–127	Output Level

Enhncr -> Cho (Enhancer -> Chorus)



Parameter	Value	Explanation
Enh Sens	0–127	Sensitivity of the enhancer
Enh Mix	0–127	Level of the overtones generated by the enhancer
Cho PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Cho Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
C. Rate	0.05–10.00 [Hz]	Frequency of modulation
C.Rate Nt	Note(P.167)	
Cho Depth	0–127	Depth of modulation
Cho Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0–127	Output Level

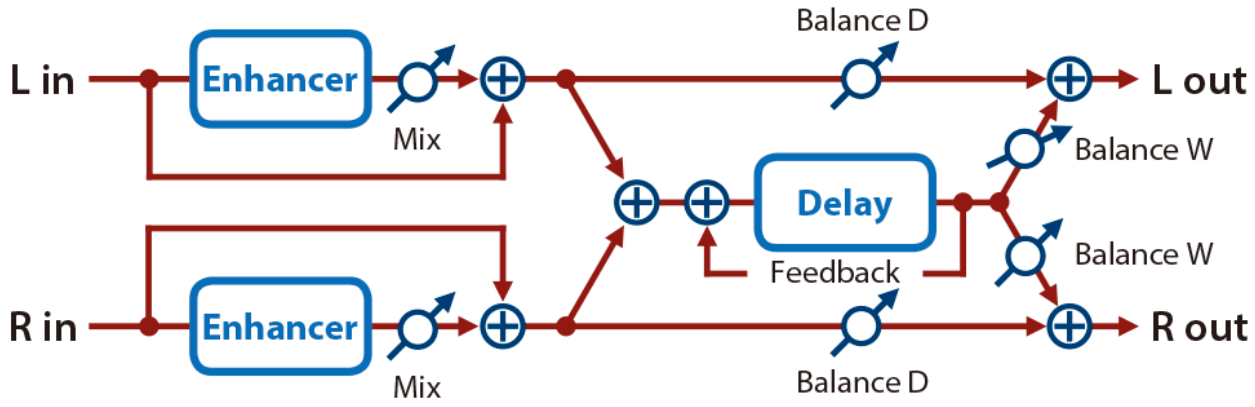
Enhncr -> Fl (Enhancer -> Flanger)



Parameter	Value	Explanation
Enh Sens	0–127	Sensitivity of the enhancer
Enh Mix	0–127	Level of the overtones generated by the enhancer
Flg PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flg Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
F. Rate	0.05–10.00 [Hz]	Frequency of modulation
F.Rate Nt	Note(P.167)	
Flg Depth	0–127	Depth of modulation
Flg Fbk	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.

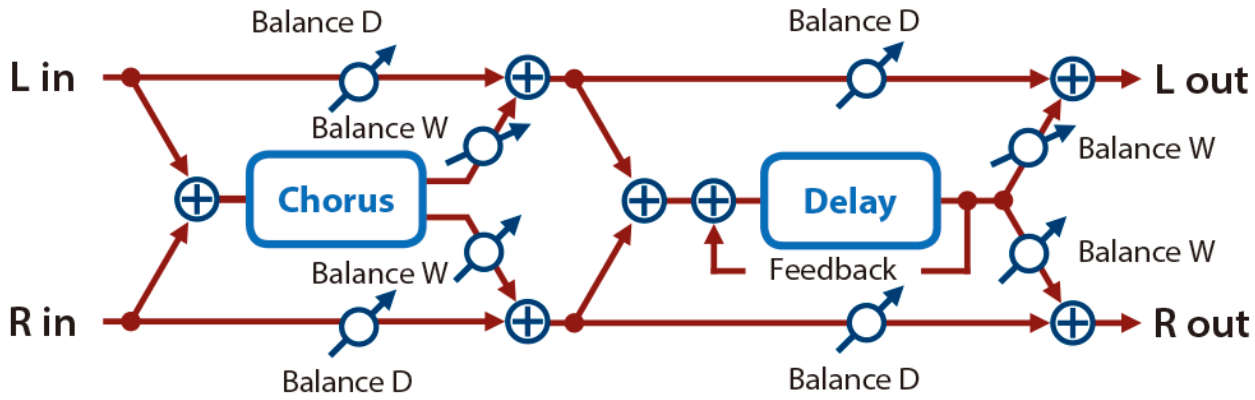
Parameter	Value	Explanation
Flg Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

Enhncr -> Dly (Enhancer -> Delay)



Parameter	Value	Explanation
Enh Sens	0–127	Sensitivity of the enhancer
Enh Mix	0–127	Level of the overtones generated by the enhancer
Delay Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D. Time	1–2600	Delay time from when the original sound is heard to when the delay sound is heard
D.Time Nt	Note(P.167)	
Delay Fbk	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Dly HF	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Dly Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

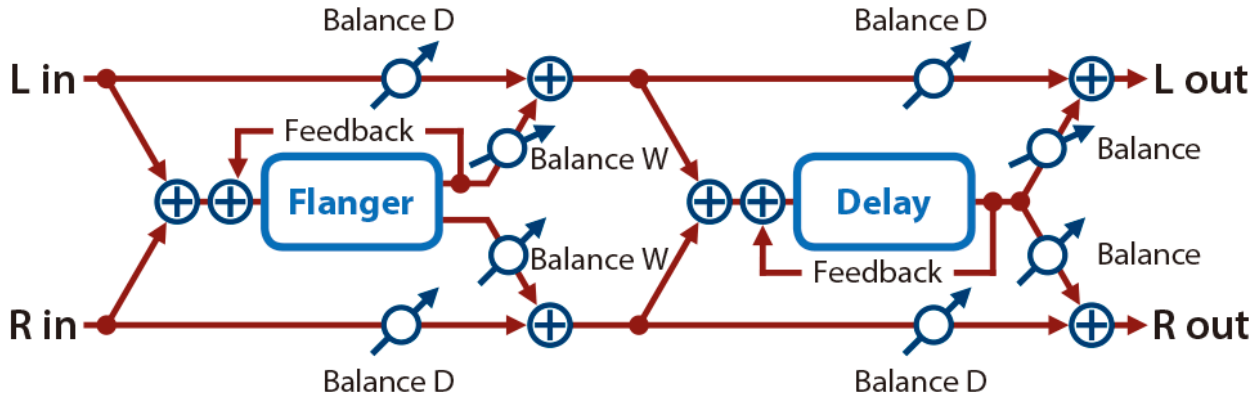
Chorus -> Dly (Chorus -> Delay)



Parameter	Value	Explanation
Cho PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Cho Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern)

Parameter	Value	Explanation
		Tempo (System)(P.76)
C. Rate	0.05–10.00 [Hz]	Frequency of modulation
C.Rate Nt	Note(P.167)	
Cho Depth	0–127	Depth of modulation
Cho Bal	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the chorus sound (W)
Delay Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D. Time	1–2600	Delay time from when the original sound is heard to when the delay sound is heard
D.Time Nt	Note(P.167)	
Delay Fbk	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Dly HF	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Dly Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

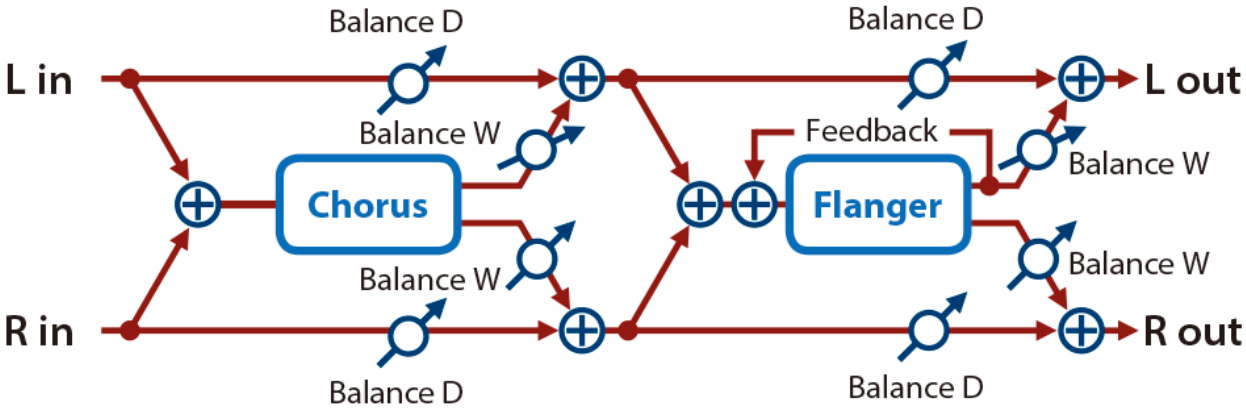
Flanger -> Dly (Flanger -> Delay)



Parameter	Value	Explanation
Flg PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flg Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
F. Rate	0.05–10.00 [Hz]	Frequency of modulation
F.Rate Nt	Note(P.167)	
Flg Depth	0–127	Depth of modulation
Flg Fbk	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flg Bal	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the flanger sound (W)
Delay Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
D. Time	1–2600	Delay time from when the original sound is heard to when the delay sound is heard
D.Time Nt	Note(P.167)	
Delay Fbk	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Dly HF	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.

Parameter	Value	Explanation
Dly Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

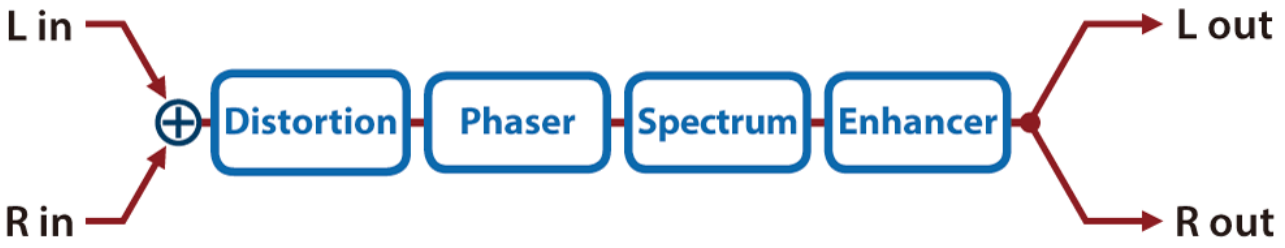
Chorus -> Fl (Chorus -> Flanger)



Parameter	Value	Explanation
Cho PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Cho Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
C. Rate	0.05–10.00 [Hz]	Modulation frequency of the chorus effect
C.Rate Nt	Note(P.167)	
Cho Depth	0–127	Modulation depth of the chorus effect
Cho Bal	D100: 0W–D0: 100W	Volume balance between the direct sound (D) and the chorus sound (W)
Flg PreDly	0.0–100 [ms]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flg Sync	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. Tempo (Pattern) Tempo (System)(P.76)
F. Rate	0.05–10.00 [Hz]	Modulation frequency of the flanger effect
F.Rate Nt	Note(P.167)	
Flg Depth	0–127	Modulation depth of the flanger effect
Flg Fbk	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flg Bal	D100: 0W–D0: 100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

JD-Multi

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



Parameter	Value	Explanation
	DS - PH - SP - EN	Selects the connection order of the effects.

Parameter	Value	Explanation
Seq	DS - PH - EN - SP	DS: Distortion PH: Phaser SP: Spectrum EN: Enhancer
	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	Sets the type of distortion.	
	MELLOW DRV	Softer distortion with a slightly darker sound.
	OVERDRIVE	Distortion that resembles a vacuum tube amp being driven.
	CRY DRV	Distortion that emphasizes the high end.
	MELLOW DST	Gives the feeling of distortion playing through a large amp.
	LIGHT DST	Strong distortion with a bright sound.
	FAT DIST	Thick distortion that emphasizes the low and high ends.
	FUZZ DIST	Distortion that's even more powerful that FAT DIST.
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.
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 level of the phase-shifted 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	Changes the pan.
Level	0–127	Sets the output volume.

Note

1/64T	Sixty-fourth-note triplet
1/64	Sixty-fourth note
1/32T	Thirty-second-note triplet
1/32	Thirty-second note
1/16T	Sixteenth-note triplet
1/32.	Dotted thirty-second note
1/16	Sixteenth note
1/8T	Eighth-note triplet
1/16.	Dotted sixteenth note
1/8	Eighth note
1/4T	Quarter-note triplet
1/8.	Dotted eighth note
1/4	Quarter note
1/2T	Half-note triplet
1/4.	Dotted quarter note
1/2	Half note
1T	Whole-note triplet
1/2.	Dotted half note
1	Whole note
2T	Double-note triplet
1.	Dotted whole note
2	Double note

PATTERN CHORUS

Parameter	Value	Explanation
Type	➡ "Chorus Parameters(P.168)"	
Switch	OFF, ON	Turns the chorus on/off.
Chorus parameters	Sets the parameters of the selected chorus type. The available parameters differ depending on the type of chorus you selected in Type. ➡ "Chorus Parameters(P.168)"	
Level	0–127	Specifies the output level of the sound with chorus applied.
Rev Send	0–127	Specifies the send level to the reverb.

Chorus Parameters

OFF

Turns the effect off.

Chorus

This is a stereo chorus.

Parameter	Value	Explanation
Rate	0–127	Adjusts the frequency of modulation.
Depth	0–127	Adjusts the depth of modulation.
Feedback	0–127	Adjusts the level of chorus sound that's returned to the input.

CE-1

This models the classic BOSS CE-1 chorus effect unit.

It provides a chorus sound with a distinctively analog warmth.

Parameter	Value	Explanation
Intensity	0–127	Adjusts the chorus depth.

SDD-320 (DIMENSION D)

This models Roland's DIMENSION D (SDD-320).

It provides a clear chorus sound.

Parameter	Value	Explanation
Mode	1, 2, 3, 4, 1+4, 2+4, 3+4	Switches the mode.

Delay

This is a stereo delay.

Parameter	Value	Explanation
Dly Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Dly Msec	1–1300	Adjusts the delay time from the direct sound until the delay sound is heard.
Dly Note	Note	
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS (*1)	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

TimeCtrlDly (Time Control Delay)

This is a delay in which the delay time can be varied smoothly.

