Roland

VERSELAB mv-1

Parameter Guide

Before using the unit, ensure that its program is at the most recent version. For information on available upgrades for the program, see the Roland website (https://www.roland.com/).

Contents

Parameter List

Project

Parameter	Value	Explanation
COMMON		
MstrTune	435.0–445.0Hz	Specifies the reference pitch (master tune) for the project. * **This has no effect on the pitch of the VOCAL track.**
PC IN	These are the settings for audio input from a computer or smartphone connected via USB.	
PC Level	0–127	Specifies the input level from the USB PC IN port.
PC Pan	L128–127R	Specifies the pan of the USB PC IN port.
COLOR	Sets the pad illumination colors for each pad operation mode.	
Note	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 color used for pads used for playing in Note mode.
Play		Sets the color used to indicate that a clip is playing back in Section Select mode.
Stay		Sets the color used to indicate that a clip has stopped in Section Select mode.
D.Style		Sets the pad color used when a drum track (KICK, SNARE, HI-HAT, KIT) is selected in Style mode.
M.Style		Sets the pad color when a melodic track (BASS, INST 1, INST 2) is selected in Style mode.

Song

GEN

Parameter	Value	Explanation	
Master Level	0–127	Adjusts the volume.	
Key	NONE, C, C#, D, D#, E, F, F#, G, G#, A, A#, B	Specifies the note that will be the key of the scale.	When a key or scale is set for a clip and the clip is loaded into another project, the clip is automatically transposed to match the MASTER KEY and scale of the project.
Scale	Specifies the scale from which the chord is extracted. ➡ For details on scales, refer to "List of scales (when KEY is C)" (p. 8).		

TEMPLATE

Parameter	Value	Explanation
Intro	NONE, SECT1 - SECT 16	Sets the section to assign for the structural elements of a song (like the intro or the chorus) when using a song template.
Verse1		
Verse2		
Verse3		
Chorus1		
Chrous2		
Bridge		
Outro		
Fill		
PreChorus		
Breakdown		
Vamp		
User1		
User2		
User3		
User4		

TRANSPOS

Parameter	Value	Explanation
KICK Trans	ON, OFF	Sets whether the clip's key/scale are automatically changed to follow the key/scale that are set for the song. Set this to "ON" to make the clip's key/scale follow the song's settings. * **This is only enabled when the track type is "tone."**
SNARE Trans		
HIHAT Trans		
KIT Trans		
BASS Trans		
INST1 Trans		
INST2 Trans		

Tone Edit

Parameters with the "ASSIGN" showing can be assigned to the knob.

Parameter	Value	Explanation
Level ASSIGN	0–127	Adjusts the volume of each part.
Pan ASSIGN	L64–0–63R	Specifies the panning of each part's sound when using stereo output.
Delay Send (Delay Send Level) ASSIGN	0–127	Specifies the send level to delay.
Reverb Send (Reverb Send Level) ASSIGN	0–127	Specifies the send level to reverb.
Coarse Tune ASSIGN	-48–+48	Shifts the pitch in units of a semitone.
Fine Tune ASSIGN	-50–+50	Finely adjusts the pitch in units of one cent.
Mono/Poly	MONO, POLY, TONE	Choose MONO if you want the tone assigned to the part to play monophonically; choose POLY if you want to play it polyphonically. Choose TONE if you want to use the setting specified by the tone.
Legato (Legato Switch)	OFF, ON, TONE	If you play monophonically, you can apply legato. "Legato" is a performance technique that smoothly connects one note to the next. This produces an effect similar to hammering-on or pulling-off when playing a guitar. Choose "ON" to apply legato, or "OFF" if you don't want to apply it. Choose "TONE" if you want to use the setting specified by the tone.
Bend Range	0–24, TONE	Specifies the amount of pitch change in semitone units (maximum two octaves) that occurs when you move a controller when pitch bend is assigned to that controller. Choose TONE if you want to use the setting specified by the tone.
Portament (Portamento Switch) ASSIGN	OFF, ON, TONE	Specifies whether portamento is applied. Select ON to apply portamento, or OFF if you don't want to apply portamento. Choose TONE if you want to use the setting specified by the tone.
Porta Time (Portamento Time) ASSIGN	0–127, TONE	When portamento is used, this specifies the time over which the pitch will change. Higher settings will cause the pitch change to the next note to take more time. Choose TONE if you want to use the setting specified by the tone.
Cutoff (Cutoff Offset) ASSIGN	-64–+63	Adjusts how far the filter is open. Increasing this value makes the sound brighter, and decreasing it makes the sound darker.
Resonance (Resonance Offset) ASSIGN	-64–+63	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort. Increasing this value strengthens the character, and decreasing it weakens the character.
Attack (Attack Time Offset) ASSIGN	-64–+63	Adjusts the time over which the sound reaches its maximum volume after you press the key. Larger settings of this value make the attack gentler, and smaller settings make the attack sharper.

Parameter	Value	Explanation
Decay (Decay Time Offset) ASSIGN	-64–+63	Adjusts the time over which the volume decreases from its maximum value. Larger settings of this value make the decay longer, and smaller settings make the decay shorter.
Release (Release Time Offset) ASSIGN	-64–+63	Adjusts the time over which the sound decays to silence after you release the key. Larger settings of this value make the sound linger, and smaller settings make the sound end more sharply.
Vib Rate (Vibrato Rate) ASSIGN	-64–+63	Adjust the vibrato speed (the rate at which the pitch is modulated). The pitch will be modulated more rapidly for higher settings, and more slowly with lower settings.
Vib Depth (Vibrato Depth) ASSIGN	-64–+63	This adjusts the depth of the vibrato effect (the depth at which the pitch is modulated). The pitch will be modulated more greatly for higher settings, and less with lower settings.
Vib Delay (Vibrato Delay) ASSIGN	-64–+63	Adjusts the time until vibrato (pitch modulation) starts to apply. Higher settings will produce a longer delay time before vibrato begins, while lower settings produce a shorter time.
Oct Shift (Octave Shift) ASSIGN	-3–+3	Shifts the pitch of the keyboard in units of one octave.
Velo Sens (Velocity Sens Offset)	-63–+63	Adjusts the velocity sensitivity. Larger settings raise the sensitivity.
VoiceAsgn (Voice Assign Mode)	Sets the way sounds are played when the same key is pressed a number of times.	
	SINGLE	Only one note of the same key is played at a time. If a sound with a long sustain is played repeatedly, the sound of the previous note is silenced before the next note is heard.
	LIMIT	Notes played on the same key are layered. If a sound with a long sustain is played repeatedly, the previous sounds are silenced after a certain number of notes accumulate.
	FULL	Notes played on the same key are layered. Even if a sound with a long sustain is played repeatedly, the notes are unrestrictedly layered without silencing the previous sounds.
Bend Mode	Specifies what occurs when you operate a controller when pitch bend is assigned to it.	
	NORMAL	The conventional pitch bend effect occurs.
	C+L (CATCH + LAST)	The pitch bend effect applies only to the last-played note. If a note-on occurs while pitch bend is already applied, the new note sounds at the center pitch. The pitch starts changing only after the controller passes through the center position.
	TONE	The tone's settings are used.
Unison Sw (Unison Switch)	OFF, ON, TONE	This layers a single sound. Choose "ON" if you want to use unison, or "OFF" if you don't. Choose "TONE" if you want to use the setting specified by the tone. Parts whose Unison Switch is On will be MONO.
SYS-Ctrl1–4 ASSIGN	0–127	Specifies the values of SYS-Ctrl 1–4. By connecting SYS-Ctrl 1–4 with tone parameters, you can use the knobs to control values other than part parameters.
Pitch Bend ASSIGN	-8192–+8191	Specifies the Pitch Bend.

MFX

Parameter	Value	Explanation
Switch	OFF, ON	Switches the MFX on/off.
Type	Selects the MFX type.	
Dly Send	0–127	Adjusts the amount of chorus. If you don't want to add the chorus effect, set it to 0.
Rev Send	0–127	Adjusts the amount of reverb. If you don't want to add the reverb effect, set it to 0.
MFX parameters	Edit the parameters for the selected MFX. The available parameters differ depending on the type of the effects you selected in MFX Type. ➡ **"MFX Parameters"** (p. 15)	

MFX CTRL

Parameter	Value	Explanation
Src1–4	Specifies the MIDI message that will control the corresponding MFX CONTROL parameter.	
	OFF	MFX will not be used.
	CC01–31	Controller number 1–31
	CC33–95	Controller number 33–95
	BEND	Pitch Bend
	AFT	Aftertouch
	SYS-CTRL1–4	Use the controller that is assigned by the System Control Source 1–4 (or Tone Control Source 1–4).
Asgn1–4	Specifies which of the multi-effect parameters are controlled using MFX CONTROL. The multi-effects parameters available for control will depend on the multi-effects type.	
Sens1–4	-63–+63	Specifies the depth of MFX CONTROL. Specify a positive "+" value if you want to change the value of the assigned destination in a positive direction (larger, toward the right, faster, etc.), or specify a negative value "-" if you want to change the value in a negative direction (smaller, toward the left, slower, etc.). Larger values will allow a greater amount of control.

Controlling a MFX via MIDI (MFX CONTROL)

You can use MIDI messages such as control change messages to control the principal MFX parameters. This capability is called "MFX CONTROL (multi-effects control)."

The editable parameters are pre-determined according to the MFX type. You can specify up to four parameters for multi-effect control.

To use MFX CONTROL, you'll need to specify which MIDI message (Source) will affect which parameter (Destination), and how greatly (Sens).

Track

GEN

Parameter	Value	Explanation
Track Level	0–127	Adjusts the volume.
Pan	L128–R127	Adjusts the sound position (pan).
Rev Offset	-128–127	Sets how much signal is sent to the delay.
Dly Offset	-128–127	Sets how much signal is sent to the reverb.

EQ

These are the track EQ settings.

Parameter	Value	Explanation
EQ Switch	OFF, ON	Turns the equalizer on/off.
Input Gain	-24–+24 [dB]	Adjusts the amount of boost/cut for the input to the EQ.
Low Gain	-24–+24 [dB]	Gain of the low frequency range.
Low Freq	20–16000 [Hz]	Frequency of the low range.
Mid Gain	-24–+24 [dB]	Specifies the reference frequency of the mid-frequency range.
Mid Freq	20–16000 [Hz]	Adjusts the amount of mid-frequency boost/cut.
Mid Q	0.5–16.0	Specifies the width of the mid-frequency range. Set a higher value for Q to narrow the range to be affected.
High Gain	-24–+24 [dB]	Gain of the high frequency range.
HighFreq	20–16000 [Hz]	Frequency of the high range.

COMP (Other than VOCAL)

Parameter	Value	Explanation
Switch	OFF, ON	Compressor on/off
Pos	Pre MFX, Post MFX	Location of the compressor.
Attack	0.1–100 [ms]	Time from when the input exceeds the threshold until compression begins
Release	10–1000 [ms]	Time from when the input falls below the threshold until compression is turned off
Thres	-60–0 [dB]	Level at which compression is applied
Ratio	1: 1–inf: 1	Compression ratio
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.
Gain	-24–+24 [dB]	Level of the output sound
Out Asgn	DRY, MFX	Specifies the compressor output destination.

MIDI (Other than VOCAL)

Parameter	Value	Explanation
TxMIDI Out	OFF, ON	Enables output to the rear panel MIDI OUT connector.
TxUSB MIDI	OFF, ON	Enables output to the rear panel USB port.
Tx Note	OFF, ON	Specifies whether the notes of each track are output. * **This is not shown for a looper track.**
Tx CC	OFF, ON	Specifies whether knob operations of each track are output.
Tx PC	OFF, ON	Specifies whether clip changes of each track are output.

CLIP SETTING

Parameter	Value	Explanation
Mix Level	0–127	Adjusts the volume of each part.
Pan	L64–0–63R	Specifies the panning of each part's sound when using stereo output.
Delay Send	0–127	Specifies the send level to delay.
Rev Send	0–127	Specifies the send level to reverb.
Shuffle (*1)	-50–+50	Adjusts the strength of shuffle (bounce) for the playback timing. This can be set individually for each clip.
Step Length	1–128	Specifies the length of the clip.
Scale (*1)	1/8, 1/16, 1/32, 1/4T, 1/8T, 1/16T	Specifies the step resolution. **1/8:** eighth notes **1/16:** sixteenth notes **1/32:** thirty-second notes **1/4T:** quarter note triplets **1/8T:** eighth note triplets **1/16T:** sixteenth notes triplets
Mode (*1)	FWD, REV, FWD+REV, INV, RND	Specifies how the sequence plays. **FWD:** Play forward from the first step. **REV:** Play backward from the last step. **FWD+REV:** Play forward from the first step, and after reaching the last step, play backward. **INV:** Play even numbers and odd numbers inverted. **RND:** Play randomly.
Qtz C.Tight (*1)	OFF, 1–100 %	Specifies the strength of quantization for the currently selected clip. Quantization is applied during playback.
Transpose (*1)	-12–+12	Shifts the playback transposition (Tone only).
Reverse (*2)	OFF, ON	**OFF:** The sample plays forward. **ON:** The sample plays backward.
Pad Octave	-5–+5	Specifies the octave for pad performance.
Bend Mute (*1)	OFF, MUTE	Disables bend (Tone only).
Key	NONE, C, C#, D, D#, E, F, F#, G, G#, A, A#, B	Specifies the note that will be the key of the scale.
Scale	Specifies the scale from which the chord is extracted. ➡ For details on scales, refer to "List of scales (when KEY is C)" (p. 8).	

When a key or scale is set for a clip and the clip is loaded into another project, the clip is automatically transposed to match the MASTER KEY and scale of the project.

*1 Valid when the track type is set to other than LOOPER.

*2 Valid when the track type is set to LOOPER

LOOPER SETTING

Parameter	Value	Explanation
Level	0–127	Specifies the volume at which the sample plays.
Pan	L63–63R	Specifies the pan of the sound.
Delay Send	0–127	Adjusts the amount sent to the total effect delay.
Reverb Send	0–127	Adjusts the amount sent to the total effect reverb.
Pitch Chrom	-24–+24	Specifies the pitch in semitone steps (maximum ±2 octaves). This setting can also be made in PAD MODE NOTE.
Pitch Fine	-100–+100	Finely adjusts the pitch.
Pitch Shift	0–400 %	Smoothly modifies the pitch in a wide range.
PitchStrch	OFF, TYPE1, TYPE2	Selects the pitch shift / time stretch method. **OFF:** Time stretch is not used; the sample is lengthened by changing its pitch. * **If OFF is selected, the settings in the PITCH tab are ignored (pitch shift is not applied).** **TYPE1:** Time stretch optimized for melodic material is applied. **TYPE2:** Time stretch optimized for rhythm material is applied.
Str Window	1.0, 0.75, 0.5, 0.375, 0.25	This parameter applies to time stretch. Higher values improve the audio quality. If an unnatural impression results when pitch shift or time stretch is used to create a large amount of change, lowering this value might improve the result.
Reverse	OFF, ON	**OFF:** The sample plays forward. **ON:** The sample plays backward.

MEAS EDIT (Only LOOPER)

Parameter	Value	Explanation
Step Length	1–128	Specifies the length of the clip. * **The same setting can also be made in the CLIP settings screen ([SHIFT] + [CLIP]).**
Reverse	OFF, ON	Specifies the sample playback method. * **The same setting can also be made in the CLIP settings screen ([SHIFT] + [CLIP]).**

SAMPLE EDIT Parameter

Parameter	Value	Explanation
Start	0–	Sets where to start playback.
End	0–	Sets where to end playback.
Norm Level	-12–0dB	Sets the peak value (maximum) for the normalized waveform.
NORMALIZE EXEC	—	Press the [VALUE] dial to normalize. Normalization automatically raises the volume to the range where the sound does not distort.
Slice Level	HARD, MID, SOFT	Sets the slice sensitivity.
SLICE EXEC	—	Press the [VALUE] dial to execute the slice. Slices are used for dividing up a sample and extracting multiple samples from the result.
Slice Point	1–256	Selects the samples to use from the sliced sample.
EXPORT SAMPLE	—	Press the [VALUE] dial to export the sample to the SD card in WAV format. Exported samples are saved in the ROLAND/MV/SAMPLE/EXPORT folder of the SD card.

