



RD-800

Effects Parameter Guide

Contents

Modulation FX Parameters.....	3
Controlling a Modulation FX via MIDI (Modulation FX CONTROL)	31
Tremolo/Amp Simulator Parameters	32
Sympathetic Resonance Parameters.....	35
Delay Parameters	36
Reverb Parameters	38
EQ Parameters	39
System Compressor Parameters.....	40

Modulation FX Parameters

Modulation FX effects are included in the tone.

You can choose from 56 types, most of which are effects that modulate the sound.

Parameters marked with a sharp “#” can be controlled using a “Controlling a Modulation FX via MIDI (Modulation FX CONTROL)” (p. 31).

Type	Modulation FX Name	Page
FILTER	1 EQUALIZER	p. 4
	2 SPECTRUM	p. 5
	3 LOW BOOST	p. 5
	4 STEP FILTER	p. 6
	5 ENHANCER	p. 6
	6 AUTO WAH	p. 7
	7 HUMANIZER	p. 7
MODULATION	8 PHASER 1	p. 8
	9 PHASER 2	p. 8
	10 PHASER 3	p. 9
	11 STEP PHASER	p. 9
	12 MULTI STAGE PHASER	p. 10
	13 INFINITE PHASER	p. 10
	14 RING MODULATOR	p. 11
	15 TREMOLO	p. 11
	16 AUTO PAN	p. 12
	17 SLICER	p. 12
CHORUS	18 CHORUS	p. 13
	19 FLANGER	p. 13
	20 STEP FLANGER	p. 14
	21 HEXA-CHORUS	p. 14
	22 TREMOLO CHORUS	p. 15
	23 SPACE-D	p. 15
DYNAMICS	24 OVERDRIVE	p. 16
	25 DISTORTION	p. 16
	26 T-SCREAM	p. 16
	27 COMPRESSOR	p. 17
	28 LIMITER	p. 17
	29 SUSTAINER	p. 18
DELAY	30 GATE	p. 18
	31 DELAY	p. 19
	32 MODULATION DELAY	p. 19
	33 3TAP PAN DELAY	p. 20
	34 4TAP PAN DELAY	p. 20
	35 MULTI TAP DELAY	p. 21
	36 REVERSE DELAY	p. 21
	37 TIME CTRL DELAY	p. 22
LO-FI	38 TAPE ECHO	p. 22
	39 LOFI COMPRESS	p. 22
PITCH	40 BIT CRUSHER	p. 23
	41 PITCH SHIFTER	p. 24
	42 2VOICE PITCH SHIFTER	p. 24

Type	Modulation FX Name	Page
COMBINATION	43 OD → CHORUS	p. 25
	44 OD → FLANGER	p. 25
	45 OD → DELAY	p. 26
	46 DS → CHORUS	p. 26
	47 DS → FLANGER	p. 26
	48 DS → DELAY	p. 26
	49 OD/DS → TWAH	p. 27
	50 OD/DS → AWAH	p. 27
	51 ENHANCER → CHORUS	p. 28
	52 ENHANCER → FLANGER	p. 28
	53 ENHANCER → DELAY	p. 29
	54 CHORUS → DELAY	p. 29
	55 FLANGER → DELAY	p. 30
	56 CHORUS → FLANGER	p. 30

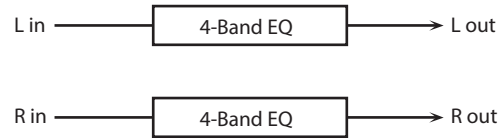
Modulation FX Parameters

Settings common to all Modulation FX

Parameter	Value	Explanation
Type	Refer to the effect list (p. 3).	Specifies the type of Modulation FX. The editable parameters will depend on the effect type that's selected.
Routing	MOD FX (Modulation FX) → TR/AMP (Tremolo/Amp Simulator) TR/AMP (Tremolo/Amp Simulator) → MOD FX (Modulation FX)	Lets you select the routing of the Modulation FX and the Tremolo/Amp Simulator. By switching the Routing type, you can change the effect that's applied to the sound. For example, suppose that you chose Chorus as the MOD FX and chose E. PIANO for TR/AMP; with the MOD FX → TR/AMP setting, the chorus sound will be output in monaural, but with the TR/AMP → MOD FX setting it will be output in stereo.

1: EQUALIZER

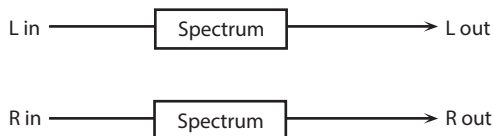
This is a four-band stereo equalizer (low, mid x 2, high).