Parameter	Value	Explanation
Dly Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Dly Msec	1–1300	Adjusts the delay time from the direct sound until the delay sound is heard.
Dly Note	Note	
Acceleration	0–15	When you change the delay time, this specifies the time over which the current delay time changes to the specified delay time. This affects the speed of pitch change as well as the delay time.
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS (*1)	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

Delay → Trem (delay → tremolo)

Tremolo is applied to the delay sound.

Parameter	Value	Explanation
Input	MONAURAL	The input is mono-mixed.
	STEREO	The sound is input in stereo.
Dly Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Dly Msec	1–1300	Adjusts the delay time from the direct sound until the delay sound is heard.
Dly Note	Note	
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS (*1)	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Trm Switch	OFF, ON	Switches the tremolo effect on/off
Trm ModWave	This sets how the panning changes.	
	TRI	Triangle wave
	SQR	Square wave
	SIN	Sine wave
	SAW1	Sawtooth wave
	SAW2	
	TRP	Trapezoidal wave
Trm Sync	OFF, ON	If this is on, the tremolo synchronizes with the tempo.
Trm Hz	0.05–10.00 [Hz]	Adjusts the rate of the tremolo.
Trm Note	Note	
Trm Depth	0–127	Adjusts the depth of the tremolo.

2Tap PanDly (2Tap Pan Delay)

Delay sound is heard in the two locations you specify.

Parameter	Value	Explanation
Dly Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Dly Msec	1–1300	Adjusts the time until the second delay sound is heard.
Dly Note	Note	
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS (*1)	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Dly1 Pan	L64–63R	Adjusts the pan position of Delay 1.
Dly2 Pan	L64–63R	Adjusts the pan position of Delay 2.
Dly1 Level	0–127	Adjusts the volume of Delay 1.
Dly2 Level	0–127	Adjusts the volume of Delay 2.

3Tap PanDly (3Tap Pan Delay)

Delay sound is heard in the three locations you specify.

Parameter	Value	Explanation
Dly Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Dly Msec	1–2600	Delay time of the third delay sound after the original sound is heard.
Dly Note	Note	
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS (*1)	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Dly1 Pan	L64–63R	Adjusts the pan position of Delay 1.
Dly2 Pan	L64–63R	Adjusts the pan position of Delay 2.
Dly3 Pan	L64–63R	Adjusts the pan position of Delay 3.
Dly1 Level	0–127	Adjusts the volume of Delay 1.
Dly2 Level	0–127	Adjusts the volume of Delay 2.

JUNO Chorus (JUNO-106 Chorus)

This models the chorus effects of the Roland JUNO-106.

Parameter	Value	Explanation
Mode	I, II, I+II, JX I, JX II	Type of Chorus I+II: the state where both buttons are pressed at the same time.
Noise Level	0–127	Volume of noise

JV Chorus

Parameter	Value	Explanation
Filter Type	OFF	The filter is not used.
	LPF	This filter cuts off the high frequencies.
	HPF	This filter cuts off the low frequencies.
Cutoff Freq	200–8000 [Hz]	Adjusts the center frequency used when the filter cuts a specific frequency region.
Pre Delay	0.0–100.0 [ms]	Adjusts the delay time from when the direct sound plays until the reverb sound is heard.
Rate Sync	OFF, ON	When this is ON, the delay synchronizes with the tempo.
Rate Hz	0.05–10.00 [Hz]	Adjusts the frequency of modulation.
Rate Note	Note	
Depth	0–127	Adjusts the depth of modulation.
Phase	0–180 [deg]	Adjusts the depth of the chorus sound.
Feedback	0–127	Adjusts how much of the sound that is fed into the chorus is returned to the input.

NOTE

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
(*1)	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz], BYPASS

PATTERN DELAY

Parameter	Value	Explanation
Type	➡ "Delay Parameters(P.171)"	
Switch	OFF, ON	Switches the delay on/off.
Delay parameters	Configure the parameters of the selected delay type. The available parameters differ depending on the type of delay you selected in Type. ➡ "Delay Parameters(P.171)"	
Level	0–127	Specifies the output level of the sound with delay applied.
Rev Send	0–127	Specifies the send level to the reverb.

Delay Parameters

OFF

Turns the effect off.

Delay

This is a stereo delay.

Parameter	Value	Explanation
Dly Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Dly Msec	1–1300	Adjusts the delay time from the direct sound until the delay sound is heard.
Dly Note	Note	
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS (*1)	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

T-Ctrl Dly (Time Control Delay)

This is a delay in which the delay time can be varied smoothly.

Parameter	Value	Explanation
Dly Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Dly Msec	1–1300	Adjusts the delay time from the direct sound until the delay sound is heard.
Dly Note	Note	
Acceleration	0–15	When you change the delay time, this specifies the time over which the current delay time changes to the specified delay time. This affects the speed of pitch change as well as the delay time.
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS (*1)	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.

Delay → Trem (delay → tremolo)

Tremolo is applied to the delay sound.

Parameter	Value	Explanation
Input	MONAURAL	The input is mono-mixed.
	STEREO	The sound is input in stereo.
Dly Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Dly Msec	1–1300	Adjusts the delay time from the direct sound until the delay sound is heard.
Dly Note	Note	
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS (*1)	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Trm Switch	OFF, ON	Switches the tremolo effect on/off

Parameter	Value	Explanation
Trm ModWave	This sets how the panning changes.	
	TRI	Triangle wave
	SQR	Square wave
	SIN	Sine wave
	SAW1	Sawtooth wave
	SAW2	
	TRP	Trapezoidal wave
Trm Sync	OFF, ON	If this is on, the tremolo synchronizes with the tempo.
Trm Hz	0.05–10.00 [Hz]	Adjusts the rate of the tremolo.
Trm Note	Note	
Trm Depth	0–127	Adjusts the depth of the tremolo.

2Tap PanDly (2Tap Pan Delay)

Delay sound is heard in the two locations you specify.

Parameter	Value	Explanation
Dly Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Dly Msec	1–1300	Adjusts the time until the second delay sound is heard.
Dly Note	Note	
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS (*1)	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Dly1 Pan	L64–63R	Adjusts the pan position of Delay 1.
Dly2 Pan	L64–63R	Adjusts the pan position of Delay 2.
Dly1 Level	0–127	Adjusts the volume of Delay 1.
Dly2 Level	0–127	Adjusts the volume of Delay 2.

3Tap PanDly (3Tap Pan Delay)

Delay sound is heard in the three locations you specify.

Parameter	Value	Explanation
Dly Sync	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Dly Msec	1–2600	Delay time of the third delay sound after the original sound is heard.
Dly Note	Note	
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS (*1)	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Dly1 Pan	L64–63R	Adjusts the pan position of Delay 1.
Dly2 Pan	L64–63R	Adjusts the pan position of Delay 2.
Dly3 Pan	L64–63R	Adjusts the pan position of Delay 3.
Dly1 Level	0–127	Adjusts the volume of Delay 1.
Dly2 Level	0–127	Adjusts the volume of Delay 2.
Dly3 Level	0–127	Adjusts the volume of delay 3.

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
(*1)	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz], BYPASS

PATTERN REVERB

Parameter	Value	Explanation
Type	➡ "Reverb Parameters(P.173)"	
Switch	OFF, ON	Switches the reverb on/off.
Reverb parameters	Configure the parameters of the selected reverb type. The available parameters differ depending on the type of reverb you selected in Type. ➡ "Reverb Parameters(P.173)"	
Level	0–127	Specifies the output level of the sound with reverb applied.

Reverb Parameters

OFF

Turns the effect off.

INTEGRA7Rev (INTEGRA 7 Reverb)

Parameter	Value	Explanation
Char	ROOM1, ROOM2, HALL1, HALL2, PLATE	Selects the types of reverb.
PreDelay	0–100	Adjusts the delay time from when the direct sound plays until the reverb sound is heard.
Time	0.1–10.0 [sec]	Adjusts the decay length of the reverb sound.
Density	0–127	Adjusts the density of the reverb sound.
Diffusion	0–127	The greater the change over time in density of the reverb sound, the denser the reverb sounds over time. This effect is especially noticeable with long reverb times.
LF Damp	0–100	Adjusts the low-frequency portion of the reverb.
HF Damp	0–100	Adjusts the high-frequency portion of the reverb.
Spread	0–127	Adjusts the reverb spread.
Tone	0–127	Adjusts the tonal character of the reverb.

Warm Hall

Parameter	Value	Explanation
PreDelay	0.0–100.0	Adjusts the delay time from when the direct sound plays until the reverb sound is heard.
Time	0.3–30.0 [sec]	Adjusts the decay length of the reverb sound.
Pre LPF	16–15000 [Hz], BYPASS (*1)	Adjusts the frequency below which to cut the high-frequency portion of the sound fed into the reverb.
Pre HPF	16–15000 [Hz], BYPASS (*2)	Adjusts the frequency below which to cut the low-frequency portion of the sound fed into the reverb.
PreLpLPF	16–15000 [Hz], BYPASS (*1)	Adjusts the frequency above which to cut the high-frequency portion of the extended reverberation.
Diffusion	0–127	Adjusts the change in the density of the reverb over time.
HF Damp F	1000–8000 [Hz] (*3)	Adjusts the frequency above which the high-frequency portion of the reverb sound is cut.
HF Damp R	0.1–1.0	Adjusts how much to attenuate the high-frequency portion of the reverb.

Hall

Parameter	Value	Explanation
PreDelay	0.0–100.0	Adjusts the delay time from when the direct sound plays until the reverb sound is heard.
Time	0–127	Adjusts the decay length of the reverb sound.
Size	1–8	Adjusts the size of the room/hall.
High Cut	160–12500 [Hz], BYPASS (*4)	Frequency above which the high-frequency portion of the final output sound is cut (BYPASS: no cut)
Density	0–127	Adjusts the density of the reverb sound.
Diffusion	0–127	The greater the change over time in density of the reverb sound, the denser the reverb sounds over time. This effect is especially noticeable with long reverb times.
LF Damp F	50–4000 [Hz] (*5)	Adjusts the frequency below which the low-frequency portion of the reverb sound is cut.

Parameter	Value	Explanation
LF Damp G	-36–0 [dB]	Adjusts the LF damp attenuation amount (0: no effect).
HF DampF	4000–12500 [Hz] (*6)	Adjusts the frequency above which the high-frequency portion of the reverb sound is cut.
HF Damp G	-36–0 [dB]	Adjusts the HF damp attenuation amount (0: no effect).

GS Reverb

Parameter	Value	Explanation
Char	ROOM1, ROOM2, ROOM3, HALL1, HALL2, PLATE, DELAY, PAN-DELAY	This selects the reverb type.
Pre LPF	0–7	Adjusts the amount of high-frequency attenuation for the sound fed into the reverb.
Time	0–127	Adjusts the decay length of the reverb sound.
Feedback	0–127	Adjusts the level at which the reverb sound is returned to the input.

SRV-2000

Parameter	Value	Explanation
Selection	R0.3, R1.0, R7.0, R15, R22, R26, R32, R37, H15, H22, H26, H32, H37, P-B, P-A	Selects the type of reverb offered by the Roland SRV-2000 digital reverb.
PreDelay	0–160	Adjusts the delay time from when the direct sound plays until the reverb sound is heard.
Time	0.1–99.0 [sec]	Adjusts the decay length of the reverb sound.
HF Damp	0.05–1.00	Adjusts the high-frequency portion of the reverb.
Density	0–9	Adjusts the density of the late reverberation.
Attack Gain	0–9	Adjusts the gain of the early reflections.
Attack Time	0–9	Adjusts the time of the early reflections.
ER Density	0–9	Adjusts the density of the early reflections.
ER Level	0–99	Adjusts the volume of the early reflections.
Low Freq	0.04–1.00 [kHz]	Sets the center frequency of the low range.
Low Gain	-24–+12 [dB]	Adjusts the boost/cut of the low frequency range.
Mid Freq	0.25–9.99 [kHz]	Sets the center frequency of the mid range.
Mid Gain	-24–+12 [dB]	Adjusts the amount of boost/cut of the mid-frequency range.
Mid Q	0.2–9.0	Sets the bandwidth of the mid-frequency range. Higher values make the bandwidth narrower.
HighFreq	0.80–9.99 [kHz]	Sets the center frequency of the high range.
HighGain	-24–+12 [dB]	Adjusts the boost/cut of the high frequency range.
High Q	0.2–9.0	Sets the bandwidth of the high frequency range. Higher values make the bandwidth narrower.

SRV-2000NL （NON-LINEAR）

Parameter	Value	Explanation
PreDelay	0–120	Adjusts the delay time from when the direct sound plays until the reverb sound is heard.
ReverbTime	0.9–+99.0 [sec]	Adjusts the decay length of the reverb sound.
GateTime	10–450	Adjusts the time it takes to cut off the reverb once the reverb begins to sound.
Low Freq	0.04–1.00 [kHz]	Sets the center frequency of the low range.
Low Gain	-24–+12 [dB]	Adjusts the boost/cut of the low frequency range.
Mid Freq	0.25–9.99 [kHz]	Sets the center frequency of the mid range.
Mid Gain	-24–+12 [dB]	Adjusts the amount of boost/cut of the mid-frequency range.
Mid Q	0.2–9.0	Sets the bandwidth of the mid-frequency range. Higher values make the bandwidth narrower.
HighFreq	0.80–9.99 [kHz]	Sets the center frequency of the high range.
HighGain	-24–+12 [dB]	Adjusts the boost/cut of the high frequency range.

Parameter	Value	Explanation
Hi Q	0.2–9.0	Sets the bandwidth of the high frequency range. Higher values make the bandwidth narrower.

GM2 Reverb

Parameter	Value	Explanation
Char	SMALL ROOM, MEDIUM ROOM, LARGE ROOM, MEDIUM HALL, LARGE HALL, PLATE	This selects the reverb type.
Time	0–127	Adjusts the decay length of the reverb sound.

Gated Reverb

Parameter	Value	Explanation
Type	NORMAL	This is a standard gate reverb.
	REVERSE	This is a reverb for which the sound ramps up in volume.
	SWEEP1	The reverb sound moves from right to left.
	SWEEP2	The reverb sound moves from left to right.
Pre Delay	0.0–100.0 [ms]	Adjusts the delay time from when the direct sound plays until the reverb sound is heard.
Gate Time	5–500 [ms]	Adjusts the decay length of the reverb sound.