SYSTEM

CTRL

Make settings for the pads and knobs.

Parameter	Value	Explanation
Knob Mode	DIRECT, CATCH	**DIRECT:** When a knob is moved, control data of the corresponding position is always output. **CATCH:** Control data is output after the knob passes through the current value of the parameter.
Pad Trg Sens	10–200	Adjusts the sensitivity of the pads to repeated strikes. With lower values, the pads will accept repeated strikes at a shorter time interval. Increase this value if you don't want repeated strikes to be accepted inadvertently.
USBMix	PRE T-FX, POST T-FX	Specifies whether sound that is input via the USB-connected MIX OUT port is input before or after TOTAL FX. ➡ "Block Diagram" (p. 52)
Load Proj	LAST, INIT	**LAST:** At startup, the project that was last saved will be loaded. **INIT:** At startup, a project will not be loaded. A new project will be created.

MIDI

Parameter	Value	Explanation
Sync Src	AUTO, INT, MIDI, USB	Specifies the tempo source. If this is "AUTO," the tempo automatically synchronizes to MIDI clock if MIDI clock is being input via the MIDI IN connector or the USB port. If this is "INT," the tempo specified on the MV-1 is used.
Sync Out	OFF, ON	Specifies whether clock, start, and stop messages are transmitted (ON) or are not transmitted (OFF) to the devices connected to the corresponding MIDI port.
SyncOut USB	OFF, ON	Specifies whether clock, start, and stop messages are transmitted (ON) or are not transmitted (OFF) to the USB-connected device.
RX Start Stop	OFF, ON	When synchronized to external MIDI clock, this setting specifies whether the step sequencer's start/stop is controlled from the device connected to the corresponding MIDI port (ON) or is not controlled (OFF).
RX Start USB	OFF, ON	When synchronized to external MIDI clock, this setting specifies whether step sequencer's start/stop is controlled from the USB-connected device (ON) or is not controlled (OFF).
Track1–4 Ch	1–16	Specifies the MIDI channel of each track.
Device ID	17–32	When transmitting and receiving system exclusive messages, the device ID numbers of both devices must match.
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 Thru	OFF, ON	Specifies whether MIDI messages received at the USB port or MIDI IN port are retransmitted without change from the MIDI OUT connector and USB port (ON) or not (OFF). If this is ON, MIDI messages received at the USB port are sent to the internal sound engine and to the MIDI OUT connector, and MIDI messages received at the MIDI IN connector are sent together with messages from the internal sound engine to the USB port.
Edit Note	OFF, ON	Sets whether the note messages received from an external source via MIDI can change what you are editing (ON) or not (OFF) while you are editing a step.

DISPLAY

Parameter	Value	Explanation
Contrast	1–10	Adjusts the contrast of the display screen.
Backlight	1–10	Adjusts the brightness of the display backlight.
LED Bright	1–10	Specifies the brightness of the fader and button LEDs.
LED Glow	1–10	Adjusts the brightness when a button LED is dimly lit.
Demo Mode	OFF, 1min–10min	Specifies the time (minutes) until the LED demo is shown.

Master Clock

Parameter	Value	Explanation
BPM	40.00–300.00	This is the tempo of the entire project. In this page, you can also use the VALUE dial to change the tempo.
MstrScale	1/8, 1/16, 1/32, 1/4T, 1/8T, 1/16T	Specifies the resolution. **1/8:** eighth notes **1/16:** sixteenth notes **1/32:** thirty-second notes **1/4T:** quarter note triplets **1/8T:** eighth note triplets **1/16T:** sixteenth note triplets
MstrStepLen	2–128	Specifies the cycle.

Arpeggio

Parameter	Value	Explanation
Style	1–128	Specifies the basic way in which the arpeggio will be played.
Variation	1–	The arpeggiator provides several variations (performance patterns) for each arpeggio style. This parameter selects the variation number. The number of variations will differ according to the arpeggio style.
Motif	Sets the order in which notes of the chord will sound.	
	UP	Notes you press will be sounded, from low to high.
	DOWN	Notes you press will be sounded, from high to low.
	UP&DOWN	Notes you press will be sounded, from low to high, and then back down from high to low.
	RANDOM	Notes you press will be sounded, in random order.
	NOTE_ORDER	Notes you press will be sounded in the order in which you pressed them. By pressing the notes in the appropriate order you can produce melody lines. Up to 128 notes will be remembered.
	GLISSANDO	Each chromatic step between the highest and lowest notes you press will sound in succession, repeating upward and downward. Press only the lowest and the highest notes.
	CHORD	All notes you press will sound simultaneously.
	AUTO1	The timing at which keys will sound will be assigned automatically, giving priority to the lowest key that was pressed.
	AUTO2	The timing at which keys will sound will be assigned automatically, giving priority to the highest key that was pressed.
	PHRASE	Pressing a single key will sound the phrase based on the pitch of that key. If multiple keys are pressed, the last-pressed key will be valid.
Hold	OFF, ON	Turn the hold function on/off.

Parameter	Value	Explanation
Velocity	REAL, 1–127	Specifies the loudness of the notes that you play. If you want the velocity value of each note to depend on how strongly you play the keyboard, set this parameter to "REAL." If you want each note to have a fixed velocity regardless of how strongly you play the keyboard, set this parameter to the desired value (1–127).
Oct Range	-3–+3	Sets the key range in octaves over which arpeggio will take place. If you want the arpeggio to sound using only the notes that you actually play, set this parameter to "0." To have the arpeggio sound using the notes you play and notes 1 octave higher, set this parameter to "+1." A setting of "-1" will make the arpeggio sound using the notes you play and notes 1 octave lower.
Acc Rate	0–100 %	Modifies the strength of accents and the length of the notes to adjust the "groove" feel of the arpeggio. A setting of "100 %" will produce the most pronounced groove feel.
Shfl Rate	0–100 %	This setting lets you modify the note timing to create shuffle rhythms. With a setting of "50 %" the notes will be spaced evenly. As the value is increased, the note timing will have more of a "dotted" (shuffle) feel. Shuffle Rate = 50 %  50 50 50 50 Shuffle Rate = 90 %  90 10 90 10
Shfl Reso	♫, ♪	Specifies the timing (as a note value) at which the notes will be heard. The note value can be specified as either a sixteenth note or an eighth note.
Chord Mode	OFF, ON	When this is on, the pads play arpeggios even in Chord mode.

VOCAL COMP

Parameter	Value	Explanation
Switch	OFF, ON	Compressor on/off
Attack	0.1–100 [ms]	Time from when the input exceeds the threshold until compression begins
Release	10–1000 [ms]	Time from when the input falls below the threshold until compression is turned off
Thres	-60–0 [dB]	Level at which compression is applied
Ratio	1: 1–inf: 1	Compression ratio
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.
Gain	-24–+24 [dB]	Level of the output sound
Out Asgn	DRY, MFX	Specifies the compressor output destination.

List of scales (when KEY is C)

SCALE	C	C#	D	D#	E	F	F#	G	G#	A	A#	B
Chromatic	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Minor (Aeorian)	✓		✓	✓		✓		✓	✓		✓	
Major (Ionian)	✓		✓		✓	✓		✓		✓		✓
Dorian	✓		✓	✓		✓		✓		✓	✓	
Phrygian	✓	✓		✓		✓		✓	✓		✓	
Lydian	✓		✓		✓		✓	✓		✓		✓
Mixolydian	✓		✓		✓	✓		✓		✓	✓	
Locrian	✓	✓		✓		✓	✓		✓		✓	
Minor Pentatonic	✓			✓		✓		✓			✓	
Minor Blues	✓			✓		✓	✓	✓			✓	
Bebop Minor (Bebop Dorian)	✓		✓	✓	✓	✓		✓		✓	✓	
Harmonic Minor	✓		✓	✓		✓		✓	✓			✓
Melodic Minor	✓		✓	✓		✓		✓		✓		✓
Major Pentatonic	✓		✓		✓			✓		✓		
Major Blues	✓		✓	✓	✓			✓		✓		
Bebop Major	✓		✓		✓	✓		✓	✓	✓		✓
Altered	✓	✓		✓	✓		✓		✓		✓	
Whole Tone	✓		✓		✓		✓		✓		✓	
Diminished Whole-Half	✓		✓	✓		✓	✓		✓	✓		✓
Diminished Half-Whole	✓	✓		✓	✓		✓	✓		✓	✓	
Gypsy Minor (Hungarian Minor)	✓		✓	✓			✓	✓	✓			✓
Romanian Minor (Ukrainian Dorian)	✓		✓	✓			✓	✓		✓	✓	
Spanish 8 Notes	✓	✓		✓	✓	✓	✓		✓		✓	
Bhairav Thaat (Mayamalavagowla)	✓	✓			✓	✓		✓	✓			✓
Marva Thaat (Gamanasrama)	✓	✓			✓		✓	✓		✓		✓
Purvi Thaat (Kamavardani)	✓	✓			✓		✓	✓	✓			✓
Todi Thaat (Shubhapantuvarali)	✓	✓		✓			✓	✓	✓			✓
Arabic	✓		✓		✓	✓	✓		✓		✓	
Egyptian	✓		✓			✓		✓			✓	
Chinese	✓				✓		✓	✓				✓
Pelog	✓	✓		✓				✓	✓			
Hirajoshi	✓		✓	✓				✓	✓			
Miyakobushi	✓	✓				✓		✓	✓			
Ryukyu	✓				✓	✓		✓				✓

Drum Kit Tone (Drum)

MFX

Parameter	Value	Explanation
Switch	OFF, ON	Switches the MFX on/off.
Type	Selects the MFX type.	
Delay Send	0–127	Adjusts the amount of delay. If you don't want to add the delay effect, set it to 0.
Reverb Send	0–127	Adjusts the amount of reverb. If you don't want to add the reverb effect, set it to 0.
MFX parameters	Edit the parameters for the selected MFX. The available parameters differ depending on the type of the effects you selected in MFX Type. ➡ **"MFX Parameters"** (p. 15)	

KIT MFX CTRL

Parameter	Value	Explanation
Src1–4	Specifies the MIDI message that will control the corresponding MFX CONTROL parameter.	
	OFF	MFX will not be used.
	CC01–31	Controller number 1–31
	CC33–95	Controller number 33–95
	BEND	Pitch Bend
	AFT	Aftertouch
	SYS-CTRL1–4	Use the controller that is assigned by the System Control Source 1–4.
Asgn1–4		Specifies which of the multi-effect parameters are controlled using MFX CONTROL. The multi-effects parameters available for control will depend on the multi-effects type.
Sens1–4	-63–+63	Specifies the depth of MFX CONTROL. Specify a positive "+" value if you want to change the value of the assigned destination in a positive direction (larger, toward the right, faster, etc.), or specify a negative value "-" if you want to change the value in a negative direction (smaller, toward the left, slower, etc.). Larger values will allow a greater amount of control.

DRUM INST EDIT

Parameter	Value	Explanation
Level	0–127	Adjusts the volume of the key.
Pan	L64–0–63R	Adjusts the stereo location of the key.
Delay Send	0–127	Adjusts the amount of delay for each key.
Reverb Send	0–127	Adjusts the amount of reverb for each key.
Mute Grp	OFF, 1–31	On an actual acoustic drum set, an open hi-hat and a closed hi-hat sound can never occur simultaneously. To reproduce the reality of this situation, you can set up a Mute Group. The Mute Group function allows you to designate two or more keys that are not allowed to sound simultaneously. Up to 31 Mute Groups can be used. Keys that are not belong to any such group should be set to "OFF."
Out Assign	DRY, MFX	Specifies the output destination for each key.
Key Offset	-24–+24	Shifts the pitch in units of a semitone.
Fine Ofst	-50–+50 [cent]	Finely adjusts the pitch in units of one cent.
Cutoff Ofst	-100–+100	Adjusts how far the filter is open. Increasing this value makes the sound brighter, and decreasing it makes the sound darker.
Reso Ofst	-100–+100	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort. Increasing this value strengthens the character, and decreasing it weakens the character.
Attack Ofst	-100–+100	Adjusts the time over which the sound reaches its maximum volume after you press the key. Larger settings of this value make the attack gentler, and smaller settings make the attack sharper.
Decay Ofst	-100–+100	Adjusts the time over which the volume decreases from its maximum value. Larger settings of this value make the decay longer, and smaller settings make the decay shorter.
ReleaseOfst	-100–+100	The time it takes after the key is released for a sound to become inaudible. If Envelope Mode is NO-SUS, this is the time until the sounded note becomes inaudible. Larger settings of this value make the sound linger, and smaller settings make the sound end more sharply.
EQ Switch	OFF, ON	Turns the equalizer on/off for each key.
Low Gain	-24.0–+24.0 [dB]	Gain of the low frequency range.
Mid Gain	-24.0–+24.0 [dB]	Specifies the reference frequency of the mid-frequency range.
HighGain	-24.0–+24.0 [dB]	Gain of the high frequency range.
Low Freq	20–16000 [Hz]	Frequency of the low range.
Mid Freq	20–16000 [Hz]	Adjusts the amount of mid-frequency boost/cut.
HighFreq	20–16000 [Hz]	Frequency of the high range.
Mid Q	0.5–16.0 (0.1step)	Specifies the width of the mid-frequency range. Set a higher value for Q to narrow the range to be affected.

Effect Parameters

Total Effect

MULTI COMP

Parameter	Value	Explanation
Switch	OFF, ON	Specifies whether the master COMP (a compressor applied to the entire sound generator of the MV-1) is used (ON) or not used (OFF).
Low Attack Time	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 Time	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 Threshold	-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 is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than Low Thres. Higher values produce a smoother transition.
Low Output Gain	-24.0–+24.0 [dB]	Specifies the output volume of the low-frequency band.
Mid Attack Time	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 Time	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 Threshold	-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 is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than Mid Thres. Higher values produce a smoother transition.
Mid Output Gain	-24.0–+24.0 [dB]	Specifies the output volume of the mid-frequency band.
HighAttack Time	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 Time	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 Threshold	-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 is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than High Thres. Higher values produce a smoother transition.
High Output Gain	-24.0–+24.0 [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 Hi		Specifies the frequency at which the high-frequency band (HIGH) and mid-frequency band (MID) are divided.

5 BAND EQ

Parameter	Value	Explanation
Switch	OFF, ON	Specifies whether the master EQ (an equalizer applied to the entire sound generator of the MV-1) is used (ON) or not used (OFF).
EQ Input Gain	-24–+24 [dB]	Adjusts the amount of boost/cut for the input to the EQ.
Low Gain	-24–+24 [dB]	Gain of the low frequency range.
Low Freq	20–16000 [Hz]	Frequency of the low range.
Mid1 Gain	-24–+24 [dB]	Gain of the middle frequency range 1.
Mid1Freq	20–16000 [Hz]	Frequency of the middle range 1.
Mid1 Q	0.5–16.0	Width of the middle frequency range 1. Set a higher value for Q to narrow the range to be affected.
Mid2 Gain	-24–+24 [dB]	Gain of the middle frequency range 2.
Mid2Freq	20–16000 [Hz]	Frequency of the middle range 2.
Mid2 Q	0.5–16.0	Width of the middle frequency range 2. Set a higher value for Q to narrow the range to be affected.
Mid3 Gain	-24–+24 [dB]	Gain of the middle frequency range 3.
Mid3 Freq	20–16000 [Hz]	Frequency of the middle range 3.
Mid3 Q	0.5–16.0	Width of the middle frequency range 3. Set a higher value for Q to narrow the range to be affected.
High Gain	-24–+24 [dB]	Gain of the high frequency range.
HighFreq	20–16000 [Hz]	Frequency of the high range.

MFX

Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
MFX parameters	(Shows the parameters of the selected MFX.)	

Controlling a MFX via MIDI (MFX CONTROL)

You can use MIDI messages such as control change messages to control the principal MFX parameters. This capability is called "MFX CONTROL (multi-effects control)."

The editable parameters are pre-determined according to the MFX type. You can specify up to four parameters for multi-effect control.

To use MFX CONTROL, you'll need to specify which MIDI message (Source) will affect which parameter (Destination), and how greatly (Sens).

EQ (Part 1–4)

Parameter	Value	Explanation
Switch	OFF, ON	Turns the equalizer (EQ) on/off.
In Gain (Input Gain)	-24–+24 [dB]	Specifies the amount of boost/cut for the input sound.
Low Gain (Low Gain)	-24–+24 [dB]	Specifies the amount of boost/cut for the low-frequency region.
Low Freq (Low Frequency)	20–16000 [Hz]	Frequency of the low range.
Mid Gain (Mid Gain)	-24–+24 [dB]	Specifies the amount of boost/cut for the mid-frequency region.
Mid Freq (Mid Frequency)	20–16000 [Hz]	Adjusts the amount of mid-frequency boost/cut.
Mid Q (Mid Q)	0.5–16.0	Specifies the width of mid-frequency region. Set a higher value for Q to narrow the range to be affected.
High Gain (High Gain)	-24–+24 [dB]	Specifies the amount of boost/cut for the high-frequency region.
HighFreq (High Frequency)	20–16000 [Hz]	Frequency of the high range.

DELAY

Parameter	Value	Explanation
Chorus Type	Selects the types of delay.	
Chorus Switch	OFF, ON	Switches the delay on/off.
Chorus Level	0–127	Specifies the output level of the sound with delay applied.
Reverb Send	0–127	Specifies the send level to reverb.
Delay Parameters	Edit the parameters of the selected delay type. The available parameters differ depending on the type of chorus you selected in Chorus Type.	

CHORUS

This is a stereo chorus.

Parameter	Value	Explanation
Rate	0–127	Frequency of modulation
Depth	0–127	Depth of modulation
Feedback	0–127	Level at which chorus sound is 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	Chorus depth

SDD-320

This models Roland's DIMENSION D (SDD-320). It provides a clear chorus sound.

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

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
Noise Level	0–127	Volume of the noise produced by chorus

DELAY

This is a stereo delay.

Parameter	Value	Explanation
Delay (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Delay (msec) Delay (note)	1–1300 [msec] Note ➡ **"Note"** (p. 51)	Adjusts the delay time from the direct sound until the delay sound is heard.
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	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 DELAY

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

Parameter	Value	Explanation
Delay (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Delay (msec) Delay (note)	1–1300 [msec] Note ➡ **"Note"** (p. 51)	Adjusts the delay time from the direct sound until the delay sound is heard.
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	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 → TREMOLO

Tremolo is applied to the delay sound.

Parameter	Value	Explanation
Input Mode	MONAURAL	The input is mono-mixed.
	STEREO	The sound is input in stereo.
Delay (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Delay (msec) Delay (note)	1–1300 [msec] Note ➡ **"Note"** (p. 51)	Adjusts the delay time from the direct sound until the delay sound is heard.
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	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.
Tremolo Switch	OFF, ON	Switches the tremolo effect on/off
Tremolo Mod Wave	Modulation Wave (panning)	
	TRI	Triangle wave
	SQR	Square wave
	SIN	Sine wave
	SAW1	Sawtooth wave
	SAW2	
	TRP	Trapezoidal wave
Tremolo Rate (sync sw)	OFF, ON	If this is on, the tremolo synchronizes with the tempo.
Tremolo Rate (Hz) Tremolo Rate (note)	0.05–10.00 [Hz] Note ➡ **"Note"** (p. 51)	Tremolo rate
Tremolo Depth	0–127	Tremolo depth

2TAP PAN DELAY

Delay sound is heard in the two locations you specify.

Parameter	Value	Explanation
Delay (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Delay (msec) Delay (note)	1–1300 [msec] Note ➡ **"Note"** (p. 51)	Adjusts the time until the second delay sound is heard.
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	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 1 Pan	L64–63R	Stereo location of Delay 1

Parameter	Value	Explanation
Delay 2 Pan	L64–63R	Stereo location of Delay 2
Delay 1 Level	0–127	Volume of delay 1
Delay 2 Level	0–127	Volume of delay 2

3TAP PAN DELAY

Delay sound is heard in the three locations you specify.

Parameter	Value	Explanation
Delay (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Delay (msec) Delay (note)	1–2600 [msec] Note ➡ **"Note"** (p. 51)	Delay time of the third delay sound after the original sound is heard.
Delay1 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	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 1 Pan	L64–63R	Stereo location of Delay 1
Delay 2 Pan	L64–63R	Stereo location of Delay 2
Delay 3 Pan	L64–63R	Stereo location of Delay 3
Delay 1 Level	0–127	Volume of delay 1
Delay 2 Level	0–127	Volume of delay 2
Delay 3 Level	0–127	Volume of delay 3

REVERB

Parameter	Value	Explanation
Reverb Type	Selects the types of reverb.	
Reverb Switch	OFF, ON	Switches the reverb on/off.
Reverb Level	0–127	Specifies the output level of the sound with reverb applied.
Reverb Parameters	Edit the parameters of the selected reverb type. The available parameters differ depending on the type of reverb you selected in Reverb Type.	

INTEGRA

Parameter	Value	Explanation
Type	**01:** ROOM1 **02:** ROOM2 **03:** HALL1 **04:** HALL2 **05:** PLATE	Selects the types of reverb. **OFF:** Reverb is not used **Room 1/2:** Room **Hall 1/2:** Hall **Plate:** Plate
Pre Delay	0–100 [msec]	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time	0.1–10.0 [sec]	Adjusts the decay length of the reverb sound.
Density	0–127	Density of reverb
Diffusion	0–127	Adjusts the change in the density of the reverb over time. The higher the value, the more the density increases with time. (The effect of this setting is most pronounced 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	Reverb spread
Tone	0–127	Tonal character of the reverb

WARM HALL

Parameter	Value	Explanation
Pre Delay	0–100 [msec]	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time	0.3–30 [sec]	Adjusts the decay length of the reverb sound.
Pre LPF	16–15000 [Hz], Bypass	Frequency above which to cut the high-frequency portion of the sound entering the reverb
Pre HPF	16–15000 [Hz], Bypass	Frequency below which to cut the low-frequency portion of the sound entering the reverb
PreLoop LPF	16–15000 [Hz], Bypass	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 Freq	1000–8000 [Hz]	Frequency above which to cut the high-frequency portion of the reverb
HF Damp Ratio	0.1–1.0	Amount by which to attenuate the high-frequency portion of the reverb

HALL

Parameter	Value	Explanation
Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time	0–127	Adjusts the decay length of the reverb sound.
Size	1–8	Size of room/hall
High Cut	160–12500 [Hz], BYPASS	Frequency above which the high-frequency portion of the final output sound is cut (BYPASS: no cut)
Density	0–127	Density of reverb

Parameter	Value	Explanation
Diffusion	0–127	Adjusts how reverb density increases over time. (This effect is especially noticeable with long reverb times.)
LF Damp Freq	50–4000 [Hz]	Frequency below which the low-frequency portion of the reverb sound is cut.
LF Damp Gain	-36–0 [dB]	LF damp attenuation amount (0: no effect)
HF Damp Freq	4000–12500 [Hz]	Frequency above which the high-frequency portion of the reverb sound is cut
HF Damp Gain	-36–0 [dB]	HF damp attenuation amount (0: no effect)

GS

Parameter	Value	Explanation
Character	ROOM1–3, HALL1–2, PLATE, DELAY, PAN-DELAY	Type of reverb
Pre-LPF	0–7	Amount of high-frequency attenuation for the sound being input to the reverb
Time	0–127	Adjusts the decay length of the reverb sound.
Delay Feedback	0–127	Level at which the reverb sound is returned to the input

SRV2000

Parameter	Value	Explanation
Selection	Selects the type of reverb offered by the Roland SRV-2000 digital reverb.	
	Pre Delay	Room reverb. Higher values increase the size of the room.
	Time	Hall reverb. Higher values increase the size of the concert hall.
	HF Damp	Plate reverb. A more flamboyant reverb sound than P-A.
	Density	Plate reverb.
Pre Delay	0–160	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time	1–990 [msec]	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.
EQ Low Freq	0.04–1.00 [kHz]	Frequency of the low range.
EQ Low Gain	-24–+12 [dB]	Gain of the low frequency range.
EQ Mid Freq	0.25–9.99 [kHz]	Adjusts the amount of mid-frequency boost/cut.
EQ Mid Gain	-24–+12 [dB]	Specifies the reference frequency of the mid-frequency range.
EQ Mid Q	0.2–9.0	Specifies the width of the mid-frequency range. Set a higher value for Q to narrow the range to be affected.
EQ Hi Freq	0.80–9.99 [kHz]	Frequency of the high range.
EQ Hi Gain	-24–+12 [dB]	Gain of the high frequency range.
EQ Hi Q	0.2–9.0	Specifies the width of the high-frequency range. Set a higher value for Q to narrow the range to be affected.

SRV2000 (NON-LINEAR)

Parameter	Value	Explanation
Pre Delay	0–160	Adjusts the delay time from the direct sound until the reverb sound is heard.
Reverb Time	1–990 [msec]	Adjusts the decay length of the reverb sound.
Gate Time	10–450 [msec]	Adjusts the decay length of the reverb sound.
HF Damp	0.05–1.00	Adjusts the high-frequency portion of the reverb.
EQ Low Freq	0.04–1.00 [kHz]	Frequency of the low range.
EQ Low Gain	-24–+12 [dB]	Gain of the low frequency range.
EQ Mid Freq	0.25–9.99 [kHz]	Adjusts the amount of mid-frequency boost/cut.
EQ Mid Gain	-24–+12 [dB]	Specifies the reference frequency of the mid-frequency range.
EQ Mid Q	0.2–9.0	Specifies the width of the mid-frequency range. Set a higher value for Q to narrow the range to be affected.
EQ Hi Freq	0.80–9.99 [kHz]	Frequency of the high range.
EQ Hi Gain	-24–+12 [dB]	Gain of the high frequency range.
EQ Hi Q	0.2–9.0	Specifies the width of the high-frequency range. Set a higher value for Q to narrow the range to be affected.

GM2 REVERB

Parameter	Value	Explanation
Character	0–5	Type of reverb
Time	0–127	Adjusts the decay length of the reverb sound.

VOCAL PROCESSOR

Parameter	Value	Explanation
Pos	EXT IN, PC IN, VOCAL-DRY, VOCAL MFX	Location of the vocal processor.
Key	Specify the key of the song that you're singing. 	
Noise Tres	0-100	Adjusts the depth of the noise suppressor.
Level	0-127	Adjusts the volume.
TONE	(No Assign), Noise Tres, Level, Enhance, Compress, De-Esser, Low Gain, High Gain, L.Mid Gain, H.Mid Gain, Robot Note, Pan, Formant, Shift, Speed, Stability, Hrm E.Level	Sets the function to assign to the [TONE] knob.

ENHANCE

ENHANCE is an effect that makes the sound more sharply defined. This effect also includes a COMPRESSOR which makes the volume more consistent, and a DE-ESSER which suppresses sibilance.

Parameter	Value	Explanation
Switch	OFF, ON	Turns this effect on/off.
Enhance	0–100	Adjusts the depth of ENHANCE. The sound becomes more sharply defined as this value is increased.
Compress	0–100	Adjusts the depth of COMPRESSOR. The volume becomes more consistent as this value is increased.
De-Esser	0–100	Adjusts the depth of DE-ESSER. Sibilance is suppressed more strongly as this value is increased.

EQ

Parameter	Value	Explanation
Switch	OFF, ON	Turns the equalizer on/off.
Low Gain	-20–+20dB	Adjusts the low frequency range tone.
High Gain	-20–+20dB	Adjusts the high frequency range tone.
Level	-20–+20dB	Adjusts the overall volume level of the equalizer.
L.Mid Gain (Low-Mid Gain)	-20–+20dB	Adjusts the low-middle frequency range tone.
L.Mid Fr (Low-Mid Frequency)	20–16.0kHz	Specifies the center of the frequency range that will be adjusted by the LMID GAIN.
L.Mid Q (Low-Mid Q)	0.5–16	Adjusts the width of the area affected by the EQ centered at the LMID FREQ. Higher values will narrow the area.
H.Mid Gain (Low-Mid Gain)	-20–+20dB	Adjusts the high-middle frequency range tone.
H.Mid Fr (High-Mid Frequency)	20–16.0kHz	Specifies the center of the frequency range that will be adjusted by the HMID GAIN.
H.Mid Q (High-Mid Q)	0.5–16	Adjusts the width of the area affected by the EQ centered at the HMID FREQ. Higher values will narrow the area.
Low Cut	FLAT, 20–800Hz	This sets the frequency at which the low cut filter begins to take effect. When "FLAT" is selected, the low cut filter will have no effect.
High Cut	630Hz–16.0kHz, FLAT	This sets the frequency at which the high cut filter begins to take effect. When "FLAT" is selected, the high cut filter will have no effect.

TUNE

TUNE suppresses instabilities in pitch. You can also convert pitch changes to a stair-step form, producing a mechanical effect.

Parameter	Value	Explanation
Switch	OFF, ON	Turns this effect on/off.
Type	SOFT	The pitch will be corrected smoothly.
	HARD	The pitch will be corrected quickly.
	ELECTRIC	Corrects pitch variation to a stair-step change.
	ROBOT	Corrects the pitch to the specified note (Robot Voice).
Scale	CHROMATIC	The pitch is corrected to the nearest chromatic semitone.
	KEY	The pitch is corrected according to the Key setting (p. 5).
Robot Note	C–B	Specifies the pitch (fixed) when Type is set to "Robot."
Pan	L128–R127	Adjusts the sound position (pan).
Formant	-50–+50	Negative (–) settings give the voice a more masculine character, while positive (+) settings make the voice more feminine.
Shift	Specifies the amount by which the pitch is shifted.	
	-12–+12	The pitch is shifted by the specified interval.
Speed	0–10	Adjusts the speed of pitch change. Higher values produce faster change.
Stability	0–20	Adjusts the ease of pitch change. Higher values make change more difficult.

HARMONY

HARMONY can add natural harmony to your voice.

Parameter	Value	Explanation
Switch	OFF, ON	Turns this effect on/off.
Hrm E.Level	0–100	Adjusts the overall volume level of the harmony.
Hrm D.Level	0–100	Adjusts the volume of the sound of the mic.
Hi Note Sens	LOW, MID, HIGH	Specifies the upper limit frequency at which the harmony effect is applied. * **In an environment in which acoustic feedback is prone to occur, using the "LOW" setting can suppress unwanted sound.**
Harmony 1–3		
Auto	OFF	Turns the harmony part off.
	UNISON	This produces the impression that another person is singing the same melody along with you.
	OCT-	Adds sound an octave lower.
	LOWER	Adds lower sound based on 6th or 5th. *1
	LOW	Adds lower sound based on 4th or 3rd. *1
	HIGH	Adds higher sound based on 4th or 3rd. *1
	HIGHER	Adds higher sound based on 6th or 5th. *1
	OCT+	Adds sound an octave higher.
Manual	OFF	Turns the harmony part off.
	UNISON	This produces the impression that another person is singing the same melody along with you.
	OCT-	Adds sound an octave lower.
	-6TH, -5TH, -4TH, -3RD, +3RD, +4TH, +5TH, +6TH	Adds harmony at the specified pitch interval of the diatonic scale.
	OCT+	Adds sound an octave higher.
Pan	L100–CENTER –R100	Adjusts the panning of the harmony part.
Level	0–100	Adjusts the volume of the harmony part.
Delay	0–10	Adjusts the delay of the harmony part.
Accuracy	0–10	Raising this value makes the pitch of the harmony more closely match the pitch of the original vocal. * **With the higher value, the harmony is sounded at the precise pitch; this means that if the pitch of the original vocal is not precise, the result might not sound harmonious. In such cases, try decreasing this value.**
Vibrato	-10–+10	Specifies how closely the vibrato will follow. * **If you want to decrease the expressiveness of the harmony relative to your own voice, use a setting in the negative range.**
Method	SCALE1–2, CHORD1–2	Specifies the rule by which the pitch of the harmony is determined. This setting specifies whether the harmony is biased toward the scale (KEY) or the chord.
Formant	-50–+50	Adjusts the vocal character of the harmony part.
Tone	-50–+50	Adjusts the tonal character of the harmony part.