Shimmer Reverb

Parameter	Value	Explanation
Low Damp	-50–+50	Adjusts how much to attenuate the low-frequency portion of the reverb.
High Damp	-50–+50	Adjusts how much to attenuate the high-frequency portion of the reverb.
Time	0.1–10.0 [s]	Adjusts the decay length of the reverb sound.
Density	1–10	Adjusts the density of the reverb sound.
Pre Delay	0–200 [ms]	Adjusts how long it takes until the reverb sound is heard, after the direct sound plays.
Modulation Rate	0–100	Adjusts the speed at which the reverb sound is modulated.
Modulation Depth	0–100	Adjusts the depth to which the reverb sound is modulated.
Pitch1 Coarse	-24–+24 [semi]	Adjusts the amount of pitch shift applied for pitch shift 1 (in semitones).
Pitch2 Coarse	-24–+24 [semi]	Adjusts the amount of pitch shift applied for pitch shift 2 (in semitones).
Pitch1 Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into pitch shift 1. Negative (-) settings invert the phase.
Pitch2 Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into pitch shift 2. Negative (-) settings invert the phase.
Level 1	0–100	Adjusts the volume of pitch shift 1.
Level 2	0–100	Adjusts the volume of pitch shift 2.

NOTE

(*1)	16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12500, 15000 [Hz], BYPASS
(*2)	BYPASS, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12500, 15000 [Hz]
(*3)	1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]
(*4)	160, 200, 250, 320, 400, 500, 640, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000, 5000, 6400, 8000, 10000, 12500 [Hz], BYPASS
(*5)	50, 64, 80, 100, 125, 160, 200, 250, 320, 400, 500, 640, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000 [Hz]
(*6)	4000, 5000, 6400, 8000, 10000, 12500 [Hz]

Sound List

Waveform List

PCM Tone

No.	Name
001	Sine
002	Cosine
003	JP-8 Sine
004	VS-Triangle
005	700 Triangle
006	JP-8 Tri
007	MG Tri Saw
008	Ramp Wave
009	Digital Saw
010	Fat Square
011	JX-8P Pulse
012	SH-101SubOSC
013	SubOSC Wave1
014	SubOSC Wave2
015	SubOSC Wave3
016	Cutters
017	Nasty
018	Wave Table
019	Wally Wave
020	Brusky Wave
021	5th Wave
022	Sync Wave
023	FeedbackWave
024	Vib Wave
025	Digi Wave 1
026	Digi Wave 2
027	FM Bell
028	Ballad Organ
029	Organ 1
030	Organ 2
031	Organ 3
032	Organ 4
033	Bell Wave 1
034	Bell Wave 2
035	DIGI Bell
036	DIGI Bell +
037	X-Mod Wave
038	FM Brass
039	White Noise
040	Pink Noise
041	MMG Pink Nz
042	Metal OSC
043	Warm Pad
044	JD Piano A
045	JD Piano C
046	Wurly mp
047	Wurly mf
048	Wurly ff
049	Kalimba
050	Xylophone
051	Marimba
052	Glocken

No.	Name
053	Glockenspiel

Rhythm Set

No.	Name
001	Sine
002	Cosine
003	JP-8 Sine
004	VS-Triangle
005	700 Triangle
006	JP-8 Tri
007	MG Tri Saw
008	Ramp Wave
009	Digital Saw
010	Fat Square
011	JX-8P Pulse
012	SH-101SubOSC
013	SubOSC Wave1
014	SubOSC Wave2
015	SubOSC Wave3
016	Cutters
017	Nasty
018	Wave Table
019	Wally Wave
020	Brusky Wave
021	5th Wave
022	Sync Wave
023	FeedbackWave
024	Vib Wave
025	Digi Wave 1
026	Digi Wave 2
027	FM Bell
028	Ballad Organ
029	Organ 1
030	Organ 2
031	Organ 3
032	Organ 4
033	Bell Wave 1
034	Bell Wave 2
035	DIGI Bell
036	DIGI Bell +
037	X-Mod Wave
038	FM Brass
039	White Noise
040	Pink Noise
041	MMG Pink Nz
042	Metal OSC
043	808 Kick 1
044	808 Kick 2
045	808 Kick 3
046	808 Kick 4
047	909 Kick 1
048	909 Kick 2
049	909 Kick 3
050	909 Kick 4
051	909 Kick 5
052	909 Kick 6
053	707 Kick 1
054	707 Kick 2
055	606 Kick 1
056	606 Kick 2

No.	Name
057	Condor 808 K
058	Super 808 K
059	Ana Whack K
060	Sat Kick
061	DAPunchyKick
062	DuffLoFiKick
063	EDM Kick 1
064	EDM Kick 2
065	EDM Kick 3
066	BigroomKick1
067	BigroomKick2
068	Dubstep Kick
069	HardlifeKick
070	RoughLayer K
071	Smallpunch K
072	Superthump K
073	Synth Kick 1
074	Synth Kick 2
075	Synth Kick 3
076	Synth Kick 4
077	FM Kick 1
078	FM Kick 2
079	Dirt Kick
080	Dirtbag Kick
081	Futurelap K
082	Lo-Bit Kick
083	Lo-Fi Kick 1
084	MG888 Regi K
085	Modular Kick
086	Punchcake K
087	Scooppunch K
088	Stacked Kick
089	Sucker Kick
090	Worker Kick
091	HipHop Kick
092	Thickstack K
093	Tube Kick
094	106 Kick
095	Lo-Fi Kick 2
096	Power Kick
097	LoBit Kick1P
098	JungleKick P
099	Reg.Kick f
100	Reg.Kick ff
101	Reg.Kick ffP
102	808 Snare 1
103	808 Snare 2
104	808 Snare 3
105	808 Snare 4
106	808 Snare 5
107	808 Snare 6
108	909 Snare 1
109	909 Snare 2
110	909 Snare 3
111	909 Snare 4
112	909 Snare 5
113	909 Snare 6
114	909 Snare 7
115	909 Snare 8
116	909 Snare 9
117	707 Snare 1
118	707 Snare 2

No.	Name
119	606 Snare 1
120	606 Snare 2
121	Alt Snare
122	Poster Snare
123	Dry Snare
124	Lofipop Snr
125	MG888 Snare1
126	Transist Snr
127	Driven 606SD
128	Hi Snare
129	FM Snare 1
130	FM Snare 2
131	FM Snare 3
132	Cubangrit SD
133	Ring Snare
134	Snr Scratch
135	Sick Snare
136	Trap Snare
137	Dubstep Snr
138	Futurebs SD1
139	106 Snare
140	Smakk Snare
141	Woodskin Snr
142	Dopehitta SD
143	LofihavanaSD
144	Skinsmack SD
145	SmackBack SD
146	SmrtpunchrSD
147	Snappy Snare
148	DanceHall SD
149	Sat Snare
150	Purephat Snr
151	Lo-Bit Snr P
152	Jungle Snr P
153	Jungle Snr
154	Futurebs SD2
155	Analog Snr 1
156	Analog Snr 2
157	Analog Snr 3
158	Chiptune SD1
159	Chiptune SD2
160	MG888 Tr Rim
161	Deep End Snr
162	MG888 Snare2
163	Snr & Rim 1
164	Snr & Rim 2
165	EDM Snr&Clap
166	DA Punchy SD
167	Snr&DistClap
168	Snr&RealClap
169	Snr&SynClap
170	3Blend Snare
171	EDM Snare
172	SD&FingerSnp
173	Reg.Snr1 p
174	Reg.Snr1mf
175	Reg.Snr1 f
176	Reg.Snr1ff
177	Reg.Snr1ff P
178	Reg.Snr2 p
179	Reg.Snr2 f
180	Reg.Snr2ff P

No.	Name
181	808 Rimshot
182	909 Rimshot
183	707 Rimshot
184	8-Bit Slap
185	Lo-Fi Rim
186	Wild Stick
187	808 Cl HiHat
188	808 Cl&Op HH
189	909 Cl HH 1
190	909 Cl HH 2
191	707 Cl HiHat
192	606 ClHH 1
193	606 ClHH 2
194	606 ClHH 3
195	606 ClHH 4
196	606 ClHH 5
197	606 ClHH 6
198	FM Cl HiHat1
199	FM Cl HiHat2
200	ALT Cl HH
201	Dryice HiHat
202	FilterlushHH
203	NYC HiHat
204	OD HiHat
205	Vibey HiHat
206	Analog Cl HH
207	Noise Cl HH
208	Sat Cl HH
209	CompClosedHH
210	Keep It ClHH
211	Simple Cl HH
212	Solid HiHat
213	VR HiHat
214	Dry Cl HiHat
215	Lo-Bit Cl HH
216	Reg.CHH p
217	Reg.CHH mf
218	Reg.CHH f
219	Reg.CHH ff
220	Rock ClHH1 p
221	Rock ClHH1mf
222	Rock ClHH1 f
223	Rock ClHH2 p
224	Rock ClHH2mf
225	Rock ClHH2 f
226	Jazz ClHH1 p
227	Jazz ClHH1mf
228	Jazz ClHH1 f
229	Jazz ClHH2 p
230	Jazz ClHH2mf
231	Jazz ClHH2 f
232	Cl HiHat
233	808 Op HiHat
234	909 OpHiHat1
235	909 OpHiHat2
236	909 OpHiHat3
237	707 Op HiHat
238	606 OpHH 1
239	606 OpHH 2
240	606 OpHH 3
241	606 OpHH 4
242	606 OpHH 5

No.	Name
243	606 OpHH 6
244	Dirt Op HH
245	Analog Op HH
246	Noise Op HH
247	Sat Op HH
248	Grunt Op HH
249	Lo-Bit Op HH
250	Rideout Cym
251	Reg.OHH mf
252	Reg.OHH f
253	Reg.OHH ff
254	Rock OpHH p
255	Rock OpHH f
256	Jazz OpHH p
257	Jazz OpHH mf
258	Jazz OpHH f
259	Op HiHat
260	Reg.PHH mf
261	Reg.PHH f
262	Jazz PdHH p
263	Jazz PdHH f
264	Pedal HiHat
265	808 Hi Tom
266	808 Mid Tom
267	808 Low Tom
268	909 Hi Tom
269	909 Mid Tom
270	909 Low Tom
271	707 Hi Tom
272	707 Mid Tom
273	707 Low Tom
274	606 Tom 1
275	606 Tom 2
276	606 Tom 3
277	606 Tom 4
278	Reg.1 H Tom
279	Reg.1 M Tom
280	Reg.1 FLTom
281	Reg.2 Tom 1
282	Reg.2 Tom 2
283	Reg.2 Tom 3
284	Reg.2 Tom 4
285	Reg.2 Tom 5
286	808 CrashCym
287	909 Cr Cym 1
288	909 Cr Cym 2
289	909 Cr Cym 3
290	909 Cr Cym 4
291	707 CrashCym
292	606 Cymbal 1
293	606 Cymbal 2
294	Glassy Cym
295	Rock CrCym1p
296	Rock CrCym1f
297	Rock CrCym2p
298	Rock CrCym2f
299	Jazz CrCym p
300	Jazz CrCym f
301	Crash Cymbal
302	Crash
303	909 RideCym1
304	909 RideCym2

No.	Name
305	909 RideCym3
306	707 Ride Cym
307	Rock RdCym1p
308	Rock RdCym1f
309	Rock RdCym2p
310	Rock RdCym2f
311	Jazz RdCym p
312	Jazz RdCymmf
313	Jazz RdCym f
314	Ride
315	Ride Bell
316	Rock China
317	China Cym
318	Rock Splash
319	808 Clap
320	909 Clap
321	707 Clap
322	Clap Stop
323	Clap
324	Noisegranule
325	EDM Clap
326	Flump Clap
327	DirtypitchCP
328	MG888 Clap 1
329	MG888 Clap 2
330	Overlayer CP
331	Powerclap CP
332	Ripped Snare
333	Analog Clap
334	Extendo Clap
335	Craaak
336	Clp&FingSnap
337	808 Cowbell
338	707 Cowbell
339	AnalogPerc 1
340	AnalogPerc 2
341	AnalogPerc 3
342	FM Low Tom
343	BrightSyn CB
344	PC-2 Cowbell
345	Live Cowbell
346	Cowbell
347	707 Tamb
348	Foleytamb
349	Tambourine
350	808 Claves
351	MG888 Claves
352	Analog Snr 4
353	Future Block
354	Blockorganic
355	808 HiConga
356	808 MidConga
357	808 LowConga
358	Analog Snr 5
359	808 Maracas
360	Maracas 1
361	Maracas 2
362	Shake
363	CrunchShaker
364	Wideshake
365	FM Beep
366	FM CrashCym

No.	Name
367	FM Op HiHat
368	FM Clap
369	FM Hi Tom
370	FM Mid Tom
371	AnalogPerc 4
372	AnalogPerc 5
373	AnalogPerc 6
374	AnalogPerc 7
375	Bounce
376	FX Blipper
377	Perc Ping
378	FM Wobble
379	MG888 Rim
380	Ana MtlPerc1
381	Ana MtlPerc2
382	AnalogPerc 8
383	AnalogPerc 9
384	AnalogPerc10
385	Chiptune FX1
386	Chiptune FX2
387	Chiptune FX3
388	Dr.Beat
389	Hi DistShort
390	Modular FX 1
391	Modular FX 2
392	Mental Perc
393	PC-2 FX 1
394	PC-2 FX 2
395	PC-2 FX 3
396	PC-2 FX 4
397	PC-2 Spacers
398	Perc Box
399	Spring Blip
400	Syndrip
401	Wupwup
402	Trap Synth 1
403	Trap Synth 2
404	Tussle
405	Perc Sunrise
406	Chillrim
407	Snappy
408	Finger Snap
409	FoleysnapsSD
410	Block Hi
411	Block Lo
412	Click Box
413	Udu Pot Long
414	Udu Pot Mute
415	Udu PotShort
416	Samba Perc
417	Woodstrike
418	Chekere
419	Bongo Hi Mt
420	Bongo Hi Slp
421	Bongo Hi Op
422	Bongo Lo Op
423	Bongo Lo Slp
424	Conga Hi Mt
425	Conga Lo Mt
426	Conga Hi Slp
427	Conga Lo Slp
428	Conga Hi Op