*1 Depending on conditions, other intervals are also added.

MFX Parameters

00 Thru

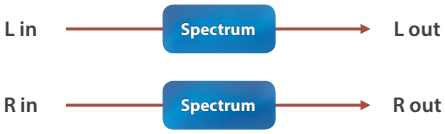
01 Equalizer

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

Parameter	Value	Explanation
Low Freq (Low Frequency)	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]	Gain of the low range
Mid1 Freq (Mid1 Frequency)	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 to narrow the range to be affected.
Mid2 Freq (Mid2 Frequency)	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 to narrow the range to be affected.
High Freq (High Frequency)	2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12500, 16000 [Hz]	Frequency of the high range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

02 Spectrum

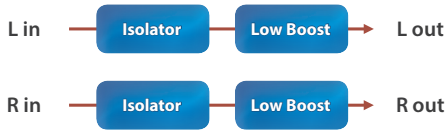
This is a stereo spectrum. Spectrum is a type of filter which modifies the timbre by boosting or cutting the level at specific frequencies.



Parameter	Value	Explanation
Band1 (250 Hz)	-15–+15 [dB]	Gain of each frequency band
Band2 (500 Hz)		
Band3 (1000 Hz)		
Band4 (1250 Hz)		
Band5 (2000 Hz)		
Band6 (3150 Hz)		
Band7 (4000 Hz)		
Band8 (8000 Hz)		
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

03 Isolator

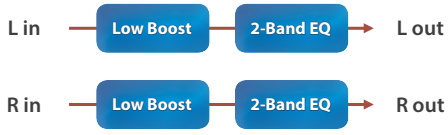
This is an equalizer which cuts the volume greatly, allowing you to add a special effect to the sound by cutting the volume in varying ranges.



Parameter	Value	Explanation
Boost/Cut Low	-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.
Boost/Cut Mid	-60–+4 [dB]	
Boost/Cut High	-60–+4 [dB]	
Anti Phase Low 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.
Anti Phase Low Level	0–127	Level of the Anti-Phase function 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.)
Anti Phase Mid Sw	OFF, ON	Settings of the Anti-Phase function for the Middle frequency ranges. The parameters are the same as for the Low frequency ranges.
Anti Phase Mid Level	0–127	
Low Boost Sw	OFF, ON	Turns Low Booster on/off. This emphasizes the bottom to create a heavy bass sound.
Low Boost Level	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

04 Low Boost

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



Parameter	Value	Explanation
Boost Frequency	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 Width	WIDE, MID, NARROW	Width of the lower range that will be boosted
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

05 Super Filter

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

Parameter	Value	Explanation
Filter Type	LPF, BPF, HPF, NOTCH	Type of filter 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
Filter Slope	-12, -24, -36 [dB]	Amount of attenuation per octave **-12 dB:** Gentle, **-24 dB:** Steep, **-36 dB:** Extremely steep
Filter Cutoff	0–127	Cutoff frequency of the filter Increasing this value will raise the cutoff frequency.
Filter Resonance	0–100	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Filter Gain	0–+12 [dB]	Amount of boost for the filter output
Modulation Sw	OFF, ON	On/off switch for cyclic change
Modulation 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)
	SAW1 SAW2 	
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Rate (note)	Note ➡ **"Note"** (p. 51)	
Depth	0–127	Depth of modulation
Attack	0–127	Speed at which the cutoff frequency will change This is effective if Modulation Wave is SQR, SAW1, or SAW2.
Level	0–127	Output Level

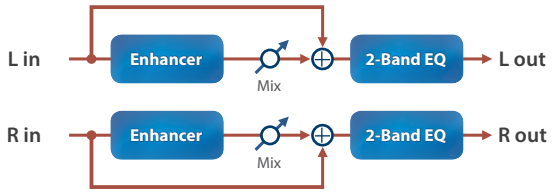
06 Step Filter

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 01–16	0–127	Cutoff frequency at each step
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Rate (note)	Note ➡ **"Note"** (p. 51)	
Attack	0–127	Speed at which the cutoff frequency changes between steps
Filter Type	LPF, BPF, HPF, NOTCH	Type of filter 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
Filter Slope	-12, -24, -36 dB	Amount of attenuation per octave **-12 dB:** Gentle, **-24 dB:** Steep, **-36 dB:** Extremely steep
Filter Resonance	0–127	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Filter Gain	0–+12 [dB]	Amount of boost for the filter output
Level	0–127	Output Level

07 Enhancer

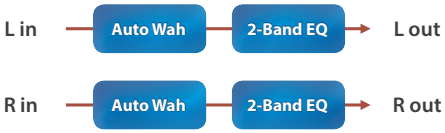
Controls the overtone structure of the high frequencies, adding sparkle and tightness to the sound.



Parameter	Value	Explanation
Sens	0–127	Sensitivity of the enhancer
Mix	0–127	Level of the overtones generated by the enhancer
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

08 Auto Wah

Cyclically controls a filter to create cyclic change in timbre.



Parameter	Value	Explanation
Filter Type	LPF, BPF	Type of filter **LPF:** Produces a wah effect in a broad frequency range. **BPF:** Produces a wah effect in 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	Adjusts the sensitivity with which the filter is controlled.
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 sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Modulation frequency of the wah effect
Rate (note)	Note ➡ **"Note"** (p. 51)	
Depth	0–127	Depth of modulation
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]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

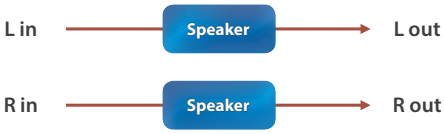
09 Humanizer

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	Vowel2
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Frequency at which the two vowels switch
Rate (note)	Note ➡ **"Note"** (p. 51)	
Depth	0–127	Depth of the effect
Input Sync Sw	OFF, ON	LFO reset on/off If this is ON, the LFO for switching the vowels is reset by the input signal.
Input Sync Threshold	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]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Pan	L64–63R	Stereo location of the output sound
Level	0–127	Output Level

10 Speaker Simulator

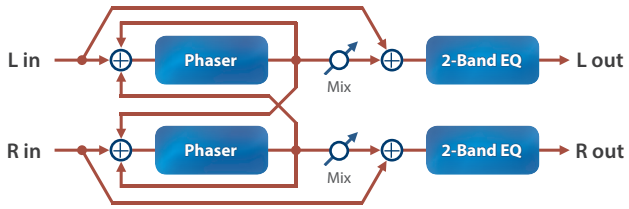
Simulates the speaker type and microphone settings used to record the speaker sound.



Parameter	Value	Explanation		
		Cabinet	Diameter (in inches) and number of the speaker	Microphone
Speaker 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, 2, 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		
Level	0–127	Output Level		

11 Phaser 1

This is a stereo phaser. A phase-shifted sound is added to the original sound and modulated.

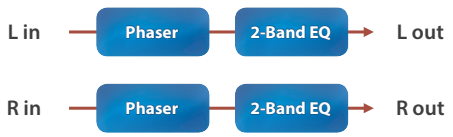


Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual	0–127	Center frequency at which the sound is modulated
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Modulation rate
Rate (note)	Note ➡ **"Note"** (p. 51)	
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
Cross 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]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

12 Phaser 2

This simulates an analog phaser of the past.

It is particularly suitable for electric piano.

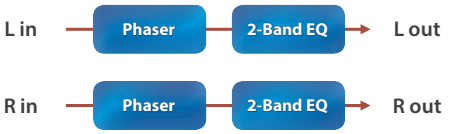


Parameter	Value	Explanation
Rate	0–100	Modulation rate
Color	1, 2	Modulation character
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

13 Phaser 3

This simulates a different analog phaser than Phaser 2.

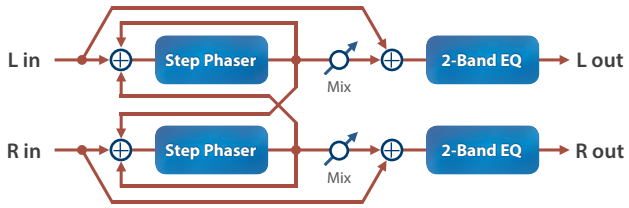
It is particularly suitable for electric piano.



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

14 Step Phaser

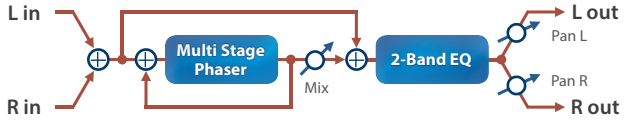
This is a stereo phaser. The phaser effect will be varied gradually.



Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual	0–127	Center frequency at which the sound is modulated
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Modulation rate
Rate (note)	Note ➡ **"Note"** (p. 51)	
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
Cross Feedback	-98–+98 [%]	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Step Rate (Hz)	0.10–20.00 [Hz]	Rate of the step-wise change in the phaser effect
Step Rate (note)	Note ➡ **"Note"** (p. 51)	
Mix	0–127	Level of the phase-shifted sound
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

15 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	Center frequency at which the sound is modulated
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Modulation rate
Rate (note)	Note ➡ **"Note"** (p. 51)	
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]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

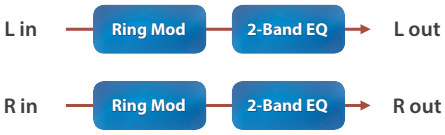
16 Infinite Phaser

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

Parameter	Value	Explanation
Mode	1, 2, 3, 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]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

17 Ring Modulator

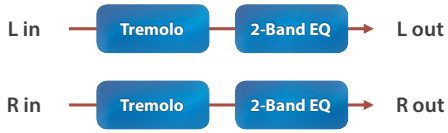
This is an effect that applies amplitude modulation (AM) to the input signal, producing bell-like sounds. You can also change the modulation frequency in response to changes in the volume of the sound sent into the effect.



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]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output Level

18 Tremolo

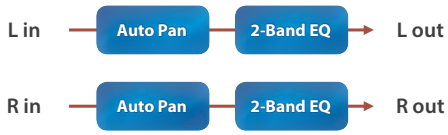
Cyclically changes the volume.



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
	SAW1 SAW2 	
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of the change
Rate (note)	Note ➡ **"Note"** (p. 51)	
Depth	0–127	Depth to which the effect is applied
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

19 Auto Pan

Cyclically modulates the stereo location of the sound.



Parameter	Value	Explanation
Mod Wave	TRI, SQR, SIN, SAW1, SAW2, TRP	How the pan changes **TRI:** Triangle wave **SQR:** Square wave **SIN:** Sine wave **SAW1/2:** Sawtooth wave **TRP:** Trapezoidal wave
	SAW1 SAW2 R R  L L	
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of the change
Rate (note)	Note ➡ **"Note"** (p. 51)	
Depth	0–127	Depth to which the effect is applied
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

20 Slicer

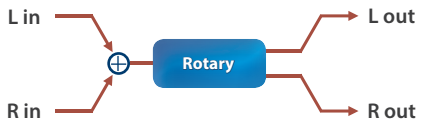
By applying successive cuts to the sound, this effect turns a conventional sound into a sound that appears to be played as a backing phrase. This is especially effective when applied to sustain-type sounds.

Parameter	Value	Explanation
Step 01–16	0–127	Level at each step
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Rate at which the 16-step sequence will cycle
Rate (note)	Note ➡ **"Note"** (p. 51)	
Attack	0–127	Speed at which the level changes between steps
Input 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)
Input Sync Threshold	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

21 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.

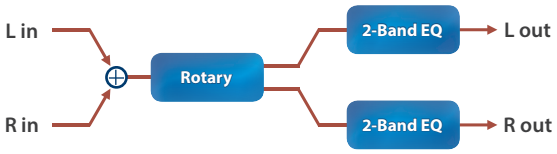


Parameter	Value	Explanation
Speed	SLOW, FAST	Simultaneously switch the rotational speed of the low frequency rotor and high frequency rotor. **SLOW:** Slows down the rotation to the Slow Rate. **FAST:** Speeds up the rotation to the Fast Rate.
Woofer Slow Speed	0.05–10.00 [Hz]	Slow speed (SLOW) of the low frequency rotor
Woofer Fast Speed	0.05–10.00 [Hz]	Fast speed (FAST) of the low frequency rotor
Woofer Acceleration	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.
Woofer Level	0–127	Volume of the low frequency rotor
Tweeter Slow Speed	0.05–10.00 [Hz]	Settings of the high frequency rotor The parameters are the same as for the low frequency rotor
Tweeter Fast Speed	0.05–10.00 [Hz]	
Tweeter Acceleration	0–15	
Tweeter Level	0–127	
Separation	0–127	Spatial dispersion of the sound
Level	0–127	Output Level

22 VK Rotary

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

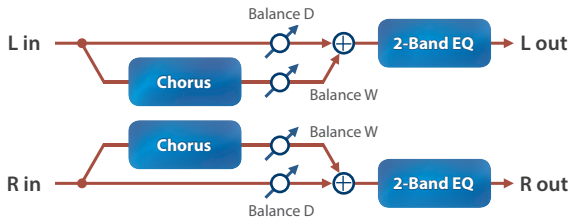
This effect features the same specifications as the VK-7's built-in rotary speaker.



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.
Woofer Slow Speed	0.05–10.00 [Hz]	Low-speed rotation speed of the woofer
Woofer Fast Speed	0.05–10.00 [Hz]	High-speed rotation speed of the woofer
Woofer Trans Up	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Slow to Fast.
Woofer Trans Down	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Fast to Slow.
Woofer Level	0–127	Volume of the woofer
Tweeter Slow Speed	0.05–10.00 [Hz]	Settings of the tweeter The parameters are the same as for the woofer.
Tweeter Fast Speed	0.05–10.00 [Hz]	
Tweeter Trans Up	0–127	
Tweeter Trans Down	0–127	
Tweeter Level	0–127	
Spread	0–10	Sets the rotary speaker stereo image.
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high 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

23 Chorus

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



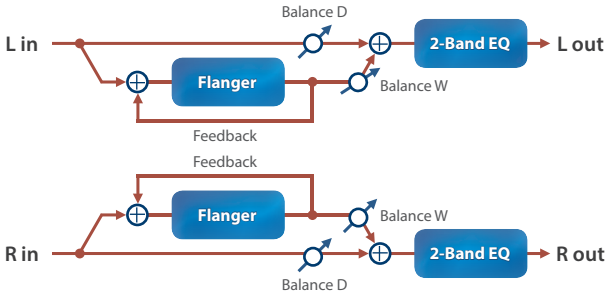
Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** No filter is used. **LPF:** Cuts the frequency range above the Cutoff Freq **HPF:** Cuts the frequency range below the Cutoff Freq
Cutoff Freq	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Basic frequency of the filter
Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Rate (note)	Note ➡ **"Note"** (p. 51)	
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

24 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.

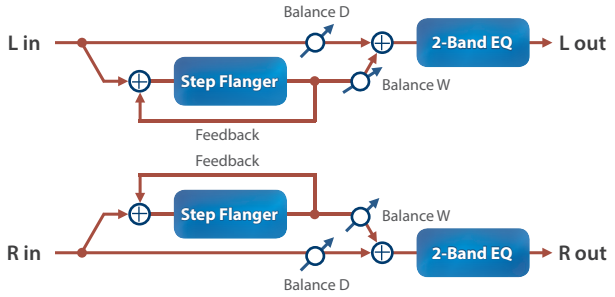


Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** No filter is used. **LPF:** Cuts the frequency range above the Cutoff Freq **HPF:** Cuts the frequency range below the Cutoff Freq
Cutoff Freq	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Basic frequency of the filter
Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Rate (note)	Note ➡ **"Note"** (p. 51)	
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]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

25 Step Flanger

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

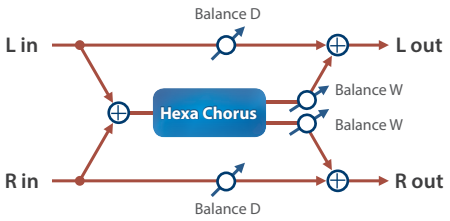
The speed at which the pitch changes can also be specified in terms of a note-value of a specified tempo.



Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** No filter is used. **LPF:** Cuts the frequency range above the Cutoff Freq **HPF:** Cuts the frequency range below the Cutoff Freq
Cutoff Freq	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	0.0–100.0 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Rate (note)	Note ➡ **"Note"** (p. 51)	
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.
Step Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Step Rate (Hz)	0.10–20.00 [Hz]	Rate (period) of pitch change
Step Rate (note)	Note ➡ **"Note"** (p. 51)	
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

26 Hexa-Chorus

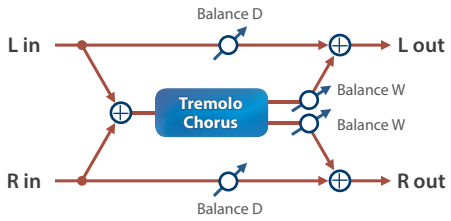
Uses a six-phase chorus (six layers of chorused sound) to give richness and spatial spread to the sound.



Parameter	Value	Explanation
Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Rate (note)	Note ➡ **"Note"** (p. 51)	
Depth	0–127	Depth of modulation
Pre Delay Deviation	0–20	Adjusts the differences in Pre Delay between each chorus sound.
Depth Deviation	-20–20	Adjusts the difference in modulation depth between each chorus sound.
Pan Deviation	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

27 Tremolo Chorus

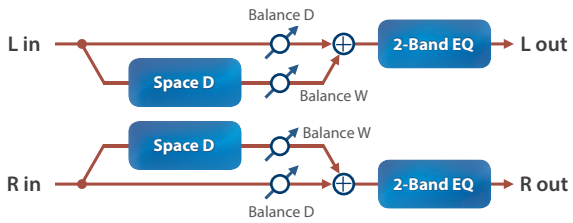
This is a chorus effect with added Tremolo (cyclic modulation of volume).



Parameter	Value	Explanation
Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Chorus Rate (Hz)	0.05–10.00 [Hz]	Modulation frequency of the chorus effect
Cho Note (Chorus Rate (note))	Note ➡ **"Note"** (p. 51)	
Chorus Depth	0–127	Modulation depth of the chorus effect
Tremolo Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Tremolo Rate (Hz)	0.05–10.00 [Hz]	Modulation frequency of the tremolo effect
Tremolo Rate (note)	Note ➡ **"Note"** (p. 51)	
Tremolo Separation	0–127	Depth of the tremolo effect
Tremolo 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

28 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 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Rate (note)	Note ➡ **"Note"** (p. 51)	
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

29 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 Sw	OFF, ON	Turns the Amp Simulator on/off.
Amp Type	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]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Pan	L64–63R	Stereo location of the output sound
Level	0–127	Output Level

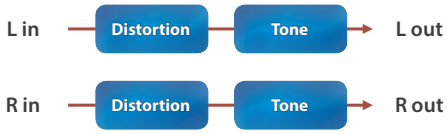
30 Distortion

This is a distortion effect 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 Sw	OFF, ON	Turns the Amp Simulator on/off.
Amp Type	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]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Pan	L64–63R	Stereo location of the output sound
Level	0–127	Output Level

31 T-Scream

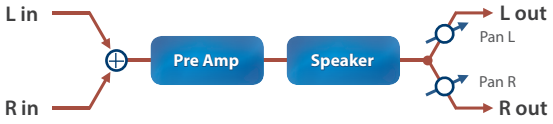
This models a classic analog overdrive. It is distinctive in adding an appropriate amount of overtones without muddying the sound.



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

32 Guitar Amp Simulator

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

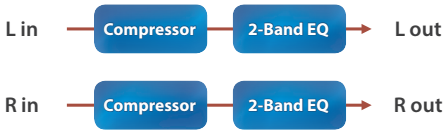


Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
Pre Amp Type		Type of guitar amp
	JC-120	This models the sound of the Roland JC-120.
	CLEAN TWIN	This models a Fender Twin Reverb.
	MATCH DRIVE	This models the sound input to left input on a Matchless D/C-30. A simulation of 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	This models the sound of connecting inputs I and II on a Marshall 1959 in parallel. It creates 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 EVH5150.
	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.
Pre Amp Volume	0–127	Volume and amount of distortion of the amp
Pre Amp Master	0–127	Volume of the entire pre-amp
Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass	0–127	Tone of the bass/mid/treble frequency range
Pre Amp Middle		
Pre Amp Treble		
Pre Amp Presence	0–127	Tone for the ultra-high frequency range
Pre Amp 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.**

Parameter	Value	Explanation		
Speaker Sw	OFF, ON	Determines whether the signal passes through the speaker (ON), or not (OFF).		
Speaker Type		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 STACK1	Sealed enclosure	12 x 2	Condenser
	BG STACK2	Large sealed enclosure	12 x 2	Condenser
	MS STACK1	Large sealed enclosure	12 x 4	Condenser
	MS STACK2	Large sealed enclosure	12 x 4	Condenser
	MTL 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, 2, 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		

33 Compressor

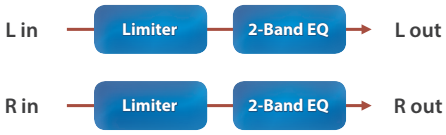
Flattens out high levels and boosts low levels, smoothing out fluctuations in volume.



Parameter	Value	Explanation
Attack	0–124	Sets the time from when the input exceeds the Threshold until the volume starts being compressed
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]	Adjusts the output gain.
Level	0–127	Output Level

34 Limiter

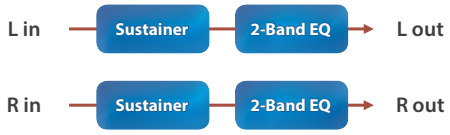
Compresses signals that exceed a specified volume level, preventing distortion from occurring.



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]	Adjusts the output gain.
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

35 Sustainer

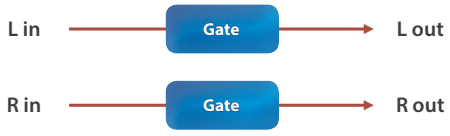
By compressing loud input and boosting low input, this effect keeps the volume consistent to produce a sustain effect without distortion.



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
Post Gain	-15–+15 [dB]	Adjusts the output gain.
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

36 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.

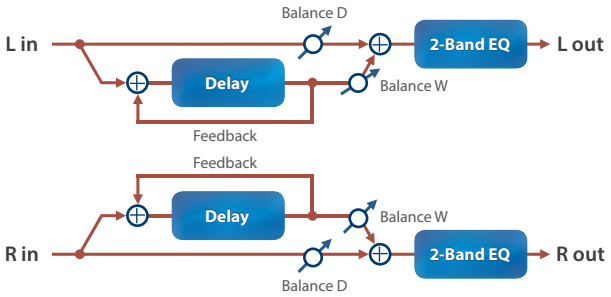


Parameter	Value	Explanation
Threshold	0–127	Volume level at which the gate begins to close
Mode	GATE, DUCK	Type of gate **GATE:** The gate will close when the volume of the original sound decreases, cutting the original sound. **DUCK (Duking):** The gate will close when the volume of the original sound 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

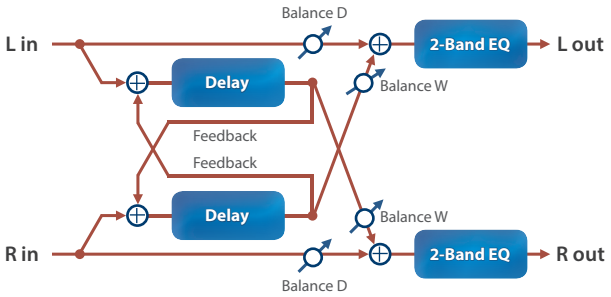
37 Delay

This is a stereo delay.

When Feedback Mode is NORMAL:



When Feedback Mode is CROSS:

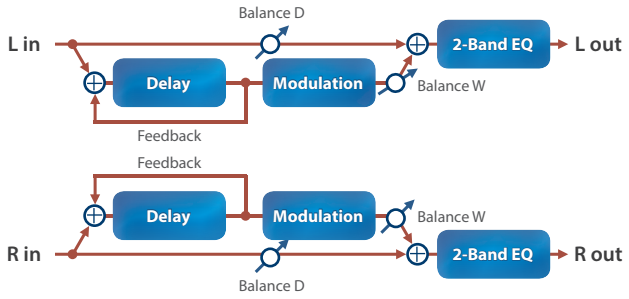


Parameter	Value	Explanation
Delay Left (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Left (msec)	1–1300 [msec]	Adjusts the time until the left delay sound is heard.
Delay Left (note)	Note ➡ **"Note"** (p. 51)	
Delay Right (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Right (msec)	1–1300 [msec]	Adjusts the time until the right delay sound is heard.
Delay Right (note)	Note ➡ **"Note"** (p. 51)	
Phase Left	NORMAL, INVERSE	Phase of left and right delay sound **NORMAL:** Non-inverted **INVERT:** Inverted
Phase Right		
Feedback 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

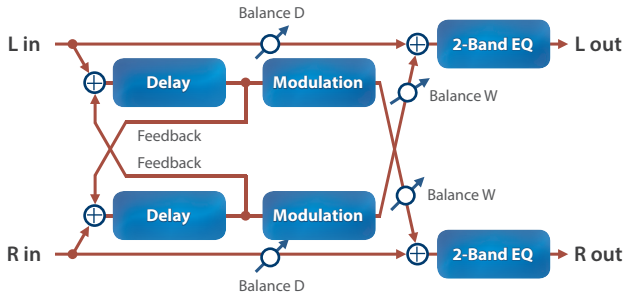
38 Modulation Delay

Adds modulation to the delayed sound.

When Feedback Mode is NORMAL:



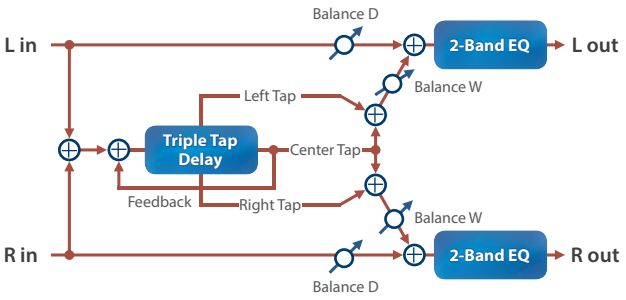
When Feedback Mode is CROSS:



Parameter	Value	Explanation
Delay Left (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Left (msec)	1–1300 [msec]	Adjusts the time until the left delay sound is heard.
Delay Left (note)	Note ➡ **"Note"** (p. 51)	
Delay Right (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Right (msec)	1–1300 [msec]	Adjusts the time until the right delay sound is heard.
Delay Right (note)	Note ➡ **"Note"** (p. 51)	
Feedback 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Rate (note)	Note ➡ **"Note"** (p. 51)	
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

39 3Tap Pan Delay

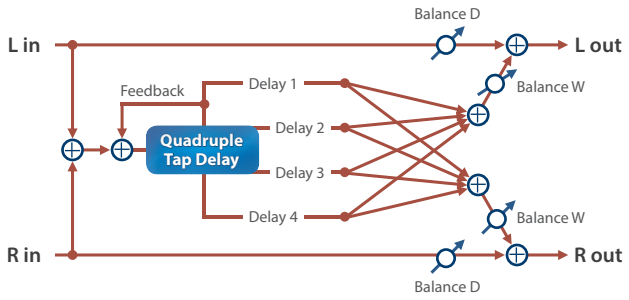
Produces three delay sounds; center, left and right.

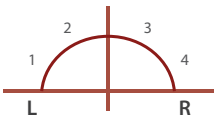


Parameter	Value	Explanation
Delay Left (sync switch)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Left (msec)	1–2600 [msec]	Adjusts the time until the left delay sound is heard.
Delay Left (note)	Note ➡ **"Note"** (p. 51)	
Delay Right (sync switch)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Right (msec)	1–2600 [msec]	Adjusts the time until the right delay sound is heard.
Delay Right (note)	Note ➡ **"Note"** (p. 51)	
Delay Center (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Center (msec)	1–2600 [msec]	Adjusts the time until the center delay sound is heard.
Delay Center (note)	Note ➡ **"Note"** (p. 51)	
Center 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
Left Level	0–127	Volume of each delay sound
Right Level	0–127	
Center Level	0–127	
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

40 4Tap Pan Delay

This effect has four delays.

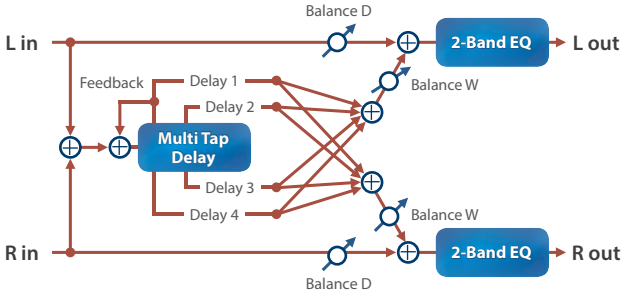




Parameter	Value	Explanation
Delay 1 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay 1 Time (msec)	1–2600 [msec]	Adjusts the time until Delay 1 is heard.
Delay 1 Time (note)	Note ➡ **"Note"** (p. 51)	
Delay 2 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay 2 Time (msec)	1–2600 [msec]	Adjusts the time until Delay 2 is heard.
Delay 2 Time (note)	Note ➡ **"Note"** (p. 51)	
Delay 3 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay 3 Time (msec)	1–2600 [msec]	Adjusts the time until Delay 3 is heard.
Delay 3 Time (note)	Note ➡ **"Note"** (p. 51)	
Delay 4 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay 4 Time (msec)	1–2600 [msec]	Adjusts the time from the original sound until Delay 4 is heard.
Delay 4 Time (note)	Note ➡ **"Note"** (p. 51)	
Delay 1 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
Delay 1 Level	0–127	Output level of Delays 1–4
Delay 2 Level		
Delay 3 Level		
Delay 4 Level		
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

41 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.