No.	Name
429	Conga Lo Op
430	Conga Slp Op
431	Conga Efx
432	Conga Thumb
433	Conga 2H Op
434	Conga 2H Mt
435	Conga 2H Slp
436	Conga 2L Op
437	Conga 2L Mt
438	Timbale 1
439	Timbale 2
440	Timbale 3
441	Timbale 4
442	Timbles LoOp
443	Timbles LoMt
444	TimbalesHand
445	Timbales Rim
446	TmbSideStick
447	TablaBayam 1
448	TablaBayam 2
449	TablaBayam 3
450	TablaBayam 4
451	TablaBayam 5
452	TablaBayam 6
453	TablaBayam 7
454	O'Skool Hit
455	Orch. Hit
456	Punch Hit
457	Philly Hit
458	ClassicHseHt
459	Tao Hit
460	TB Blip
461	Brass Hit
462	Water Drop
463	MetallicShot
464	Boing
465	Freeze
466	Trap Horn
467	Glass
468	Metal Bang
469	Spoon Hit
470	Tube FX
471	Vinyl Noise
472	Metronome 1
473	Metronome 2
474	MC500 Beep 1
475	MC500 Beep 2
476	Vibe AtkNz
477	SteelGtrNz
478	TVF Trig
479	Digi Attack
480	Chamberclick
481	DC

Wavetable

No.	Name
001	4waves morph
002	Sine Garden
003	SineToDist 1
004	SineToDist 2
005	Sine Blend
006	Sqr To Saw
007	Saw Sync
008	Morph Mode
009	EffEmm One
010	FM Bells
011	EffEmm Two
012	FM Parade
013	FM Sweep
014	FM Oct Mod
015	Circuit
016	Inharmonic
017	Can Tank
018	Spect2
019	UniSqr Spctl
020	Saw Spectral
021	Hubble
022	Harmonic
023	Uni Sqr Warp
024	Rhythm Warp
025	Mosquito
026	Vowel Sweep
027	Voxylor
028	Future Acid
029	Guitar Sweep
030	IntrmissivWT
031	Ripple

Tone List

SH-4d OSC model

No.	Name	Category	MSB	LSB	PC
001	Brilliant	38:Synth PolyKey	88	64	001
002	Synth Bass 1	21:Synth Bass	88	64	002
003	Synth Lead 1	34:Synth Lead	88	64	003
004	Willkommen!	36:Synth Pad/Str	88	64	004
005	November 2019	36:Synth Pad/Str	88	64	005
006	CollapsedCircuit	39:Synth FX	88	64	006
007	Echoes from Eons	38:Synth PolyKey	88	64	007
008	SK Seqsy Pluck	40:Synth Seq/Pop	88	64	008
009	1901 Bass	21:Synth Bass	88	64	009
010	JU OSC 7th Stack	34:Synth Lead	88	64	010
011	Undulation Rate	39:Synth FX	88	64	011
012	28 Saw Hit & Run	44:Hit	88	64	012
013	Brasscal	35:Synth Brass	88	64	013
014	Recently Bass	21:Synth Bass	88	64	014
015	Bend Chord	38:Synth PolyKey	88	64	015
016	Wheel Drums	39:Synth FX	88	64	016
017	Mod Apart Pluck	34:Synth Lead	88	64	017
018	Cinematic	36:Synth Pad/Str	88	64	018
019	SH-4d Pulse	40:Synth Seq/Pop	88	64	019
020	Minor Riser	42:Pulsating	88	64	020
021	Dark Wave	38:Synth PolyKey	88	64	021
022	Pls Arpg Me <3	40:Synth Seq/Pop	88	64	022
023	Fragile Pad	36:Synth Pad/Str	88	64	023
024	Double JX Pad	36:Synth Pad/Str	88	64	024
025	Inf Down	42:Pulsating	88	64	025
026	Rotary Organ	38:Synth PolyKey	88	64	026
027	5th Stack Lead	34:Synth Lead	88	64	027
028	Brite Syn Brass	35:Synth Brass	88	64	028
029	Switch On	39:Synth FX	88	64	029
030	Super Super	34:Synth Lead	88	64	030
031	Strange Point	38:Synth PolyKey	88	64	031
032	Synth Hall	36:Synth Pad/Str	88	64	032
033	7 Lead	34:Synth Lead	88	64	033
034	Kick LFO Bass 2	21:Synth Bass	88	64	034
035	PulseStack Stab1	44:Hit	88	64	035
036	PulseStack Stab2	44:Hit	88	64	036
037	Perfect Rise	36:Synth Pad/Str	88	64	037
038	Alternate	44:Hit	88	64	038
039	Progressive Plk	40:Synth Seq/Pop	88	64	039
040	Pulsating Pad	36:Synth Pad/Str	88	64	040
041	Matrix Sweep FX	39:Synth FX	88	64	041
042	Step F Lead	42:Pulsating	88	64	042
043	PsyTrance Bass 2	21:Synth Bass	88	64	043
044	Electro Bow	34:Synth Lead	88	64	044
045	808 Long Bass	21:Synth Bass	88	64	045
046	Black Hole Pluck	38:Synth PolyKey	88	64	046
047	Techy Stab	44:Hit	88	64	047
048	Saw&Pulse Bass	21:Synth Bass	88	64	048
049	Synth Pad/Str 1	36:Synth Pad/Str	88	64	049
050	Synth Pad/Str 2	36:Synth Pad/Str	88	64	050
051	Synth Pad/Str 3	36:Synth Pad/Str	88	64	051
052	Synth Pad/Str 4	36:Synth Pad/Str	88	64	052
053	Synth Pad/Str 5	36:Synth Pad/Str	88	64	053
054	Synth Pad/Str 6	36:Synth Pad/Str	88	64	054
055	Synth PolyKey 1	38:Synth PolyKey	88	64	055
056	Synth PolyKey 2	38:Synth PolyKey	88	64	056

No.	Name	Category	MSB	LSB	PC
057	Synth Lead 2	34:Synth Lead	88	64	057
058	Synth Bass 2	21:Synth Bass	88	64	058
059	Synth Bass 3	21:Synth Bass	88	64	059
060	Synth Pad/Str 7	36:Synth Pad/Str	88	64	060
061	Synth Pad/Str 8	36:Synth Pad/Str	88	64	061
062	Synth Pad/Str 9	36:Synth Pad/Str	88	64	062
063	Pulsating 1	42:Pulsating	88	64	063
064	Synth Pad/Str 10	36:Synth Pad/Str	88	64	064
065	Synth Pad/Str 11	36:Synth Pad/Str	88	64	065
066	Synth Pad/Str 12	36:Synth Pad/Str	88	64	066
067	Synth Pad/Str 13	36:Synth Pad/Str	88	64	067
068	Synth Pad/Str 14	36:Synth Pad/Str	88	64	068
069	Synth Pad/Str 15	36:Synth Pad/Str	88	64	069
070	Bell 1	14:Bell	88	64	070
071	Synth Brass 1	35:Synth Brass	88	64	071
072	Synth Bass 4	21:Synth Bass	88	64	072
073	Synth Bass 5	21:Synth Bass	88	64	073
074	Synth Bass 6	21:Synth Bass	88	64	074
075	Synth PolyKey 3	38:Synth PolyKey	88	64	075
076	Bell 2	14:Bell	88	64	076
077	Synth Lead 3	34:Synth Lead	88	64	077
078	Synth Lead 4	34:Synth Lead	88	64	078
079	Synth Lead 5	34:Synth Lead	88	64	079
080	Synth Lead 6	34:Synth Lead	88	64	080
081	Synth Bass 7	21:Synth Bass	88	64	081
082	Synth Seq/Pop 1	40:Synth Seq/Pop	88	64	082
083	Pulsating 2	42:Pulsating	88	64	083
084	Synth FX 1	39:Synth FX	88	64	084
085	Synth FX 2	39:Synth FX	88	64	085
086	Chordy Pants	42:Pulsating	88	64	086
087	Tube FX	39:Synth FX	88	64	087
088	Quad Saw	38:Synth PolyKey	88	64	088
089	Synth Lead 7	34:Synth Lead	88	64	089
090	Synth Bass 8	21:Synth Bass	88	64	090
091	Synth PolyKey 4	38:Synth PolyKey	88	64	091
092	Heavy J Pluck	40:Synth Seq/Pop	88	64	092
093	LongStory2B Hold	21:Synth Bass	88	64	093
094	Jovian Strings	36:Synth Pad/Str	88	64	094
095	Additive 4 Bass	21:Synth Bass	88	64	095
096	Yuya Bass R4	21:Synth Bass	88	64	096
097	Phoenix Pf	14:Bell	88	64	097
098	Asimov Bots	34:Synth Lead	88	64	098
099	14 Saw OctUnison	34:Synth Lead	88	64	099
100	NeoWorldSymphony	36:Synth Pad/Str	88	64	100
101	Tweak Box	21:Synth Bass	88	64	101
102	Modul Arpg	39:Synth FX	88	64	102
103	Bubble Boy	34:Synth Lead	88	64	103
104	2 Many Cables	39:Synth FX	88	64	104
105	Melancholy	34:Synth Lead	88	64	105
106	Smooth Fat	21:Synth Bass	88	64	106
107	Liquid Stab	36:Synth Pad/Str	88	64	107
108	Simple Pluck	34:Synth Lead	88	64	108
109	Cacophony Stack	36:Synth Pad/Str	88	64	109
110	Dirty SSaws	34:Synth Lead	88	64	110
111	Sidechain SSaws	42:Pulsating	88	64	111
112	Super Square!	34:Synth Lead	88	64	112
113	Super Pluck	40:Synth Seq/Pop	88	64	113
114	Saw Delay	38:Synth PolyKey	88	64	114
115	Standard Lead	34:Synth Lead	88	64	115
116	HPF Lead	40:Synth Seq/Pop	88	64	116
117	HPF Sweep Pad	36:Synth Pad/Str	88	64	117
118	Ya-I	42:Pulsating	88	64	118

No.	Name	Category	MSB	LSB	PC
119	Saw Oct Stack Bs	21:Synth Bass	88	64	119
120	7th Stack Lead	34:Synth Lead	88	64	120
121	Phaser Pad	36:Synth Pad/Str	88	64	121
122	Flanger Pad	36:Synth Pad/Str	88	64	122
123	S-Saw Stack Key	38:Synth PolyKey	88	64	123
124	Solid Lead	34:Synth Lead	88	64	124
125	Buzz Lead	34:Synth Lead	88	64	125
126	Saw Stack Stab	36:Synth Pad/Str	88	64	126
127	Silent Lead	34:Synth Lead	88	64	127
128	Bit Force	40:Synth Seq/Pop	88	64	128
129	Rumors Bass	21:Synth Bass	88	65	001
130	Analog Magic	34:Synth Lead	88	65	002
131	Kick LFO Bass 1	21:Synth Bass	88	65	003
132	Bit Bass	21:Synth Bass	88	65	004
133	Bit Bass SQ	21:Synth Bass	88	65	005
134	B Pluck	40:Synth Seq/Pop	88	65	006
135	BP Wide	38:Synth PolyKey	88	65	007
136	7 Lead P	34:Synth Lead	88	65	008
137	PWM SQ	38:Synth PolyKey	88	65	009
138	Tri Kick Bass	21:Synth Bass	88	65	010
139	Analog Stab	44:Hit	88	65	011
140	Happy Lead	34:Synth Lead	88	65	012
141	SuperSaw Pad	36:Synth Pad/Str	88	65	013
142	LoFi Ravy	38:Synth PolyKey	88	65	014
143	US House Bass	21:Synth Bass	88	65	015
144	JUNO Reso Pad	36:Synth Pad/Str	88	65	016
145	SSaw&Sine Pad	34:Synth Lead	88	65	017
146	Quad Color	36:Synth Pad/Str	88	65	018
147	Sunset Pad	36:Synth Pad/Str	88	65	019
148	Fall Down FX	39:Synth FX	88	65	020
149	4D Stab	44:Hit	88	65	021
150	Fly High Pad	36:Synth Pad/Str	88	65	022
151	PsyTrance Bass 1	21:Synth Bass	88	65	023
152	Pop Pop Sqr	40:Synth Seq/Pop	88	65	024
153	Noise Impact	39:Synth FX	88	65	025
154	808 Bass	21:Synth Bass	88	65	026
155	Trance Chord	36:Synth Pad/Str	88	65	027
156	Saw&Noise Pluck	34:Synth Lead	88	65	028
157	Epic Pluck	34:Synth Lead	88	65	029
158	Wow!!	39:Synth FX	88	65	030
159	Sine Lead	34:Synth Lead	88	65	031
160	Soft Syn Brass	35:Synth Brass	88	65	032
161	Siren	39:Synth FX	88	65	033
162	Rituals	36:Synth Pad/Str	88	65	034
163	Wind Wave 1	39:Synth FX	88	65	035
164	Whistle	34:Synth Lead	88	65	036
165	Wah Keys	38:Synth PolyKey	88	65	037
166	Round Bass	21:Synth Bass	88	65	038
167	Bass Saw	21:Synth Bass	88	65	039
168	Synth Pad/Str 16	36:Synth Pad/Str	88	65	040
169	Synth Pad/Str 17	36:Synth Pad/Str	88	65	041
170	Synth Pad/Str 18	36:Synth Pad/Str	88	65	042
171	Synth Pad/Str 19	36:Synth Pad/Str	88	65	043
172	Synth Pad/Str 20	36:Synth Pad/Str	88	65	044
173	Synth Pad/Str 21	36:Synth Pad/Str	88	65	045
174	Synth Pad/Str 22	36:Synth Pad/Str	88	65	046
175	Synth Pad/Str 23	36:Synth Pad/Str	88	65	047
176	Synth Pad/Str 24	36:Synth Pad/Str	88	65	048
177	Synth Pad/Str 25	36:Synth Pad/Str	88	65	049
178	Synth Pad/Str 26	36:Synth Pad/Str	88	65	050
179	Synth Pad/Str 27	36:Synth Pad/Str	88	65	051
180	Synth Pad/Str 28	36:Synth Pad/Str	88	65	052