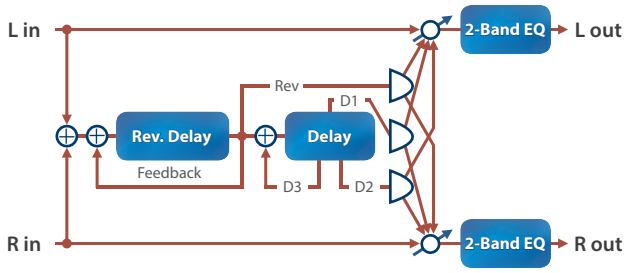


Parameter	Value	Explanation
Delay 1 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay 1 Time (msec)	1–2600 [msec]	Adjusts the time from the original sound until Delay 1 is heard.
Delay 1 Time (note)	Note ➡ **"Note"** (p. 51)	
Delay 2 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay 2 Time (msec)	1–2600 [msec]	Adjusts the time from the original sound until Delay 2 is heard.
Delay 2 Time (note)	Note ➡ **"Note"** (p. 51)	
Delay 3 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay 3 Time (msec)	1–2600 [msec]	Adjusts the time from the original sound until Delay 3 is heard.
Delay 3 Time (note)	Note ➡ **"Note"** (p. 51)	
Delay 4 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay 4 Time (msec)	1–2600 [msec]	Adjusts the time from the original sound until Delay 4 is heard.
Delay 4 Time (note)	Note ➡ **"Note"** (p. 51)	
Delay 1 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
Delay 1 Pan	L64–63R	Stereo location of Delays 1–4
Delay 2 Pan		
Delay 3 Pan		
Delay 4 Pan		
Delay 1 Level	0–127	Output level of Delays 1–4
Delay 2 Level		
Delay 3 Level		
Delay 4 Level		
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output Level

42 Reverse Delay

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

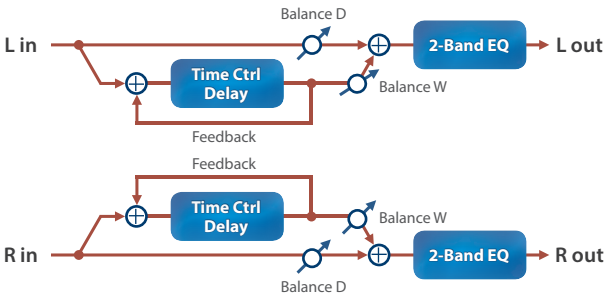
A tap delay is connected immediately after the reverse delay.



Parameter	Value	Explanation
Threshold	0–127	Volume at which the reverse delay will begin to be applied
Rev Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rev Delay Time (msec)	1–1300 [msec]	Delay time from when sound is input into the reverse delay until the delay sound is heard
Rev Delay Time (note)	Note ➡ **"Note"** (p. 51)	
Rev Delay Feedback	-98–+98 [%]	Proportion of the delay sound that is to be returned to the input of the reverse delay (negative (-) values invert the phase)
Rev Delay HF Damp	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)
Rev Delay Pan	L64–63R	Panning of the reverse delay sound
Rev Delay Level	0–127	Volume of the reverse delay sound
Delay 1 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay 1 Time (msec)	1–1300 [msec]	Delay time from when sound is input into the tap delay until the delay sound is heard
Delay 1 Time (note)	Note ➡ **"Note"** (p. 51)	
Delay 2 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay 2 Time (msec)	1–1300 [msec]	Delay time from when sound is input into the tap delay until the delay sound is heard
Delay 2 Time (note)	Note ➡ **"Note"** (p. 51)	
Delay 3 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay 3 Time (msec)	1–1300 [msec]	Delay time from when sound is input into the tap delay until the delay sound is heard
Delay 3 Time (note)	Note ➡ **"Note"** (p. 51)	
Delay 3 Feedback	-98–+98 [%]	Proportion of the delay sound that is to be returned to the input of the tap delay (negative (-) values invert the phase)
Delay HF Damp	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)
Delay 1 Pan	L64–63R	Panning of the tap delay sounds
Delay 2 Pan	L64–63R	
Delay 1 Level	0–127	Volume of the tap delay sounds
Delay 2 Level	0–127	
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

43 Time Ctrl Delay

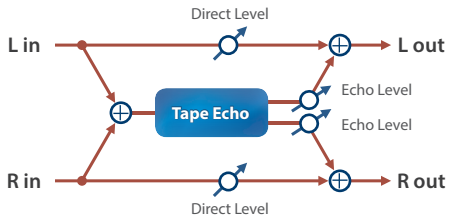
A stereo delay in which the delay time can be varied smoothly.



Parameter	Value	Explanation
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Time (msec)	1–1300 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Time (note)	Note ➡ **"Note"** (p. 51)	
Acceleration	0–15	Speed at which the current delay time changes to the specified delay time when you change the 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, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

44 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	
Tape 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.
W/F Rate	0–127	Speed of wow/flutter (complex variation in pitch caused by tape wear and rotational irregularity)
W/F Depth	0–127	Depth of wow/flutter
Echo Level	0–127	Volume of the echo sound
Direct Level	0–127	Volume of the original sound
Level	0–127	Output Level

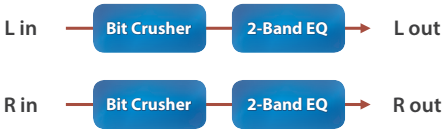
45 LOFI Compress

Degrades the sound quality.

Parameter	Value	Explanation
Pre Filter Type	1, 2, 3, 4, 5, 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, 2, 3, 4, 5, 6, 7, 8, 9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	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
Post Filter Cutoff	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Basic frequency of the Post Filter
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output Level

46 Bit Crusher

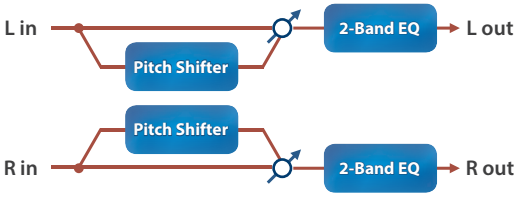
This creates a lo-fi sound.



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]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

47 Pitch Shifter

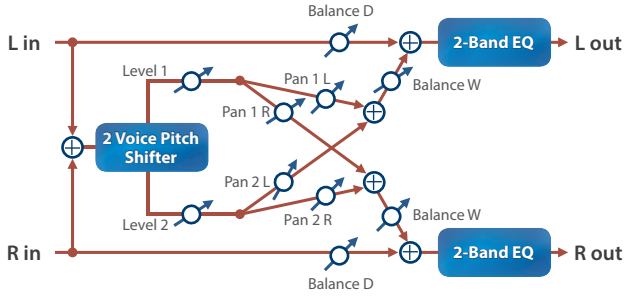
A stereo pitch shifter.



Parameter	Value	Explanation
Coarse	-24–+12 [semi]	Adjusts the pitch of the pitch shifted sound in semitone steps.
Fine	-100–+100 [cent]	Adjusts the pitch of the pitch shifted sound in 2-cent steps.
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Time (msec)	1–1300 [msec]	Adjusts the delay time from the direct sound until the pitch shifted sound is heard.
Delay Time (note)	Note ➡ **"Note"** (p. 51)	
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]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0–127	Output Level

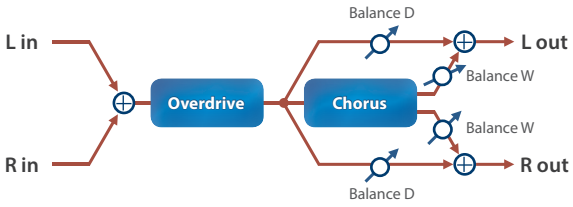
48 2Voice Pitch Shifter

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.



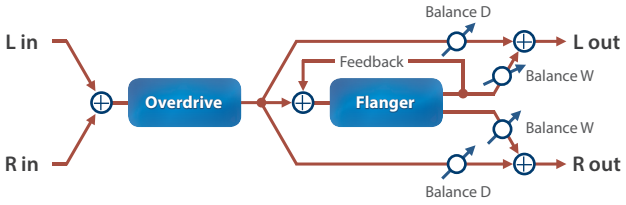
Parameter	Value	Explanation
Pitch1 Coarse	-24–+12 [semi]	Adjusts the pitch of Pitch Shift 1 in semitone steps.
Pitch1 Fine	-100–+100 [cent]	Adjusts the pitch of Pitch Shift Pitch 1 in 2-cent steps.
Pitch1 Delay (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Pitch1 Delay (msec)	1–1300 [msec]	Adjusts the delay time from the direct sound until the Pitch Shift 1 sound is heard.
Pitch1 Delay (note)	Note ➡ **"Note"** (p. 51)	
Pitch1 Feedback	-98–+98 [%]	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
Pitch1 Pan	L64–63R	Stereo location of the Pitch Shift 1 sound
Pitch1 Level	0–127	Volume of the Pitch Shift 1 sound
Pitch2 Coarse	-24–+12 [semi]	Settings of the Pitch Shift 2 sound. The parameters are the same as for the Pitch Shift 1 sound.
Pitch2 Fine	-100–+100 [cent]	
Pitch2 Delay (sync sw)	OFF, ON	
Pitch2 Delay (msec)	1–1300 [msec]	
Pitch2 Delay (note)	Note ➡ **"Note"** (p. 51)	
Pitch2 Feedback	-98–+98 [%]	
Pitch2 Pan	L64–63R	
Pitch2 Level	0–127	
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0–127	Output Level

49 Overdrive → Chorus



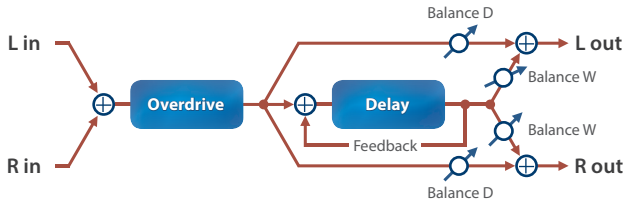
Parameter	Value	Explanation
Overdrive Drive	0–127	Degree of distortion Also changes the volume.
Overdrive Pan	L64–63R	Stereo location of the overdrive sound
Chorus Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Chorus Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Chorus Rate (note)	Note ➡ **"Note"** (p. 51)	
Chorus Depth	0–127	Depth of modulation
Chorus Balance	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

50 Overdrive → Flanger



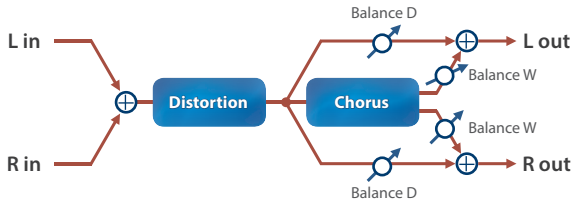
Parameter	Value	Explanation
Overdrive Drive	0–127	Degree of distortion Also changes the volume.
Overdrive Pan	L64–63R	Stereo location of the overdrive sound
Flanger Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Flanger Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Flanger Rate (note)	Note ➡ **"Note"** (p. 51)	
Flanger Depth	0–127	Depth of modulation
Flanger Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	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

51 Overdrive → Delay



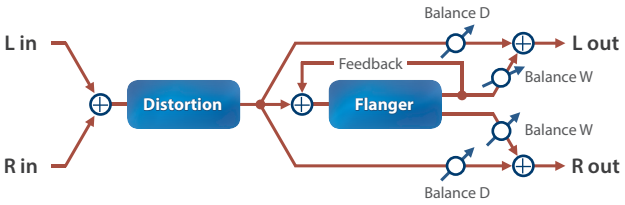
Parameter	Value	Explanation
Overdrive Drive	0–127	Degree of distortion Also changes the volume.
Overdrive Pan	L64–63R	Stereo location of the overdrive sound
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Time (msec)	1–2600 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Time (note)	Note ➡ **"Note"** (p. 51)	
Delay Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
Delay 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

52 Distortion → Chorus



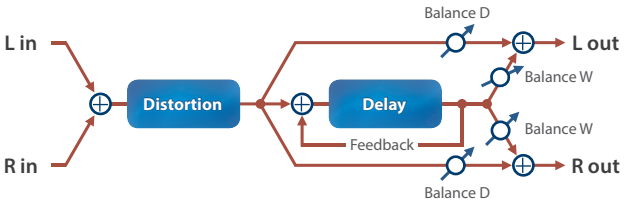
Parameter	Value	Explanation
Distortion Drive	0–127	Degree of distortion Also changes the volume.
Distortion Pan	L64–63R	Stereo location of the overdrive sound
Chorus Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Chorus Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Chorus Rate (note)	Note ➡ **"Note"** (p. 51)	
Chorus Depth	0–127	Depth of modulation
Chorus Balance	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

53 Distortion → Flanger



Parameter	Value	Explanation
Distortion Drive	0–127	Degree of distortion Also changes the volume.
Distortion Pan	L64–63R	Stereo location of the overdrive sound
Flanger Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Flanger Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Flanger Rate (note)	Note ➡ **"Note"** (p. 51)	
Flanger Depth	0–127	Depth of modulation
Flanger Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	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

54 Distortion → Delay



Parameter	Value	Explanation
Distortion Drive	0–127	Degree of distortion Also changes the volume.
Distortion Pan	L64–63R	Stereo location of the overdrive sound
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Time (msec)	1–2600 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Time (note)	Note ➡ **"Note"** (p. 51)	
Delay Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
Delay 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

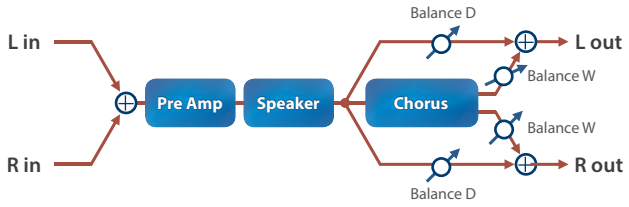
55 OD/DS → TouchWah

Parameter	Value	Explanation
Drive Switch	OFF, ON	Turns overdrive/distortion on/off
Drive 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.
Amp Type	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	Type of filter **LPF:** Produces a wah effect in a broad frequency range. **BPF:** Produces a wah effect in a narrow frequency range.
TWah Polarity	DOWN, UP	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.
TWah Sens	0–127	Adjusts the sensitivity with which the filter is controlled.
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 Balance	D100:0W–D0:100W	Volume balance of the sound that passes through the wah (W) and the unprocessed sound (D)
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

56 OD/DS → AutoWah

Parameter	Value	Explanation
Drive Switch	OFF, ON	Turns overdrive/distortion on/off
Drive 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.
Amp Type	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
AutoWah Switch	OFF, ON	Wah on/off
AutoWah Mode	LPF, BPF	Type of filter **LPF:** Produces a wah effect in a broad frequency range. **BPF:** Produces a wah effect in a narrow frequency range.
AutoWah Manual	0–127	Center frequency at which the wah effect is applied
AutoWah Peak	0–127	Width of the frequency region at which the wah effect is applied Increasing this value will make the frequency region narrower.
AutoWah Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
AutoWah Rate (Hz)	0.05–10.00 [Hz]	Modulation frequency of the wah effect
AutoWah Rate (note)	Note ➡ **"Note"** (p. 51)	
AutoWah Depth	0–127	Depth of modulation
AutoWah Balance	D100:0W–D0:100W	Volume balance of the sound that passes through the wah (W) and the unprocessed sound (D)
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

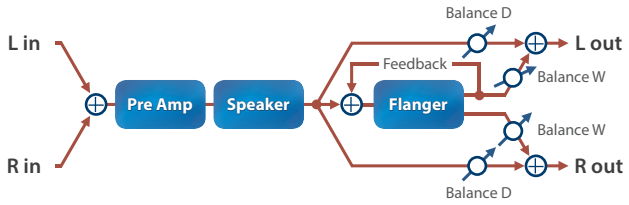
57 GtAmpSim → Chorus



Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
Pre Amp Type		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	This models the sound of connecting inputs I and II on a Marshall 1959 in parallel. It creates 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.
Pre Amp Volume	0–127	Volume and amount of distortion of the amp
Pre Amp Master	0–127	Volume of the entire pre-amp
Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass	0–127	Tone of the bass/mid/treble frequency range
Pre Amp Middle	0–127	
Pre Amp Treble	0–127	

Parameter	Value	Explanation		
Speaker Sw	OFF, ON	Selects whether the sound will be sent through the speaker (ON) or not (OFF)		
Speaker Type		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-IN1	Open back enclosure	12 x 2	Dynamic
	BUILT-IN2	Open back enclosure	12 x 2	Condenser
	BUILT-IN3	Open back enclosure	12 x 2	Condenser
	BUILT-IN4	Open back enclosure	12 x 2	Condenser
	BUILT-IN5	Open back enclosure	12 x 2	Condenser
	BG STACK1	Sealed enclosure	12 x 2	Condenser
	BG STACK2	Large sealed enclosure	12 x 2	Condenser
	MS STACK1	Large sealed enclosure	12 x 4	Condenser
	MS STACK2	Large sealed enclosure	12 x 4	Condenser
	MTL 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 Switch	OFF, ON	Chorus on/off		
Chorus Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.		
Chorus Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation		
Chorus Depth	0–127	Depth of modulation		
Chorus Balance	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		

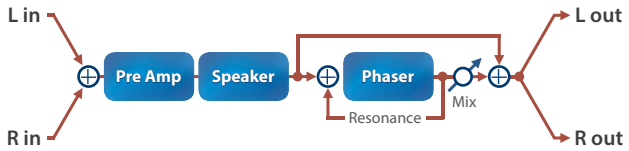
58 GtAmpSim → Flanger



Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
Pre Amp Type		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	This models the sound of connecting inputs I and II on a Marshall 1959 in parallel. It creates 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 EVH5150.
	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.
Pre Amp Volume	0–127	Volume and amount of distortion of the amp
Pre Amp Master	0–127	Volume of the entire pre-amp
Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass	0–127	Tone of the bass/mid/treble frequency range
Pre Amp Middle	0–127	
Pre Amp Treble	0–127	

Parameter	Value	Explanation
Speaker Sw	OFF, ON	Determines whether the signal passes through the speaker (ON), or not (OFF).
Speaker Type		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-IN1	Open back enclosure / 12 x 2 / Dynamic
	BUILT-IN2	Open back enclosure / 12 x 2 / Condenser
	BUILT-IN3	Open back enclosure / 12 x 2 / Condenser
	BUILT-IN4	Open back enclosure / 12 x 2 / Condenser
	BUILT-IN5	Open back enclosure / 12 x 2 / Condenser
	BG STACK1	Sealed enclosure / 12 x 2 / Condenser
	BG STACK2	Large sealed enclosure / 12 x 2 / Condenser
	MS STACK1	Large sealed enclosure / 12 x 4 / Condenser
	MS STACK2	Large sealed enclosure / 12 x 4 / Condenser
	MTL 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
Flanger Switch	OFF, ON	Flanger on/off
Flanger Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Flanger Depth	0–127	Depth of modulation
Flanger Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	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

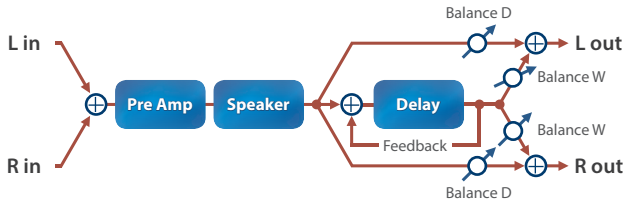
59 GtAmpSim → Phaser



Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
Pre Amp Type		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	This models the sound of connecting inputs I and II on a Marshall 1959 in parallel. It creates 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 EVH5150.
	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.
Pre Amp Volume	0–127	Volume and amount of distortion of the amp
Pre Amp Master	0–127	Volume of the entire pre-amp
Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass	0–127	Tone of the bass/mid/treble frequency range
Pre Amp Middle	0–127	
Pre Amp Treble	0–127	

Parameter	Value	Explanation		
Speaker Sw	OFF, ON	Determines whether the signal passes through the speaker (ON), or not (OFF).		
Speaker Type		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-IN1	Open back enclosure	12 x 2	Dynamic
	BUILT-IN2	Open back enclosure	12 x 2	Condenser
	BUILT-IN3	Open back enclosure	12 x 2	Condenser
	BUILT-IN4	Open back enclosure	12 x 2	Condenser
	BUILT-IN5	Open back enclosure	12 x 2	Condenser
	BG STACK1	Sealed enclosure	12 x 2	Condenser
	BG STACK2	Large sealed enclosure	12 x 2	Condenser
	MS STACK1	Large sealed enclosure	12 x 4	Condenser
	MS STACK2	Large sealed enclosure	12 x 4	Condenser
	MTL 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 Switch	OFF, ON	Phaser on/off		
Phaser Rate (Hz)	0.05–10.00 [Hz]	Modulation rate		
Phaser Manual	0–127	Center frequency at which the sound is modulated		
Phaser Depth	0–127	Depth of modulation		
Phaser Resonance	0–127	Amount of feedback		
Phaser Mix	0–127	Level of the phase-shifted sound		
Level	0–127	Output Level		

60 GtAmpSim → Delay



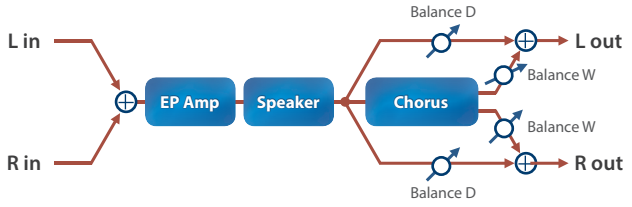
Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
Pre Amp Type		Type of guitar amp
	JC-120	This models the sound of the Roland JC-120.
	CLEAN TWIN	This models a Fender Twin Reverb.
	MATCH DRIVE	This models the sound input to left input on a Matchless D/C-30. A simulation of 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	This models the sound of connecting inputs I and II on a Marshall 1959 in parallel. It creates 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 EVH5150.
	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.
Pre Amp Volume	0–127	Volume and amount of distortion of the amp
Pre Amp Master	0–127	Volume of the entire pre-amp
Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass	0–127	Tone of the bass/mid/treble frequency range
Pre Amp Middle	0–127	
Pre Amp Treble	0–127	

Parameter	Value	Explanation
Speaker Sw	OFF, ON	Determines whether the signal passes through the speaker (ON), or not (OFF).
Speaker Type		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-IN1	Open back enclosure / 12 x 2 / Dynamic
	BUILT-IN2	Open back enclosure / 12 x 2 / Condenser
	BUILT-IN3	Open back enclosure / 12 x 2 / Condenser
	BUILT-IN4	Open back enclosure / 12 x 2 / Condenser
	BUILT-IN5	Open back enclosure / 12 x 2 / Condenser
	BG STACK1	Sealed enclosure / 12 x 2 / Condenser
	BG STACK2	Large sealed enclosure / 12 x 2 / Condenser
	MS STACK1	Large sealed enclosure / 12 x 4 / Condenser
	MS STACK2	Large sealed enclosure / 12 x 4 / Condenser
	MTL 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 Switch	OFF, ON	Delay on/off
Delay Time	1–1300 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	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)
Delay 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

61 EPAmpSim → Tremolo

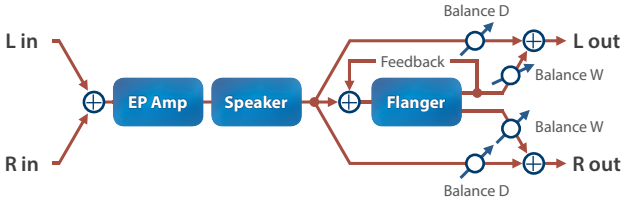
Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
	WURLY	A standard electric piano sound of the 60s
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Tremolo Switch	OFF, ON	Tremolo on/off
Tremolo Speed (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Tremolo Speed (Hz)	0.05–10.00 [Hz]	Rate of the tremolo effect
Tremolo Speed (note)	Note ➡ **"Note"** (p. 51)	
Tremolo Depth	0–127	Depth of the tremolo effect
Tremolo Duty	-10–+10	Adjusts the duty cycle of the LFO waveform used to apply tremolo.
Speaker 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

62 EPAmpSim → Chorus



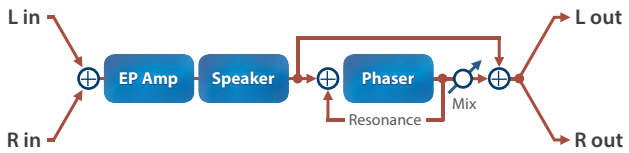
Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Chorus Switch	OFF, ON	Chorus on/off
Chorus Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Chorus Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Chorus Rate (note)	Note ➡ **"Note"** (p. 51)	
Chorus Depth	0–127	Depth of modulation
Chorus Balance	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).
Speaker 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

63 EPAmpSim → Flanger



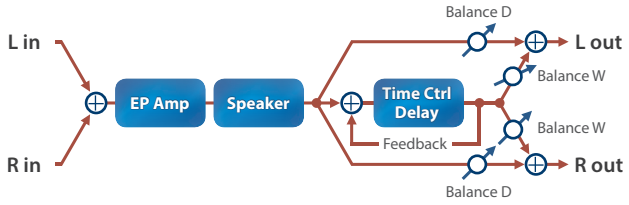
Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Flanger Switch	OFF, ON	Flanger on/off
Flanger Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Flanger Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Flanger Rate (note)	Note ➡ **"Note"** (p. 51)	
Flanger Depth	0–127	Depth of modulation
Flanger Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	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).
Speaker 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

64 EPAmpSim → Phaser



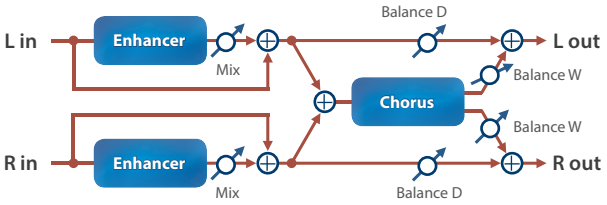
Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Phaser Switch	OFF, ON	Phaser on/off
Phaser Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Phaser Rate (Hz)	0.05–10.00 [Hz]	Modulation rate
Phaser Rate (note)	Note ➡ **"Note"** (p. 51)	
Phaser Manual	0–127	Center frequency at which the sound is modulated
Phaser Depth	0–127	Depth of modulation
Phaser Resonance	0–127	Amount of feedback
Phaser Mix	0–127	Level of the phase-shifted sound
Speaker 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

65 EPAmpSim → Delay



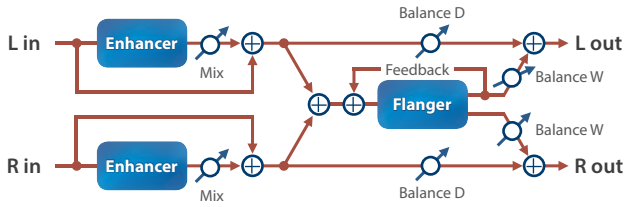
Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Delay Switch	OFF, ON	Delay on/off
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Time (msec)	1–1300 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Time (note)	Note ➡ **"Note"** (p. 51)	
Delay Accel	0–15	Speed at which the current delay time changes to the specified delay time when you change the delay time. This affects the speed of pitch change as well as the delay time.
Delay Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	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)
Delay 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).
Speaker 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

66 Enhancer → Chorus



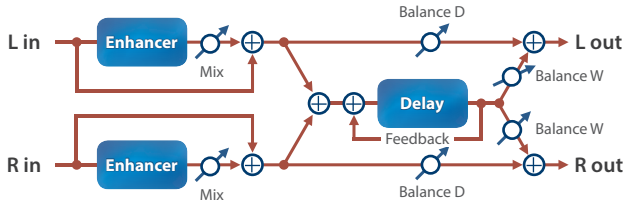
Parameter	Value	Explanation
Enhancer Sens	0–127	Sensitivity of the enhancer
Enhancer Mix	0–127	Level of the overtones generated by the enhancer
Chorus Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Chorus Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Chorus Rate (note)	Note ➡ **"Note"** (p. 51)	
Chorus Depth	0–127	Depth of modulation
Chorus Balance	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

67 Enhancer → Flanger



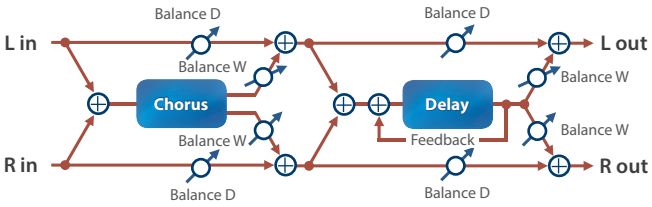
Parameter	Value	Explanation
Enhancer Sens	0–127	Sensitivity of the enhancer
Enhancer Mix	0–127	Level of the overtones generated by the enhancer
Flanger Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Flanger Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Flanger Rate (note)	Note ➡ **"Note"** (p. 51)	
Flanger Depth	0–127	Depth of modulation
Flanger Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	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

68 Enhancer → Delay



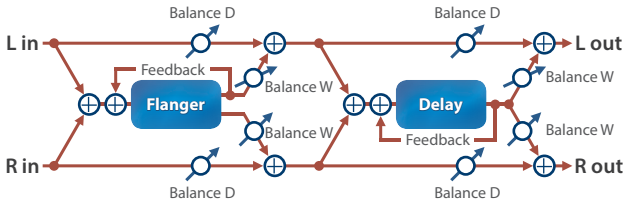
Parameter	Value	Explanation
Enhancer Sens	0–127	Sensitivity of the enhancer
Enhancer Mix	0–127	Level of the overtones generated by the enhancer
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Time (msec)	1–2600 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Time (note)	Note ➡ **"Note"** (p. 51)	
Delay Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
Delay 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

69 Chorus → Delay



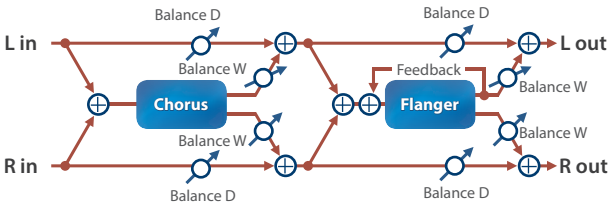
Parameter	Value	Explanation
Chorus Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Chorus Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Chorus Rate (note)	Note ➡ **"Note"** (p. 51)	
Chorus Depth	0–127	Depth of modulation
Chorus Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Time (msec)	1–2600 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Time (note)	Note ➡ **"Note"** (p. 51)	
Delay Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
Delay 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

70 Flanger → Delay



Parameter	Value	Explanation
Flanger Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Flanger Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Flanger Rate (note)	Note ➡ **"Note"** (p. 51)	
Flanger Depth	0–127	Depth of modulation
Flanger Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Delay Time (msec)	1–2600 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Time (note)	Note ➡ **"Note"** (p. 51)	
Delay Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
Delay 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

71 Chorus → Flanger

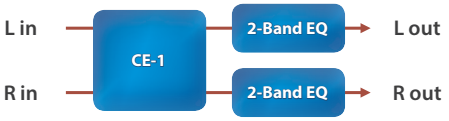


Parameter	Value	Explanation
Chorus Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Chorus Rate (Hz)	0.05–10.00 [Hz]	Modulation frequency of the chorus effect
Chorus Rate (note)	Note ➡ **"Note"** (p. 51)	
Chorus Depth	0–127	Modulation depth of the chorus effect
Chorus Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Flanger Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Flanger Rate (Hz)	0.05–10.00 [Hz]	Modulation frequency of the flanger effect
Flanger Rate (note)	Note ➡ **"Note"** (p. 51)	
Flanger Depth	0–127	Modulation depth of the flanger effect
Flanger Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	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

72 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	Chorus depth
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

73 SBF-325

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 sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.02–5.00 [Hz]	Modulation frequency of the flanger effect
Rate (note)	Note ➡ **"Note"** (p. 51)	
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.
CH-R Mode 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.
CH-L Phase		Phase when mixing the flanging sound with the original sound **NORM:** normal phase **INV:** inverse phase
CH-R Phase		
Level	0–127	Output Level