No.	Name	Category	MSB	LSB	PC
181	Synth Pad/Str 29	36:Synth Pad/Str	88	65	053
182	Synth Pad/Str 30	36:Synth Pad/Str	88	65	054
183	Synth Pad/Str 31	36:Synth Pad/Str	88	65	055
184	Synth Pad/Str 32	36:Synth Pad/Str	88	65	056
185	Synth PolyKey 5	38:Synth PolyKey	88	65	057
186	Synth PolyKey 6	38:Synth PolyKey	88	65	058
187	Synth PolyKey 7	38:Synth PolyKey	88	65	059
188	Synth PolyKey 8	38:Synth PolyKey	88	65	060
189	Pulsating 3	42:Pulsating	88	65	061
190	Pulsating 4	42:Pulsating	88	65	062
191	Pulsating 5	42:Pulsating	88	65	063
192	Synth Brass 2	35:Synth Brass	88	65	064
193	Synth Brass 3	35:Synth Brass	88	65	065
194	Synth Lead 8	34:Synth Lead	88	65	066
195	Synth Lead 9	34:Synth Lead	88	65	067
196	Synth Lead 10	34:Synth Lead	88	65	068
197	Synth Lead 11	34:Synth Lead	88	65	069
198	Synth Lead 12	34:Synth Lead	88	65	070
199	Synth Bass 9	21:Synth Bass	88	65	071
200	Synth Lead 13	34:Synth Lead	88	65	072
201	Synth Bass 10	21:Synth Bass	88	65	073
202	Synth Bass 11	21:Synth Bass	88	65	074
203	Synth Bass 12	21:Synth Bass	88	65	075
204	Synth Bass 13	21:Synth Bass	88	65	076
205	Synth Bass 14	21:Synth Bass	88	65	077
206	Synth Bass 15	21:Synth Bass	88	65	078
207	Synth Bass 16	21:Synth Bass	88	65	079
208	Synth Bass 17	21:Synth Bass	88	65	080
209	Synth Bass 18	21:Synth Bass	88	65	081
210	Synth Bass 19	21:Synth Bass	88	65	082
211	Synth Bass 20	21:Synth Bass	88	65	083
212	Synth Seq/Pop 2	40:Synth Seq/Pop	88	65	084
213	Synth Seq/Pop 3	40:Synth Seq/Pop	88	65	085
214	Synth Seq/Pop 4	40:Synth Seq/Pop	88	65	086
215	Synth FX 3	39:Synth FX	88	65	087
216	Synth Brass 4	35:Synth Brass	88	65	088
217	Synth Pad/Str 33	36:Synth Pad/Str	88	65	089
218	Synth Pad/Str 34	36:Synth Pad/Str	88	65	090
219	Synth PolyKey 9	38:Synth PolyKey	88	65	091
220	Synth PolyKey 10	38:Synth PolyKey	88	65	092
221	Synth PolyKey 11	38:Synth PolyKey	88	65	093
222	Synth PolyKey 12	38:Synth PolyKey	88	65	094
223	Synth PolyKey 13	38:Synth PolyKey	88	65	095
224	Synth PolyKey 14	38:Synth PolyKey	88	65	096
225	Synth Brass 5	35:Synth Brass	88	65	097
226	Synth Pad/Str 35	36:Synth Pad/Str	88	65	098
227	Synth PolyKey 15	38:Synth PolyKey	88	65	099
228	Synth PolyKey 16	38:Synth PolyKey	88	65	100
229	Synth Bass 21	21:Synth Bass	88	65	101
230	Synth Lead 14	34:Synth Lead	88	65	102
231	Synth Lead 15	34:Synth Lead	88	65	103
232	Synth PolyKey 17	38:Synth PolyKey	88	65	104
233	Synth Bass 22	21:Synth Bass	88	65	105
234	Synth PolyKey 18	38:Synth PolyKey	88	65	106
235	Synth Pad/Str 36	36:Synth Pad/Str	88	65	107
236	Synth FX 4	39:Synth FX	88	65	108
237	Synth FX 5	39:Synth FX	88	65	109
238	Synth FX 6	39:Synth FX	88	65	110
239	Synth Pad/Str 37	36:Synth Pad/Str	88	65	111
240	Synth Pad/Str 38	36:Synth Pad/Str	88	65	112
241	Synth PolyKey 19	38:Synth PolyKey	88	65	113
242	Synth PolyKey 20	38:Synth PolyKey	88	65	114

No.	Name	Category	MSB	LSB	PC
243	Synth PolyKey 21	38:Synth PolyKey	88	65	115
244	Synth PolyKey 22	38:Synth PolyKey	88	65	116
245	Synth PolyKey 23	38:Synth PolyKey	88	65	117
246	Synth Pad/Str 39	36:Synth Pad/Str	88	65	118
247	Synth Pad/Str 40	36:Synth Pad/Str	88	65	119
248	Synth Pad/Str 41	36:Synth Pad/Str	88	65	120
249	Pulsating 6	42:Pulsating	88	65	121
250	Pulsating 7	42:Pulsating	88	65	122
251	Pulsating 8	42:Pulsating	88	65	123
252	Synth Bass 23	21:Synth Bass	88	65	124
253	Synth Brass 6	35:Synth Brass	88	65	125
254	Synth Brass 7	35:Synth Brass	88	65	126
255	Synth Pad/Str 42	36:Synth Pad/Str	88	65	127
256	Synth PolyKey 24	38:Synth PolyKey	88	65	128
257	Synth Pad/Str 43	36:Synth Pad/Str	88	66	001
258	Synth Pad/Str 44	36:Synth Pad/Str	88	66	002
259	Synth Pad/Str 45	36:Synth Pad/Str	88	66	003
260	Synth PolyKey 25	38:Synth PolyKey	88	66	004
261	Synth Pad/Str 46	36:Synth Pad/Str	88	66	005
262	Synth PolyKey 26	38:Synth PolyKey	88	66	006
263	Synth Pad/Str 47	36:Synth Pad/Str	88	66	007
264	Synth Pad/Str 48	36:Synth Pad/Str	88	66	008
265	Synth Pad/Str 49	36:Synth Pad/Str	88	66	009
266	Synth Pad/Str 50	36:Synth Pad/Str	88	66	010
267	Synth Pad/Str 51	36:Synth Pad/Str	88	66	011
268	Synth Pad/Str 52	36:Synth Pad/Str	88	66	012
269	Synth Pad/Str 53	36:Synth Pad/Str	88	66	013
270	Bell 3	14:Bell	88	66	014
271	Synth PolyKey 27	38:Synth PolyKey	88	66	015
272	Synth Lead 16	34:Synth Lead	88	66	016
273	Pulsating 9	42:Pulsating	88	66	017
274	Synth Brass 8	35:Synth Brass	88	66	018
275	Synth Brass 9	35:Synth Brass	88	66	019
276	Synth Brass 10	35:Synth Brass	88	66	020
277	Synth Brass 11	35:Synth Brass	88	66	021
278	Synth Brass 12	35:Synth Brass	88	66	022
279	Synth Brass 13	35:Synth Brass	88	66	023
280	Synth Brass 14	35:Synth Brass	88	66	024
281	Synth Lead 17	34:Synth Lead	88	66	025
282	Synth Lead 18	34:Synth Lead	88	66	026
283	Synth Lead 19	34:Synth Lead	88	66	027
284	Synth Lead 20	34:Synth Lead	88	66	028
285	Synth Lead 21	34:Synth Lead	88	66	029
286	Synth Bass 24	21:Synth Bass	88	66	030
287	Synth Bass 25	21:Synth Bass	88	66	031
288	Synth Bass 26	21:Synth Bass	88	66	032
289	Synth Seq/Pop 5	40:Synth Seq/Pop	88	66	033
290	Synth Seq/Pop 6	40:Synth Seq/Pop	88	66	034
291	Synth Seq/Pop 7	40:Synth Seq/Pop	88	66	035
292	Synth Seq/Pop 8	40:Synth Seq/Pop	88	66	036
293	Synth Seq/Pop 9	40:Synth Seq/Pop	88	66	037
294	Synth Bass 27	21:Synth Bass	88	66	038
295	Synth FX 7	39:Synth FX	88	66	039
296	Synth FX 8	39:Synth FX	88	66	040
297	Synth PolyKey 28	38:Synth PolyKey	88	66	041
298	Synth PolyKey 29	38:Synth PolyKey	88	66	042
299	Synth PolyKey 30	38:Synth PolyKey	88	66	043
300	Synth Pad/Str 54	36:Synth Pad/Str	88	66	044
301	Synth Pad/Str 55	36:Synth Pad/Str	88	66	045
302	Synth PolyKey 31	38:Synth PolyKey	88	66	046
303	Synth PolyKey 32	38:Synth PolyKey	88	66	047
304	Synth Bass 28	21:Synth Bass	88	66	048

No.	Name	Category	MSB	LSB	PC
305	Synth Pad/Str 56	36:Synth Pad/Str	88	66	049
306	Synth Pad/Str 57	36:Synth Pad/Str	88	66	050
307	Synth FX 9	39:Synth FX	88	66	051
308	Synth PolyKey 33	38:Synth PolyKey	88	66	052
309	Synth Lead 22	34:Synth Lead	88	66	053
310	Synth Brass 15	35:Synth Brass	88	66	054
311	Synth Brass 16	35:Synth Brass	88	66	055
312	Synth Brass 17	35:Synth Brass	88	66	056
313	Synth PolyKey 34	38:Synth PolyKey	88	66	057
314	Synth PolyKey 35	38:Synth PolyKey	88	66	058
315	Synth Brass 18	35:Synth Brass	88	66	059
316	Synth Pad/Str 58	36:Synth Pad/Str	88	66	060
317	Synth Pad/Str 59	36:Synth Pad/Str	88	66	061
318	Synth Pad/Str 60	36:Synth Pad/Str	88	66	062
319	Synth Pad/Str 61	36:Synth Pad/Str	88	66	063
320	Synth Seq/Pop 10	40:Synth Seq/Pop	88	66	064
321	Synth PolyKey 36	38:Synth PolyKey	88	66	065
322	Bell 4	14:Bell	88	66	066
323	Bell 5	14:Bell	88	66	067
324	Synth Bass 29	21:Synth Bass	88	66	068
325	Synth FX 10	39:Synth FX	88	66	069
326	Synth Pad/Str 62	36:Synth Pad/Str	88	66	070
327	Synth Pad/Str 63	36:Synth Pad/Str	88	66	071
328	Synth Pad/Str 64	36:Synth Pad/Str	88	66	072
329	Synth Pad/Str 65	36:Synth Pad/Str	88	66	073
330	Synth Pad/Str 66	36:Synth Pad/Str	88	66	074
331	Synth Pad/Str 67	36:Synth Pad/Str	88	66	075
332	Synth Pad/Str 68	36:Synth Pad/Str	88	66	076
333	Synth PolyKey 37	38:Synth PolyKey	88	66	077
334	Synth Lead 23	34:Synth Lead	88	66	078
335	Synth Seq/Pop 11	40:Synth Seq/Pop	88	66	079
336	Synth Lead 24	34:Synth Lead	88	66	080
337	Synth Lead 25	34:Synth Lead	88	66	081
338	Synth Lead 26	34:Synth Lead	88	66	082
339	Synth Lead 27	34:Synth Lead	88	66	083
340	Synth Lead 28	34:Synth Lead	88	66	084
341	Synth Bass 30	21:Synth Bass	88	66	085
342	Synth Lead 29	34:Synth Lead	88	66	086
343	Synth Lead 30	34:Synth Lead	88	66	087
344	Synth Lead 31	34:Synth Lead	88	66	088
345	Synth Lead 32	34:Synth Lead	88	66	089
346	Synth Lead 33	34:Synth Lead	88	66	090
347	Synth Lead 34	34:Synth Lead	88	66	091
348	Synth Lead 35	34:Synth Lead	88	66	092
349	Synth Lead 36	34:Synth Lead	88	66	093
350	Synth Lead 37	34:Synth Lead	88	66	094
351	Synth Lead 38	34:Synth Lead	88	66	095
352	Synth Lead 39	34:Synth Lead	88	66	096
353	Synth Lead 40	34:Synth Lead	88	66	097
354	Synth Bass 31	21:Synth Bass	88	66	098
355	Synth Bass 32	21:Synth Bass	88	66	099
356	Synth Bass 33	21:Synth Bass	88	66	100
357	Synth Bass 34	21:Synth Bass	88	66	101
358	Synth Bass 35	21:Synth Bass	88	66	102
359	Synth Bass 36	21:Synth Bass	88	66	103
360	Synth Bass 37	21:Synth Bass	88	66	104
361	Synth Bass 38	21:Synth Bass	88	66	105
362	Synth Bass 39	21:Synth Bass	88	66	106
363	Synth Bass 40	21:Synth Bass	88	66	107
364	Synth Bass 41	21:Synth Bass	88	66	108
365	Synth Bass 42	21:Synth Bass	88	66	109
366	Synth Bass 43	21:Synth Bass	88	66	110

No.	Name	Category	MSB	LSB	PC
367	Synth Bass 44	21:Synth Bass	88	66	111
368	Synth Bass 45	21:Synth Bass	88	66	112
369	Synth Bass 46	21:Synth Bass	88	66	113
370	Synth Bass 47	21:Synth Bass	88	66	114
371	Synth Bass 48	21:Synth Bass	88	66	115
372	Synth Bass 49	21:Synth Bass	88	66	116
373	Synth Bass 50	21:Synth Bass	88	66	117
374	Synth Bass 51	21:Synth Bass	88	66	118
375	Synth Bass 52	21:Synth Bass	88	66	119
376	Synth Bass 53	21:Synth Bass	88	66	120
377	Synth Seq/Pop 12	40:Synth Seq/Pop	88	66	121
378	Synth Seq/Pop 13	40:Synth Seq/Pop	88	66	122
379	Synth Seq/Pop 14	40:Synth Seq/Pop	88	66	123
380	Synth Seq/Pop 15	40:Synth Seq/Pop	88	66	124
381	Synth Seq/Pop 16	40:Synth Seq/Pop	88	66	125
382	Synth Seq/Pop 17	40:Synth Seq/Pop	88	66	126
383	Bell 6	14:Bell	88	66	127
384	Synth Pad/Str 69	36:Synth Pad/Str	88	66	128
385	Synth Lead 41	34:Synth Lead	88	67	001
386	Synth PolyKey 38	38:Synth PolyKey	88	67	002
387	Synth PolyKey 39	38:Synth PolyKey	88	67	003
388	Pulsating 10	42:Pulsating	88	67	004
389	Pulsating 11	42:Pulsating	88	67	005
390	Pulsating 12	42:Pulsating	88	67	006
391	Synth Seq/Pop 18	40:Synth Seq/Pop	88	67	007
392	Synth PolyKey 40	38:Synth PolyKey	88	67	008
393	Synth FX 11	39:Synth FX	88	67	009
394	Synth FX 12	39:Synth FX	88	67	010
395	Synth Lead 42	34:Synth Lead	88	67	011
396	Synth Lead 43	34:Synth Lead	88	67	012
397	Synth Lead 44	34:Synth Lead	88	67	013
398	Synth Pad/Str 70	36:Synth Pad/Str	88	67	014
399	Synth PolyKey 41	38:Synth PolyKey	88	67	015
400	Bass Fifth	21:Synth Bass	88	67	016
401	Phaso Pulse	42:Pulsating	88	67	017

SH-3d OSC model

No.	Name	Category	MSB	LSB	PC
001	Synth Bass 54	21:Synth Bass	88	68	001
002	Synth Bass 55	21:Synth Bass	88	68	002
003	Froggy Triplet	42:Pulsating	88	68	003
004	SH Professional	34:Synth Lead	88	68	004
005	Distant Past	36:Synth Pad/Str	88	68	005
006	Chemical Drop	21:Synth Bass	88	68	006
007	PWM Go	38:Synth PolyKey	88	68	007
008	Behooves You	38:Synth PolyKey	88	68	008
009	Morning Dew	40:Synth Seq/Pop	88	68	009
010	SciFi Lead	34:Synth Lead	88	68	010
011	3OSC Acid Arpg	21:Synth Bass	88	68	011
012	5th Ambi Pluck	40:Synth Seq/Pop	88	68	012
013	Tri Stack Lead	34:Synth Lead	88	68	013
014	Random 7	42:Pulsating	88	68	014
015	Reese Lead	34:Synth Lead	88	68	015
016	EmotionalAmbient	36:Synth Pad/Str	88	68	016
017	Crazy Pad 3D	36:Synth Pad/Str	88	68	017
018	Synwave Bass	21:Synth Bass	88	68	018
019	LoFi Piano Stab	44:Hit	88	68	019
020	Resonance Pad	36:Synth Pad/Str	88	68	020
021	Mother Ship	36:Synth Pad/Str	88	68	021
022	In the Cloud	36:Synth Pad/Str	88	68	022

No.	Name	Category	MSB	LSB	PC
023	Synth Lead 45	34:Synth Lead	88	68	023
024	Synth Bass 56	21:Synth Bass	88	68	024
025	Synth Brass 19	35:Synth Brass	88	68	025
026	Synth Lead 46	34:Synth Lead	88	68	026
027	Synth Lead 47	34:Synth Lead	88	68	027
028	Synth Lead 48	34:Synth Lead	88	68	028
029	Synth Lead 49	34:Synth Lead	88	68	029
030	Synth Brass 20	35:Synth Brass	88	68	030
031	Synth Lead 50	34:Synth Lead	88	68	031
032	Synth Lead 51	34:Synth Lead	88	68	032
033	Synth Bass 57	21:Synth Bass	88	68	033
034	Synth Lead 52	34:Synth Lead	88	68	034
035	Synth Lead 53	34:Synth Lead	88	68	035
036	Synth Lead 54	34:Synth Lead	88	68	036
037	Synth Bass 58	21:Synth Bass	88	68	037
038	Synth Bass 59	21:Synth Bass	88	68	038
039	Synth Lead 55	34:Synth Lead	88	68	039
040	Bell 7	14:Bell	88	68	040
041	Synth PolyKey 42	38:Synth PolyKey	88	68	041
042	Synth FX 13	39:Synth FX	88	68	042
043	Synth Seq/Pop 19	40:Synth Seq/Pop	88	68	043
044	Synth Lead 56	34:Synth Lead	88	68	044
045	ThereGoes Fluffy	42:Pulsating	88	68	045
046	NeucleoGenesis 3	42:Pulsating	88	68	046
047	MartiansComeHome	34:Synth Lead	88	68	047
048	BehindThePolyMo	38:Synth PolyKey	88	68	048
049	Daughter of '72	34:Synth Lead	88	68	049
050	Son of '69	34:Synth Lead	88	68	050
051	Soul Flight '69	34:Synth Lead	88	68	051
052	Half Deity	39:Synth FX	88	68	052
053	Storm Singer	34:Synth Lead	88	68	053
054	Flutter Pad	36:Synth Pad/Str	88	68	054
055	Sweet Keys	38:Synth PolyKey	88	68	055
056	Noi Sine	42:Pulsating	88	68	056
057	TB-3d Saw Dry	21:Synth Bass	88	68	057
058	TB-3d Sqr Dist	21:Synth Bass	88	68	058
059	TB-3d Modded	21:Synth Bass	88	68	059
060	Wheel Riser	39:Synth FX	88	68	060
061	Liquid Radio	39:Synth FX	88	68	061
062	Wind Control	39:Synth FX	88	68	062
063	Psy Lead	34:Synth Lead	88	68	063
064	Oct Glider	36:Synth Pad/Str	88	68	064
065	SH RNDM Pluck	40:Synth Seq/Pop	88	68	065
066	Gravity Bounce	42:Pulsating	88	68	066
067	I've seen things	36:Synth Pad/Str	88	68	067
068	Rndm Mod Lead	34:Synth Lead	88	68	068
069	Slow Organ	38:Synth PolyKey	88	68	069
070	Lofi B	38:Synth PolyKey	88	68	070
071	Dual Square	34:Synth Lead	88	68	071
072	Sqr Cho Pluck	40:Synth Seq/Pop	88	68	072
073	FLead 505	34:Synth Lead	88	68	073
074	Synth Poly Key	38:Synth PolyKey	88	68	074
075	Dist Lead 1	34:Synth Lead	88	68	075
076	S&H Pad	42:Pulsating	88	68	076
077	FX Scan	39:Synth FX	88	68	077
078	Lead 7	34:Synth Lead	88	68	078
079	CAOSiN	34:Synth Lead	88	68	079
080	CAOSiN P	42:Pulsating	88	68	080
081	Attack Bass	21:Synth Bass	88	68	081
082	Open Pluck	40:Synth Seq/Pop	88	68	082
083	Euro Synth	34:Synth Lead	88	68	083
084	Deep Reese Bass	21:Synth Bass	88	68	084

No.	Name	Category	MSB	LSB	PC
085	Future Org Bass	21:Synth Bass	88	68	085
086	Disco Lead	34:Synth Lead	88	68	086
087	LoFiWarm E.Piano	38:Synth PolyKey	88	68	087
088	Sweep Pad	36:Synth Pad/Str	88	68	088
089	Seq Pad	42:Pulsating	88	68	089
090	Seq Noise Delay	39:Synth FX	88	68	090
091	Pop Lead 1	34:Synth Lead	88	68	091
092	Pop Lead 2	34:Synth Lead	88	68	092
093	Alien Dialogue	39:Synth FX	88	68	093
094	Wind Wave 2	39:Synth FX	88	68	094
095	Storm Wave	39:Synth FX	88	68	095
096	Choppp	42:Pulsating	88	68	096

Sync OSC model

No.	Name	Category	MSB	LSB	PC
001	Synth Lead 57	34:Synth Lead	88	69	001
002	Progression	42:Pulsating	88	69	002
003	Sync Shredder	34:Synth Lead	88	69	003
004	Sync Riffer	21:Synth Bass	88	69	004
005	Sweeper	36:Synth Pad/Str	88	69	005
006	Punch	39:Synth FX	88	69	006
007	Doggie Lead	34:Synth Lead	88	69	007
008	Polymisterio	42:Pulsating	88	69	008
009	SyncSweep Lead 1	34:Synth Lead	88	69	009
010	Sync Sweep 1	39:Synth FX	88	69	010
011	Sync Lead 1	34:Synth Lead	88	69	011
012	Bad Sync	34:Synth Lead	88	69	012
013	Reverse Pluck	40:Synth Seq/Pop	88	69	013
014	Cosmic Sync	38:Synth PolyKey	88	69	014
015	PWM Acid	40:Synth Seq/Pop	88	69	015
016	Slow Sync Pad	36:Synth Pad/Str	88	69	016
017	Synth Bass 60	21:Synth Bass	88	69	017
018	Pulsating 13	42:Pulsating	88	69	018
019	Synth Bass 61	21:Synth Bass	88	69	019
020	Pulsating 14	42:Pulsating	88	69	020
021	Synth Lead 58	34:Synth Lead	88	69	021
022	Synth Lead 59	34:Synth Lead	88	69	022
023	Synth PolyKey 43	38:Synth PolyKey	88	69	023
024	Synth FX 14	39:Synth FX	88	69	024
025	Synth Bass 62	21:Synth Bass	88	69	025
026	Synth Lead 60	34:Synth Lead	88	69	026
027	Nasal Sync Pad	36:Synth Pad/Str	88	69	027
028	Sync Different	42:Pulsating	88	69	028
029	Harmony X	40:Synth Seq/Pop	88	69	029
030	Keyfollow Wobble	21:Synth Bass	88	69	030
031	Sync Pulse	42:Pulsating	88	69	031
032	Deep Sync$	34:Synth Lead	88	69	032
033	Space Shift	39:Synth FX	88	69	033
034	Sync Pluck	39:Synth FX	88	69	034
035	Dist Lead 1	34:Synth Lead	88	69	035
036	Sync Magic	39:Synth FX	88	69	036
037	Drum n Lead	34:Synth Lead	88	69	037
038	Sync Jet	38:Synth PolyKey	88	69	038
039	Sync Lead 2	34:Synth Lead	88	69	039
040	Game Attack	40:Synth Seq/Pop	88	69	040
041	Lazer Gun	39:Synth FX	88	69	041
042	Sync Sweep 2	39:Synth FX	88	69	042
043	Dream Pad	36:Synth Pad/Str	88	69	043
044	SyncSweep Lead 2	34:Synth Lead	88	69	044
045	Sync Saw Acid	40:Synth Seq/Pop	88	69	045

No.	Name	Category	MSB	LSB	PC
046	Sync Zap FX	39:Synth FX	88	69	046
047	Rock Solo Lead	34:Synth Lead	88	69	047
048	Sync Saw	34:Synth Lead	88	69	048
049	Kick The Square	21:Synth Bass	88	69	049
050	Space Clav	38:Synth PolyKey	88	69	050
051	OD Sync	34:Synth Lead	88	69	051

SH-101d OSC model

No.	Name	Category	MSB	LSB	PC
001	SHlime Bass	21:Synth Bass	88	70	001
002	SHoly Pad	36:Synth Pad/Str	88	70	002
003	SH Bass Gate	21:Synth Bass	88	70	003
004	SH-Dark Bass	21:Synth Bass	88	70	004
005	101 Bass Drone	21:Synth Bass	88	70	005
006	Noisy Pad	36:Synth Pad/Str	88	70	006
007	Tronic Bass	21:Synth Bass	88	70	007
008	Filter Velo Bass	21:Synth Bass	88	70	008
009	PW & SQR Bass	21:Synth Bass	88	70	009
010	Tight Bass	21:Synth Bass	88	70	010
011	Space Colony	39:Synth FX	88	70	011
012	Smooth 101	34:Synth Lead	88	70	012
013	Shore	39:Synth FX	88	70	013
014	Teen's Regime 17	34:Synth Lead	88	70	014
015	Acid Bugs	42:Pulsating	88	70	015
016	Analog Flop	40:Synth Seq/Pop	88	70	016
017	Simple Sub	21:Synth Bass	88	70	017
018	Steady SH	21:Synth Bass	88	70	018
019	SH Res Pad	36:Synth Pad/Str	88	70	019
020	NoisePulse Track	34:Synth Lead	88	70	020
021	Tricky Bass	21:Synth Bass	88	70	021
022	PWM Drone Bass	21:Synth Bass	88	70	022
023	Rubber Bass	21:Synth Bass	88	70	023
024	8th Timeline	42:Pulsating	88	70	024
025	Dty Ba$$	21:Synth Bass	88	70	025
026	Biyoon	34:Synth Lead	88	70	026
027	Crazy DTMF	42:Pulsating	88	70	027
028	Disco Pad?	38:Synth PolyKey	88	70	028
029	Unstable P	42:Pulsating	88	70	029
030	Noise Lead	34:Synth Lead	88	70	030
031	SQR Reso Bass	21:Synth Bass	88	70	031
032	White Bass	21:Synth Bass	88	70	032
033	Tomorrow FX	39:Synth FX	88	70	033
034	Space Lead	34:Synth Lead	88	70	034
035	Random Slash	39:Synth FX	88	70	035
036	Portamento Bass	21:Synth Bass	88	70	036
037	Lead 101	34:Synth Lead	88	70	037
038	SH Tech Bass	21:Synth Bass	88	70	038
039	Sqr&Sub Bass	21:Synth Bass	88	70	039
040	Damage SH01	34:Synth Lead	88	70	040
041	SH SQR Lead	34:Synth Lead	88	70	041
042	Reso Melo SH	40:Synth Seq/Pop	88	70	042
043	Fat Saw Lead	34:Synth Lead	88	70	043
044	NRG SQR Lead	34:Synth Lead	88	70	044
045	NRG HPF Lead	34:Synth Lead	88	70	045
046	Solo Bass	21:Synth Bass	88	70	046
047	Square Lead	34:Synth Lead	88	70	047
048	SH Bass	21:Synth Bass	88	70	048
049	Square Syn Kick	39:Synth FX	88	70	049
050	Reso Env Pad	36:Synth Pad/Str	88	70	050
051	SH-|()| Bass	21:Synth Bass	88	70	051