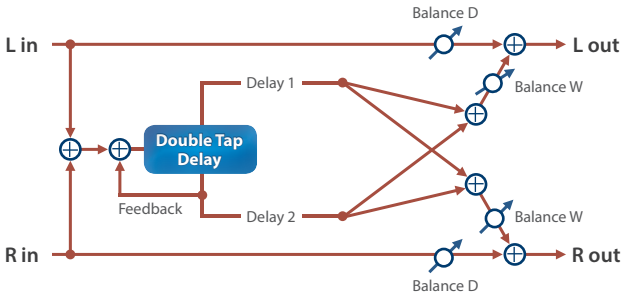
74 SDD-320

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]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

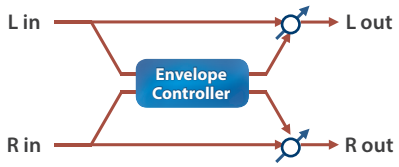
75 2Tap Pan Delay



Parameter	Value	Explanation
Delay Time (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Delay Time (msec)	1–2600 [msec]	Adjusts the delay time from the direct sound until the second delay sound is heard.
Delay Time (note)	Note ➡ **"Note"** (p. 51)	
Delay Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
Delay 1 Pan	L64–63R	Stereo location of Delay 1
Delay 2 Pan	L64–63R	Stereo location of Delay 2
Delay 1 Level	0–127	Volume of delay 1
Delay 2 Level	0–127	Volume of delay 2
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high 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

76 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.
Output Gain	-24–+12 [dB]	Output gain
Sense	LOW, MID, HIGH	Quickness with which the attack is detected
Level	0–127	Output Level

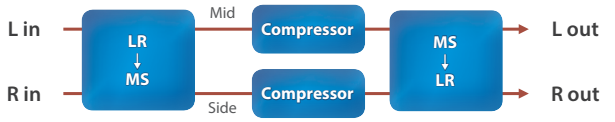
77 Mid-Side EQ

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 Input Gain	-12.00–+12.00 [dB]	Volume of left/right input signals whose phase is similar (in phase)
M Low Frequency	20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400 [Hz]	Frequency of the low range
M Low Gain	-12.00–+12.00 [dB]	Gain of the low range
M Mid1 Frequency	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 Mid1 Gain	-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 to narrow the range to be affected.
M Mid2 Frequency	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 Mid2 Gain	-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 to narrow the range to be affected.
M Mid3 Frequency	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 Mid3 Gain	-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 to narrow the range to be affected.
M High Frequency	2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12500, 16000 [Hz]	Frequency of the high range
M High Gain	-12.00–+12.00 [dB]	Gain of the high range
S EQ Switch	OFF, ON	Switches whether to apply tonal adjustment to left/right input signals whose phase is distant (opposite phase).
S Input Gain	-12.00–+12.00 [dB]	Volume of left/right signals whose phase is distant (opposite phase)
S Low Frequency	20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400 [Hz]	Frequency of the low range
S Low Gain	-12.00–+12.00 [dB]	Gain of the low range
S Mid1 Frequency	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 Mid1 Gain	-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 to narrow the range to be affected.
S Mid2 Frequency	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 Mid2 Gain	-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 to narrow the range to be affected.
S Mid3 Frequency	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 Mid3 Gain	-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 to narrow the range to be affected.
S High Frequency	2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12500, 16000 [Hz]	Frequency of the high range
S High Gain	-12.00–+12.00 [dB]	Gain of the high range
Level	0–127	Output Level

78 Mid-Side Compressor

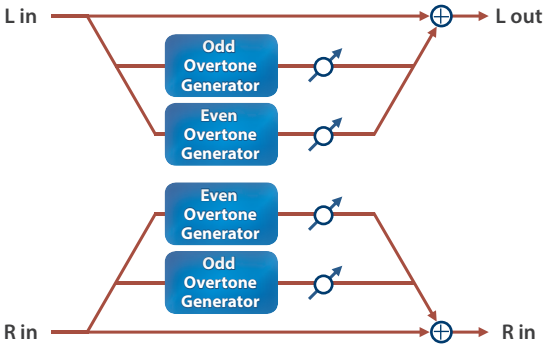
This effect allows the left/right signals that have similar phase to be adjusted to a different sense of volume than the left/right signals that have different phase.



Parameter	Value	Explanation
M Comp Switch	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 time from when the input exceeds the Threshold until the volume starts being compressed
M Release	0–124	Adjusts the time after the signal volume falls below the Threshold Level until compression is no longer applied.
M Threshold	-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 THRESHOLD. Higher values produce a smoother transition.
M Ratio	1:1, 1.5:1, 2:1, 4:1, 16:1, INF:1	Compression ratio
M Post Gain	0–+18 [dB] -	Adjusts the output gain.
S Comp Switch	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 time from when the input exceeds the Threshold until the volume starts being compressed
S Release	0–124	Adjusts the time after the signal volume falls below the Threshold Level until compression is no longer applied.
S Threshold	-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 THRESHOLD. Higher values produce a smoother transition.
S Ratio	1:1, 1.5:1, 2:1, 4:1, 16:1, INF:1	Compression ratio
S Post Gain	0–+18 [dB]	Adjusts the output gain.
Level	0–127	Output Level

79 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

80 Mid-Side Delay

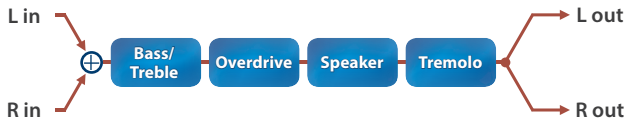
This effect applies different amounts of delay to left/right signals of similar phase and differing phase.

Parameter	Value	Explanation
M Delay Level	0–127	Delay volume of left/right input signals whose phase is similar (in phase)
M Delay Mode	2Tap, 3Tap, 4Tap	Delay divisions for the input signals whose left/right phase is similar (identical phase)
M Delay Time (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
M Delay Time (msec)	1–1300 [msec]	Adjusts the time from the original sound until the delay sound is heard.
M Delay Time (note)	Note ➡ **"Note"** (p. 51)	
M Delay 1 Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
M 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
M Delay 1 Pan	L64–63R	Panning of the first delay sound
M Delay 2 Pan		Panning of the second delay sound
M Delay 3 Pan		Panning of the third delay sound
M Delay 4 Pan		Panning of the fourth delay sound
S Delay Level	0–127	Delay volume of left/right input signals whose phase is distant (opposite phase)
S Delay Mode	2Tap, 3Tap, 4Tap	Delay divisions for the input signals whose left/right phase is distant (reverse phase)
S Delay Time (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
S Delay Time (msec)	1–1300 [msec]	Adjusts the time from the original sound until the delay sound is heard.
S Delay Time (note)	Note ➡ **"Note"** (p. 51)	

Parameter	Value	Explanation
S Delay 1 Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
S 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 the delay sound fed back to the effect is filtered out (**BYPASS:** no cut).
S Delay 1 Pan	L64–63R	Panning of the first delay sound
S Delay 2 Pan		Panning of the second delay sound
S Delay 3 Pan		Panning of the third delay sound
S Delay 4 Pan		Panning of the fourth delay sound
Level	0–127	Output Level

81 RD EPAmpSim

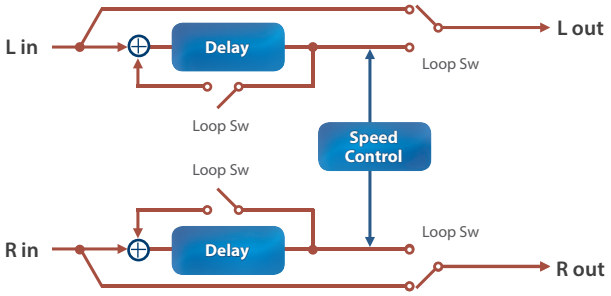
This is an effect that was developed for the RD series SuperNatural E.Piano.



Parameter	Value	Explanation
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Tremolo Switch	OFF, ON	Tremolo on/off
Tremolo Type		Type of tremolo effect
	OLDCASE MONO	A standard electric piano sound of the early 70s (mono)
	OLDCASE STEREO	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
Tremolo Speed (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Tremolo Speed (Hz)	0.05–10.00 [Hz]	Rate of the tremolo effect
Tremolo Speed (note)	Note ➡ **"Note"** (p. 51)	
Tremolo Depth	0–127	Depth of the tremolo effect
Tremolo Shape	0–20	Adjusts the waveform of the tremolo.
AMP Switch	OFF, ON	Turns the speaker and distortion on/off
Speaker Type	LINE, OLD, NEW, WURLY, TWIN	Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation.
OD Drive	0–127	Degree of distortion Also changes the volume.
Level	0–127	Output Level

82 DJFX Looper

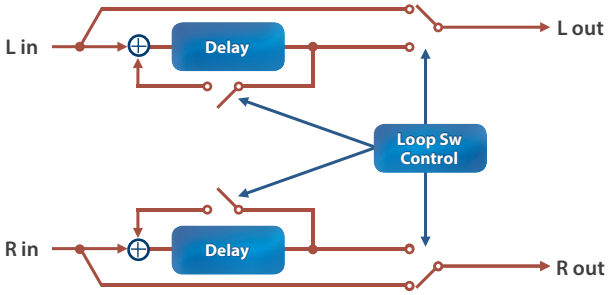
Loops a short portion of the input sound. You can vary the playback direction and playback speed of the input sound to add turntable-type effects.



Parameter	Value	Explanation
Length	0–127	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

83 BPM Looper

Loops a short portion of the input sound. This can automatically turn the loop on/off in synchronization with the rhythm.

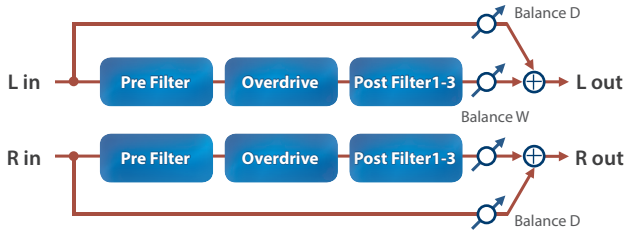


Parameter	Value	Explanation
Length	0–127	Specifies the length of the loop.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate Hz	0.05–10.00 [Hz]	Cycle at which the loop automatically turns on/off
Rate Note	Note ➡ **"Note"** (p. 51)	
On Timing	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)
On Length	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.**

Parameter	Value	Explanation
Level	0–127	Output Level

84 Saturator

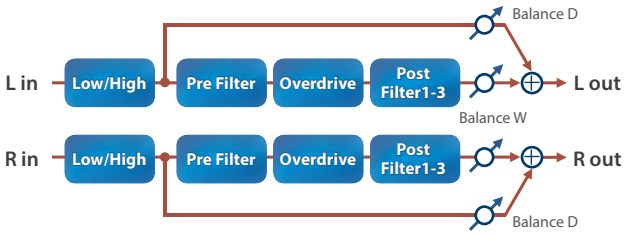
This effect combines overdrive and filter.



Parameter	Value	Explanation
DrvPre1 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
DrvPre1 Frequency	20–16000 [Hz]	Frequency at which the pre-distortion filter operates
DrvPre1 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
DrvPost1 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 1 which follows the distortion processing
DrvPost1 Frequency	20–16000 [Hz]	Frequency at which post-distortion filter 1 operates
DrvPost1 Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
DrvPost2 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 2 which follows the distortion processing
DrvPost2 Frequency	20–16000 [Hz]	Frequency at which post-distortion filter 2 operates
DrvPost2 Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
DrvPost3 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
DrvPost3 Frequency	20–16000 [Hz]	Frequency at which post-distortion filter 3 operates
DrvPost3 Gain	-24.0–+24.0 [dB]	For the PKG type, the amount of boost/cut
DrvPost3 Q	0.5–16.0	Width of the frequency range affected by the filter
Makeup Sense	-60.0–0.0 [dB]	Adjust this value so that the sound is not made louder when distortion is applied.
DrvPost Gain	-48.0–+12.0 [dB]	Gain following distortion processing
Drive Balance	D100:0W–D0:100W	Volume balance between the dry sound (D) and effect sound (W)
Level	0–127	Output Level

85 Warm Saturator

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

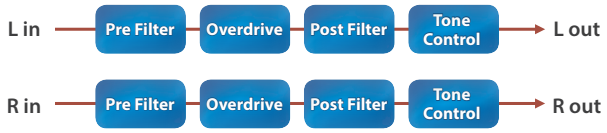


Parameter	Value	Explanation
EQ Low Frequency	20–16000 [Hz]	Input filter (low range) Boosts/cuts the sound below the specified frequency.
EQ Low Gain	-24–+24 [dB]	Amount of boost/cut
EQ High Slope	THRU, -12dB, -24dB	Input filter (high range) Boosts/cuts the sound above the specified frequency.
EQ High Frequency	20–16000 [Hz]	Amount of boost/cut
DrvPre1 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
DrvPre1 Frequency	20–16000 [Hz]	Frequency at which the pre-distortion filter operates
DrvPre1 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
DrvPost1 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 1 which follows the distortion processing
DrvPost1 Frequency	20–16000 [Hz]	Frequency at which post-distortion filter 1 operates
DrvPost1 Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
DrvPost2 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 2 which follows the distortion processing
DrvPost2 Frequency	20–16000 [Hz]	Frequency at which post-distortion filter 2 operates
DrvPost2 Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
DrvPost3 Type	THRU, LPF, HPF, LSV, HSV	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
DrvPost3 Frequency	20–16000 [Hz]	Frequency at which post-distortion filter 3 operates
DrvPost3 Gain	-24.0–+24.0 [dB]	For the PKG type, the amount of boost/cut
DrvPost3 Q	0.5–16.0	Width of the frequency range affected by the filter
Makeup Sense	-60.0–0.0 [dB]	Adjust this value so that the sound is not made louder when distortion is applied.
DrvPost Gain	-48.0–+12.0 [dB]	Gain following distortion processing

Parameter	Value	Explanation
Drive Balance	D100:0W–D0:100W	Volume balance between the dry sound (D) and effect sound (W)
Level	0–127	Output Level

86 Fuzz

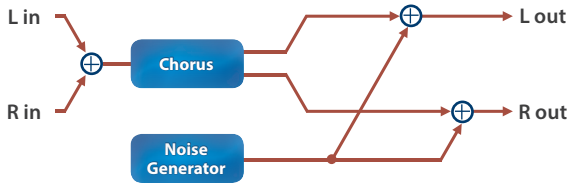
Adds overtones and intensely distorts the sound.



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

87 JUNO-106 Chorus

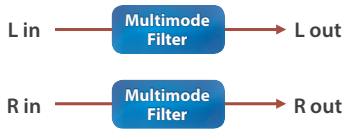
This models the chorus effects of the Roland JUNO-106.



Parameter	Value	Explanation
Mode	I, II, I+II, JX I, JX II	Type of Chorus **I+II:** The state in which two buttons are pressed simultaneously.
Noise Level	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

88 Multi Mode Filter

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



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

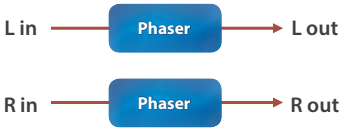
89 HMS Distortion

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

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

90 Phaser 100

This simulates an analog phaser of the past.



Parameter	Value	Explanation
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➡ **"BPM"** (p. 7)
Rate (Hz)	0.05–10.00 [Hz]	Modulation rate
Rate (note)	Note ➡ **"Note"** (p. 51)	
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	Center frequency at which the sound is modulated
Resonance	0–66	Amount of feedback
Mix	0–127	Level of the phase-shifted sound
Level	0–127	Output Level

Note

	Sixty-fourth-note triplet		Sixty-fourth note		Thirty-second-note triplet		Thirty-second note
	Sixteenth-note triplet		Dotted thirty-second note		Sixteenth note		Eighth-note triplet
	Dotted sixteenth note		Eighth note		Quarter-note triplet		Dotted eighth note
	Quarter note		Half-note triplet		Dotted quarter note		Half note
	Whole-note triplet		Dotted half note		Whole note		Double-note triplet
	Dotted whole note		Double note				

Block Diagram