JUNO-106 OSC model

No.	Name	Category	MSB	LSB	PC
001	NothinButTheRain	36:Synth Pad/Str	88	71	001
002	Green Grid	38:Synth PolyKey	88	71	002
003	Ju-Funk Bass	21:Synth Bass	88	71	003
004	PulseControl Pad	36:Synth Pad/Str	88	71	004
005	Cordion	36:Synth Pad/Str	88	71	005
006	JUNO Viola	36:Synth Pad/Str	88	71	006
007	106 Swell	36:Synth Pad/Str	88	71	007
008	Glow Pad	36:Synth Pad/Str	88	71	008
009	Ice & Fire	38:Synth PolyKey	88	71	009
010	Brilliant JUNO	38:Synth PolyKey	88	71	010
011	JUNO Strings	36:Synth Pad/Str	88	71	011
012	JUNO Pad 1	36:Synth Pad/Str	88	71	012
013	Super Moon	36:Synth Pad/Str	88	71	013
014	JUNO Bass 1	21:Synth Bass	88	71	014
015	SubSpace 106	21:Synth Bass	88	71	015
016	U Know Bass 106	21:Synth Bass	88	71	016
017	Harmonica Lead	34:Synth Lead	88	71	017
018	Insert Coin!	38:Synth PolyKey	88	71	018
019	Computer Clav	38:Synth PolyKey	88	71	019
020	Harp Breeze	14:Bell	88	71	020
021	Quacky JUNO	38:Synth PolyKey	88	71	021
022	Analog Saw Poly	38:Synth PolyKey	88	71	022
023	JUNO Pad 2	36:Synth Pad/Str	88	71	023
024	JUNO Bass 2	21:Synth Bass	88	71	024
025	JUNO Pad 3	36:Synth Pad/Str	88	71	025
026	JUNO Bass 3	21:Synth Bass	88	71	026
027	JUNO Pad 4	36:Synth Pad/Str	88	71	027
028	PWM&Sub Bass	21:Synth Bass	88	71	028
029	Above the Clouds	36:Synth Pad/Str	88	71	029
030	Old Days Key	38:Synth PolyKey	88	71	030
031	Ye Olde JUNO Ld	34:Synth Lead	88	71	031

Cross FM OSC model

No.	Name	Category	MSB	LSB	PC
001	Bell 8	14:Bell	88	72	001
002	Hit & Hold	39:Synth FX	88	72	002
003	Noisy Marbles	42:Pulsating	88	72	003
004	Incoming in Big	14:Bell	88	72	004
005	Slow Attack Bell	14:Bell	88	72	005
006	Kick Bass	21:Synth Bass	88	72	006
007	Bot Bell	14:Bell	88	72	007
008	Alien Temple	14:Bell	88	72	008
009	Whiny Wub	21:Synth Bass	88	72	009
010	Dripper EP	38:Synth PolyKey	88	72	010
011	Bwoink	38:Synth PolyKey	88	72	011
012	Marimba Phone	40:Synth Seq/Pop	88	72	012
013	Dirty Bass	21:Synth Bass	88	72	013
014	PWM	38:Synth PolyKey	88	72	014
015	Space Marimba	38:Synth PolyKey	88	72	015
016	Pluck	40:Synth Seq/Pop	88	72	016
017	Classic Bass	21:Synth Bass	88	72	017
018	Avantgarde	14:Bell	88	72	018
019	Tubolar Bell	14:Bell	88	72	019
020	Ambiente	36:Synth Pad/Str	88	72	020
021	Crystal Glass	14:Bell	88	72	021
022	Silence-B	42:Pulsating	88	72	022
023	E.Piano 1	38:Synth PolyKey	88	72	023

No.	Name	Category	MSB	LSB	PC
024	Bell B	14:Bell	88	72	024
025	Lead	34:Synth Lead	88	72	025
026	Lead C	34:Synth Lead	88	72	026
027	Lead P	34:Synth Lead	88	72	027
028	Delay Glass Plk	40:Synth Seq/Pop	88	72	028
029	Glassy Brass	35:Synth Brass	88	72	029
030	Old Tape Bell	14:Bell	88	72	030
031	Plastic Pluck	40:Synth Seq/Pop	88	72	031
032	Grass Land	36:Synth Pad/Str	88	72	032
033	Satellites	14:Bell	88	72	033
034	Echo Pluck	34:Synth Lead	88	72	034
035	Synth Lead 61	34:Synth Lead	88	72	035
036	Synth Lead 62	34:Synth Lead	88	72	036
037	Synth Bass 63	21:Synth Bass	88	72	037
038	Bell 9	14:Bell	88	72	038
039	Fujio-chang	42:Pulsating	88	72	039
040	Silver Droplets	42:Pulsating	88	72	040
041	One Hundred	38:Synth PolyKey	88	72	041
042	Wind Caves	14:Bell	88	72	042
043	Berly Keys	38:Synth PolyKey	88	72	043
044	Gnissel Lead	34:Synth Lead	88	72	044
045	Uncontrolla Bell	14:Bell	88	72	045
046	OrganI C	36:Synth Pad/Str	88	72	046
047	Odd Pluck	40:Synth Seq/Pop	88	72	047
048	Mosquito 1	42:Pulsating	88	72	048
049	Light Bell	14:Bell	88	72	049
050	Buzz Bell	34:Synth Lead	88	72	050
051	PP Dash	40:Synth Seq/Pop	88	72	051
052	Small Talk	39:Synth FX	88	72	052
053	Cross Bell 1	14:Bell	88	72	053
054	Donk Bass	21:Synth Bass	88	72	054
055	Marimba	40:Synth Seq/Pop	88	72	055
056	Mystery Pluck	40:Synth Seq/Pop	88	72	056
057	Space Journey	39:Synth FX	88	72	057
058	Bite	34:Synth Lead	88	72	058
059	Cry Lead	34:Synth Lead	88	72	059
060	Pluck 2	38:Synth PolyKey	88	72	060
061	Dream	38:Synth PolyKey	88	72	061
062	Cross Bell 2	14:Bell	88	72	062
063	Lead B	34:Synth Lead	88	72	063
064	Pluck C	40:Synth Seq/Pop	88	72	064
065	E.Piano 2	38:Synth PolyKey	88	72	065
066	Clavi	38:Synth PolyKey	88	72	066
067	Dist Bass	21:Synth Bass	88	72	067
068	Reso Pluck	40:Synth Seq/Pop	88	72	068
069	S&H Robot	39:Synth FX	88	72	069
070	E.Marinba	40:Synth Seq/Pop	88	72	070
071	2OP Plack	40:Synth Seq/Pop	88	72	071
072	Detroit Solid Bs	21:Synth Bass	88	72	072
073	Soft Melo	34:Synth Lead	88	72	073
074	Dirty Bell Brass	35:Synth Brass	88	72	074
075	Remote Rave	34:Synth Lead	88	72	075
076	Plastic Bass	21:Synth Bass	88	72	076
077	Caramel Box	14:Bell	88	72	077
078	Pad 1	36:Synth Pad/Str	88	72	078
079	Pad 2	36:Synth Pad/Str	88	72	079
080	Hollow Space	34:Synth Lead	88	72	080
081	Ripple Chime	14:Bell	88	72	081
082	Robot Lead	34:Synth Lead	88	72	082
083	Space Pan	38:Synth PolyKey	88	72	083
084	Pluck One	34:Synth Lead	88	72	084
085	Soft Bell	14:Bell	88	72	085

No.	Name	Category	MSB	LSB	PC
086	Porta Mono Lead	40:Synth Seq/Pop	88	72	086
087	313 Ring	14:Bell	88	72	087
088	Glissen	14:Bell	88	72	088

Ring OSC model

No.	Name	Category	MSB	LSB	PC
001	Synth Bass 64	21:Synth Bass	88	73	001
002	Ring Mod Sweep	42:Pulsating	88	73	002
003	Mo Drum	39:Synth FX	88	73	003
004	Ring Wash BPF	36:Synth Pad/Str	88	73	004
005	Broke Box	14:Bell	88	73	005
006	Tek Blip	40:Synth Seq/Pop	88	73	006
007	Ring LFO Sweep	42:Pulsating	88	73	007
008	Electric Ring	21:Synth Bass	88	73	008
009	Overdriven Ring	14:Bell	88	73	009
010	Anello Pad	36:Synth Pad/Str	88	73	010
011	Spinning Ring	42:Pulsating	88	73	011
012	Dimension Ring	42:Pulsating	88	73	012
013	Dark Ambience	36:Synth Pad/Str	88	73	013
014	Mono Ring Bell	14:Bell	88	73	014
015	Ring Matic	14:Bell	88	73	015
016	Ring Vel	14:Bell	88	73	016
017	Ring Harm	34:Synth Lead	88	73	017
018	Ring Harm B	34:Synth Lead	88	73	018
019	Ringin Bass	21:Synth Bass	88	73	019
020	Dark Fantasy	36:Synth Pad/Str	88	73	020
021	Proxima	39:Synth FX	88	73	021
022	Ambient Lead	34:Synth Lead	88	73	022
023	Raga Bass	21:Synth Bass	88	73	023
024	Haunting	14:Bell	88	73	024
025	Synth Seq/Pop 20	40:Synth Seq/Pop	88	73	025
026	Kinda Modulated	42:Pulsating	88	73	026
027	Drop Module	21:Synth Bass	88	73	027
028	Silo Pluck	34:Synth Lead	88	73	028
029	Pesky Lead	34:Synth Lead	88	73	029
030	Ring Tone	34:Synth Lead	88	73	030
031	Ring Hit	44:Hit	88	73	031
032	LFO Key	38:Synth PolyKey	88	73	032
033	IS S&H	42:Pulsating	88	73	033
034	Black Bell	14:Bell	88	73	034
035	Ring Bell	14:Bell	88	73	035
036	Ring FX	39:Synth FX	88	73	036
037	Fade Point	42:Pulsating	88	73	037
038	Ring Attack	38:Synth PolyKey	88	73	038
039	Ring Panic	21:Synth Bass	88	73	039
040	Ring Magic B	14:Bell	88	73	040
041	Sub Bass R	21:Synth Bass	88	73	041
042	Future House Bs	21:Synth Bass	88	73	042
043	UK Bass Lead	34:Synth Lead	88	73	043
044	Future Bass Stab	21:Synth Bass	88	73	044
045	Retro Wave Pad	36:Synth Pad/Str	88	73	045
046	Space Wave Pad	36:Synth Pad/Str	88	73	046
047	Solid Ring Bass	21:Synth Bass	88	73	047
048	Tech 'n' Bass	21:Synth Bass	88	73	048
049	Pulsing Train	42:Pulsating	88	73	049

Wavetable OSC model

No.	Name	Category	MSB	LSB	PC
001	Synth Lead 62	34:Synth Lead	88	74	001
002	Bell Pad ALiVE	14:Bell	88	74	002
003	Industrial Rev4d	42:Pulsating	88	74	003
004	LearningMachines	42:Pulsating	88	74	004
005	FeedbackOsc Izit	42:Pulsating	88	74	005
006	IndexTransitions	34:Synth Lead	88	74	006
007	Resurgence 4D	36:Synth Pad/Str	88	74	007
008	FM Parade	42:Pulsating	88	74	008
009	Lozza Wub	21:Synth Bass	88	74	009
010	Metal Droid Bass	21:Synth Bass	88	74	010
011	Morph Mode	38:Synth PolyKey	88	74	011
012	WT Scanner	38:Synth PolyKey	88	74	012
013	Series Finale	39:Synth FX	88	74	013
014	Circuit Breath 1	34:Synth Lead	88	74	014
015	Round Sub Glide	21:Synth Bass	88	74	015
016	Circuit Breath 2	34:Synth Lead	88	74	016
017	UniSqr Spctl Hit	44:Hit	88	74	017
018	Vactrol Strike	40:Synth Seq/Pop	88	74	018
019	Gargantua Bass	21:Synth Bass	88	74	019
020	Table GL1t[#	42:Pulsating	88	74	020
021	Robot Talk	34:Synth Lead	88	74	021
022	Oh Yeah !!!	38:Synth PolyKey	88	74	022
023	Radioactive Wind	36:Synth Pad/Str	88	74	023
024	Lo-Fi Bell	14:Bell	88	74	024
025	Wavefolder Bass	21:Synth Bass	88	74	025
026	Reverse Dream	36:Synth Pad/Str	88	74	026
027	Frog Talk	39:Synth FX	88	74	027
028	Tron Pad	36:Synth Pad/Str	88	74	028
029	Future Acid	40:Synth Seq/Pop	88	74	029
030	Saw Spectral	38:Synth PolyKey	88	74	030
031	Circuit Error	38:Synth PolyKey	88	74	031
032	8Bit Game Bass	21:Synth Bass	88	74	032
033	WT Gamelan 1	14:Bell	88	74	033
034	Music Box WT	14:Bell	88	74	034
035	Future Pop Chord	42:Pulsating	88	74	035
036	Glacier Cave	14:Bell	88	74	036
037	Vibration	38:Synth PolyKey	88	74	037
038	Circuit Bass	21:Synth Bass	88	74	038
039	Deep Sauce	42:Pulsating	88	74	039
040	Synth Lead 61	34:Synth Lead	88	74	040
041	Synth Lead 63	21:Synth Bass	88	74	041
042	Ohh Yeah!?	36:Synth Pad/Str	88	74	042
043	FM EP on Wavtabl	38:Synth PolyKey	88	74	043
044	Water Beneath Us	36:Synth Pad/Str	88	74	044
045	Dellinger Effect	39:Synth FX	88	74	045
046	Wave Speak	42:Pulsating	88	74	046
047	Big Mouth	21:Synth Bass	88	74	047
048	Walker	38:Synth PolyKey	88	74	048
049	Pad Pastures	36:Synth Pad/Str	88	74	049
050	Morph Pad	36:Synth Pad/Str	88	74	050
051	Yikes	34:Synth Lead	88	74	051
052	Stack Feedback	34:Synth Lead	88	74	052
053	Deep Pad	36:Synth Pad/Str	88	74	053
054	Sine Garden Pad	38:Synth PolyKey	88	74	054
055	Wave Edge	38:Synth PolyKey	88	74	055
056	Chit Chat	42:Pulsating	88	74	056
057	AIOIEA	36:Synth Pad/Str	88	74	057
058	Metal Drop	39:Synth FX	88	74	058
059	Tap FX	39:Synth FX	88	74	059

No.	Name	Category	MSB	LSB	PC
060	S&H Bass	42:Pulsating	88	74	060
061	Rhythm Warp	42:Pulsating	88	74	061
062	Voxylor	42:Pulsating	88	74	062
063	Radio Tune	34:Synth Lead	88	74	063
064	Wow Lead	34:Synth Lead	88	74	064
065	Fold Bell	14:Bell	88	74	065
066	Sync Bass B	21:Synth Bass	88	74	066
067	Warp Pad	36:Synth Pad/Str	88	74	067
068	Hexa Bass	21:Synth Bass	88	74	068
069	Space Alien	42:Pulsating	88	74	069
070	Scat Pluck	40:Synth Seq/Pop	88	74	070
071	Digital Harpsico	38:Synth PolyKey	88	74	071
072	Wave Dist Gtr	38:Synth PolyKey	88	74	072
073	Mosquito 2	38:Synth PolyKey	88	74	073
074	FM Oct Mod	39:Synth FX	88	74	074
075	Digi Mid Bass	21:Synth Bass	88	74	075
076	West Coast	38:Synth PolyKey	88	74	076
077	Mustache Wave	38:Synth PolyKey	88	74	077
078	Uni HPF Warp	38:Synth PolyKey	88	74	078
079	Wavetable Clavi	38:Synth PolyKey	88	74	079
080	WT Gamelan 2	14:Bell	88	74	080
081	Tribal Acid	34:Synth Lead	88	74	081
082	Choco Mint Synth	38:Synth PolyKey	88	74	082
083	Elek Banjo	38:Synth PolyKey	88	74	083
084	Clean Guitar WT	38:Synth PolyKey	88	74	084
085	OD-1 Guitar WT	38:Synth PolyKey	88	74	085
086	Clean Synth WT	38:Synth PolyKey	88	74	086
087	Clean Square WT	38:Synth PolyKey	88	74	087
088	Up Sweep Pad	36:Synth Pad/Str	88	74	088
089	Table	34:Synth Lead	88	74	089
090	Oye	38:Synth PolyKey	88	74	090
091	Hammer Down	21:Synth Bass	88	74	091
092	Harmonics Seq	36:Synth Pad/Str	88	74	092
093	Uni Sqr Warp Ld	34:Synth Lead	88	74	093
094	Fly Bye FX	39:Synth FX	88	74	094
095	Flutable	34:Synth Lead	88	74	095

Chord OSC model

No.	Name	Category	MSB	LSB	PC
001	Synth Pad/Str 71	36:Synth Pad/Str	88	75	001
002	Synth Pad/Str 72	36:Synth Pad/Str	88	75	002
003	7 Fluctuations	42:Pulsating	88	75	003
004	Sustainability 4	42:Pulsating	88	75	004
005	Descendant 7sus4	42:Pulsating	88	75	005
006	Chordplex	44:Hit	88	75	006
007	Bit Chord	34:Synth Lead	88	75	007
008	Fade Chord	36:Synth Pad/Str	88	75	008
009	Major Memories	34:Synth Lead	88	75	009
010	4th Magic <>	42:Pulsating	88	75	010
011	9th Lead	34:Synth Lead	88	75	011
012	Chord Pad P2	36:Synth Pad/Str	88	75	012
013	Cloud Ripples	42:Pulsating	88	75	013
014	Pingpong	38:Synth PolyKey	88	75	014
015	Pulsating 15	42:Pulsating	88	75	015
016	Pulsating 16	42:Pulsating	88	75	016
017	Synth Pad/Str 73	36:Synth Pad/Str	88	75	017
018	Basic Stab	44:Hit	88	75	018
019	Chord Pad	36:Synth Pad/Str	88	75	019
020	Chord Pad P	36:Synth Pad/Str	88	75	020
021	Chord Slice	42:Pulsating	88	75	021

No.	Name	Category	MSB	LSB	PC
022	Chord Sine	36:Synth Pad/Str	88	75	022
023	Wavy Brass	35:Synth Brass	88	75	023
024	Chord Ripples	42:Pulsating	88	75	024
025	Chordy Dance	38:Synth PolyKey	88	75	025

Drawing OSC model

No.	Name	Category	MSB	LSB	PC
001	Scribble Bass	21:Synth Bass	88	76	001
002	Box Bot Lead	34:Synth Lead	88	76	002
003	Vision EP	38:Synth PolyKey	88	76	003
004	Drawing Guitar	38:Synth PolyKey	88	76	004
005	Foreign Pluck	40:Synth Seq/Pop	88	76	005
006	Load "*", 8,1	40:Synth Seq/Pop	88	76	006
007	Draw Dream	38:Synth PolyKey	88	76	007
008	Morning Organ	38:Synth PolyKey	88	76	008
009	Drawing Sine Ld	34:Synth Lead	88	76	009
010	Refresh Rate	42:Pulsating	88	76	010
011	DigitizerTab 100	39:Synth FX	88	76	011
012	Deetar	38:Synth PolyKey	88	76	012
013	Phase Pluck	42:Pulsating	88	76	013
014	Direct Lead	34:Synth Lead	88	76	014
015	Drawing Bell	14:Bell	88	76	015
016	DrawingTri Bs MW	21:Synth Bass	88	76	016
017	Building	38:Synth PolyKey	88	76	017
018	Drawing Organ	38:Synth PolyKey	88	76	018
019	Fat Draw Bass	21:Synth Bass	88	76	019
020	Draw	34:Synth Lead	88	76	020
021	Drawn Droid	38:Synth PolyKey	88	76	021
022	Toy Chime	14:Bell	88	76	022

PCM OSC model

No.	Name	Category	MSB	LSB	PC
001	JD Piano	38:Synth PolyKey	88	77	001
002	Cosine Bass	21:Synth Bass	88	77	002
003	Warm Pad	36:Synth Pad/Str	88	77	003
004	Warm Stack Pad	36:Synth Pad/Str	88	77	004
005	Cathedral	38:Synth PolyKey	88	77	005
006	Harmonic Bars	38:Synth PolyKey	88	77	006
007	FM Brass	35:Synth Brass	88	77	007
008	Organ 1	38:Synth PolyKey	88	77	008
009	Organ 2	38:Synth PolyKey	88	77	009
010	Organ 3	38:Synth PolyKey	88	77	010
011	Nasty Bass	21:Synth Bass	88	77	011

Rhythm Set List

No.	Name	MSB	LSB	PC
001	Synthesized Kit	86	64	001
002	IDM Kit	86	64	002
003	Chill-Hop Kit	86	64	003
004	Thumper Kit	86	64	004
005	Techno Kit	86	64	005
006	Drum & Step	86	64	006
007	Old Machine Kit	86	64	007
008	Big Breaks Kit	86	64	008
009	Machine Kit	86	64	009
010	Toy Kit	86	64	010
011	DG Kit	86	64	011
012	908 Kit	86	64	012
013	Euro Modular Kit	86	64	013
014	Friendship Kit	86	64	014
015	Plastic Kit	86	64	015
016	Mod Kit	86	64	016
017	Dark GB Kit	86	64	017
018	Power X0X	86	64	018
019	Elektro Exp. Kit	86	64	019
020	Club Floor Kit	86	64	020
021	Noise & Sines	86	64	021
022	Lo-Fi or Not Kit	86	64	022
023	TR-707 Kit	86	64	023
024	Heartbeat Kit	86	64	024
025	Trap Kit	86	64	025
026	Gully Kit	86	64	026
027	WT Jam	86	64	027
028	Punchy	86	64	028
029	Phat Tech	86	64	029
030	Mixture Kit	86	64	030
031	Hard Kit	86	64	031
032	Nod Kit	86	64	032
033	Ambi Kit	86	64	033
034	Industrial Kit	86	64	034
035	Experimental Kit	86	64	035
036	Hard Groove Kit	86	64	036
037	Jungle Kit	86	64	037
038	Hard Psy Kit	86	64	038
039	Ambient Kit	86	64	039
040	FXM Kick	86	64	040
041	Saturated Kit	86	64	041
042	DnB 808	86	64	042
043	DnB B	86	64	043
044	TR-909 Kit	86	64	044
045	Bedroom Lofi Kit	86	64	045
046	Tech House Kit	86	64	046
047	Afro Kit	86	64	047
048	Popping Up	86	64	048
049	9090 Kit	86	64	049

Pattern List

No.	Name
001	Do Synths Dream?
002	Paati Pi
003	Flutable
004	Romper
005	Lofi Beats
006	Space Trip Beats
007	Electro Machine
008	Fern Gully
009	Dist Lead Beats
010	Pluck Syn Beats
011	Mystery Spiral
012	Into the void
013	Night Drop
014	Tamarind
015	Future Lovers
016	Saw&Noise Pluck
017	Perfect Rise
018	Misc Machines
019	Drum 'n' Bells
020	Phat Seq Beats
021	Wobble Beats
022	Tekno Robot :]
023	Cold Shock Broke

MIDI Implementation Chart

MIDI Implementation Chart (Tone)

Function		Transmitted	Recognized	Remarks
Basic Channel		1-16	1-16	
MODE		MODE3	MODE3	
Note Number		0-127	0-127	
Velocity	Note On	o	o	
	Note Off	x	x	
Channel Key Pressure		o (*1)	o (*2)	
Pitch Bend		o	o	
Control Change	1	o (*1)	o (*2)	Modulation Wheel
	7	o	o	AMP LEVEL (Pattern Part Level)
	10	o	o	AMP PAN (Pattern Part Pan)
	16	o	o	LFO RATE
	18	o	o	LFO PITCH
	19	o	o	LFO FILTER
	20	o	o	LFO FADE
	21	o	o	PITCH
	28	o	o	FILTER SUSTAIN
	29	o	o	FILTER RELEASE
	31	o	o	AMP SUSTAIN
	64	x	o	Hold Pedal
	66	x	o	Sostenuto
	71	o	o	FILTER RESONANCE
	72	o	o	AMP RELEASE
	73	o	o	AMP ATTACK
	74	o	o	FILTER CUTOFF
	75	o	o	AMP DECAY
	77	o	o	TIMBRE
	78	o	o	FILTER KBD
	79	o	o	FILTER HPF
	80	o	o	LFO AMP
	81	o	o	FILTER ENV
	82	o	o	FILTER ATTACK
	83	o	o	FILTER DECAY
	84	x	o	Portamento Control
	85	o	o	SLIDER 1
	86	o	o	SLIDER 2
	87	o	o	SLIDER 3
	88	o	o	SLIDER 4
	90	o	o	FILTER DRIVE
Program Change	LSB	64-77 (*3)	64-77 (*3)	
	MSB	87-88 (*3)	87-88 (*3)	
	PC	0-127 (*3)	0-127 (*3)	
System Exclusive		x	x	
System Common	: Song Position	x	x	
	: Song Select	x	x	
	: Tune Request	x	x	
System Real Time	:Clock	o	o	
	:Start	o	o	
	:Continue	x	o	
	:Stop	o	o	
AUX Message	:All Sound Off	x	o	
	:Reset All Controllers	x	o	
	:Local On/Off	x	x	
	: All Notes Off	x	o	
	: Omni Mode Off	x	o	Same process as All Notes Off
	: Omni Mode On	x	o	Same process as All Notes Off
	: Mono Mode On	x	x	

	: Poly Mode On	x	x
	: Active Sensing	o	o
	: System Reset	x	x

(*1) Can be transmitted from D-MOTION only

(*2) Channel Key Pressure and all Control Change messages except for CC#0 and CC#32 are recognized depending on settings of MATRIX

(*3) See Sound List

MIDI Implementation Chart (Rhythm)

Function		Transmitted	Recognized	Remarks
Basic Channel		1-16	1-16	
MODE		MODE3	MODE3	
Note Number		0-127	0-127	
Velocity	Note On	o	o	
	Note Off	x	x	
Channel Key Pressure		x	x	
Pitch Bend		x	x	
Control Change		x	x	
Program Change	LSB	0, 64 (*3)	0, 64 (*3)	
	MSB	86 (*3)	86 (*3)	
	PC	0-127 (*3)	0-127 (*3)	
System Exclusive		x	x	
System Common	: Song Position	x	x	
	: Song Selec	x	x	
	: Tune Request	x	x	
System Real Time	:Clock	o	o	
	:Start	o	o	
	:Continue	x	o	
	:Stop	o	o	
AUX Message	:All Sound Off	x	o	
	:Reset All Controllers	x	o	
	:Local On/Off	x	x	
	: All Notes Off	x	o	
	: Omni Mode Off	x	o	Same process as All Notes Off
	: Omni Mode On	x	o	Same process as All Notes Off
	: Mono Mode On	x	o	Same process as All Notes Off
	: Poly Mode On	x	x	
	: Active Sensing	o	o	
	: System Reset	x	x	

Mode 1: Omni On, Poly Mode 2: Omni On, Mono o: Yes Mode 3: Omni Off, Poly Mode 4: Omni Off, Mono x: No

(*3) See Sound List

MIDI Implementation Chart (SYSTEM)

Function		Transmitted	Recognized	Remarks
Basic Channel		1-16, OFF	1-16, OFF	
MODE		MODE3	MODE3	
Note Number		0-127	0-127	transfer to selected part
Velocity	Note On	o	o	transfer to selected part
	Note Off	x	x	transfer to selected part
After Touch		x	o	transfer to selected part
ControlChange		x	x	
Program Change	LSB	0	0	
	MSB	85	85	
	PC	0-127	0-127	Pattern Change (*4)
System Exclusive		x	x	
System Common	: Song Position	x	x	
	: Song Selec	x	x	
	: Tune Request	x	x	
System Real Time	:Clock	o	o	
	:Start	o	o	
	:Continue	x	o	Same process as Start.
	:Stop	o	o	
AUX Message	:All Sound Off	x	x	
	:Reset All Controllers	x	x	
	:Local On/Off	x	x	
	: All Notes Off	x	x	
	: Omni Mode Off	x	x	
	: Omni Mode On	x	x	
	: Mono Mode On	x	x	
	: Poly Mode On	x	x	
	: Active Sensing	o	o	
	: System Reset	x	x	

Mode 1: Omni On, Poly Mode 2: Omni On, Mono o: Yes Mode 3: Omni Off, Poly Mode 4: Omni Off, Mono x: No

(*4) Send and receive only on the PATTERN screen. The program change is (bank number of the pattern you want to load) x 8 + (pattern number) -1.

SH-4d

01

Owner’s Manual