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	LOW GAIN, HIGH GAIN, LEVEL	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Low Freq	20–400 [Hz]	Frequency of the low range
Low Gain #	-15–+15 [dB]	Gain of the low range
Mid1 Freq	200–8000 [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	200–8000 [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	2000–16000 [Hz]	Frequency of the high range
High Gain #	-15–+15 [dB]	Gain of the high range
Level #	0–127	Output Level

2: SPECTRUM

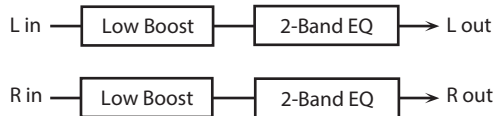
This is a stereo spectrum. Spectrum is a type of filter which modifies the timbre by boosting or cutting the level at specific frequencies.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	BAND1, BAND3, LEVEL	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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

3: LOW BOOST

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



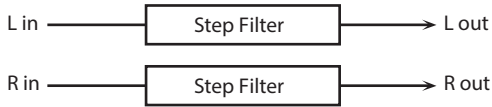
Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	BOOST FREQUENCY, BOOST GAIN	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Boost Frequency #	50-125 [Hz]	Basic frequency at which the lower range will be boosted
Boost Gain #	0--+12 [dB]	Amount by 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 frequency range
High Gain	-15--+15 [dB]	Gain of the high frequency range
Level	0-127	Output level

Modulation FX Parameters

4: 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.

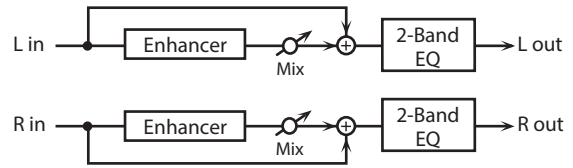
You can use MFX CONTROL to restart the step sequence from the beginning (p. 31).



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	RATE, ATTACK, FILTER	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	RESONANCE	
Step 01 –16	0–127	Cutoff frequency at each step
Rate (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) #/ Rate (note) #	0.05–10.00 note (p. 31)	Rate of modulation
Attack #	0–127	Speed at which the cutoff frequency changes between steps
Filter Type	LPF, BPF, HPF, NOTCH	Filter type 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

5: ENHANCER

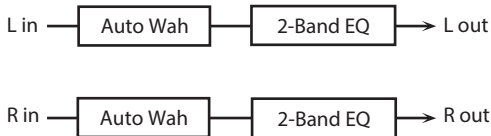
Controls the overtone structure of the high frequencies, adding sparkle and tightness to the sound.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	SENS, MIX	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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

6: AUTO WAH

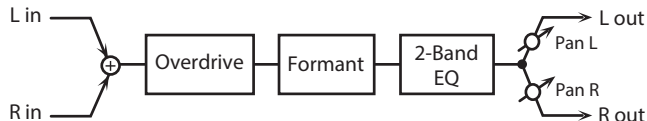
Cyclically controls a filter to create cyclic change in timbre.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	MANUAL, SENS, RATE, DEPTH, PHASE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	MANUAL, SENS, RATE, DEPTH, PHASE	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Filter Type	LPF, BPF	Type of filter LPF: The wah effect will be applied over a wide frequency range. BPF: The wah effect will be applied over a narrow frequency range.
Manual #	0-127	Adjusts the basic frequency at which the effect is applied.
Peak	0-127	Adjusts the amount of the wah effect that will occur in the range of the basic frequency. Set a higher value for Q to narrow the range to be affected.
Sens #	0-127	Adjusts the sensitivity with which the filter is controlled.
Polarity	UP, DOWN	Sets the direction in which the frequency will change when the auto-wah filter is modulated. 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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) # / Rate (note) #	0.05-10.00 [Hz] note (p. 31)	Frequency of modulation
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

7: HUMANIZER

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

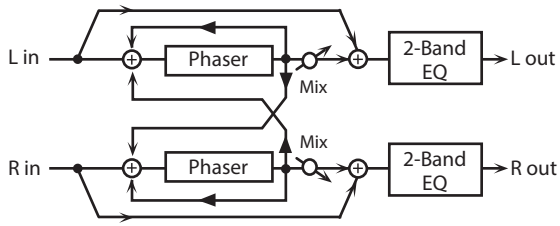


Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	DRIVE, RATE, DEPTH, MANUAL, PAN	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	DRIVE, RATE, DEPTH, MANUAL, PAN	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Drive Sw	OFF, ON	Turns Drive on/off.
Drive #	0-127	Degree of distortion Also changes the volume.
Vowel1	A, E, I, O, U	Selects the vowel.
Vowel2	A, E, I, O, U	
Rate (sync sw) #	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) # / Rate (note) #	0.05-10.00 [Hz] note (p. 31)	Frequency at which the two vowels switch
Depth #	0-127	Effect depth
Input Sync Sw	OFF, ON	LFO reset on/off Determines whether the LFO for switching the vowels is reset by the input signal (ON) or not (OFF).
Input Sync Threshold	0-127	Volume level at which reset is applied
Manual #	0-100	Point at which Vowel 1/2 switch 49 or less: Vowel 1 will have a longer duration. 50: Vowel 1 and 2 will be of equal duration. 51 or more: Vowel 2 will have a longer duration.
Low Gain	-15-+15 [dB]	Gain of the low frequency range
High Gain	-15-+15 [dB]	Gain of the high frequency range
Pan #	L64-63R	Stereo location of the output
Level	0-127	Output level

Modulation FX Parameters

8: PHASER 1

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

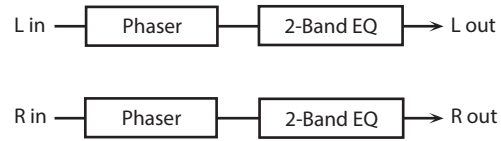


Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	MANUAL, RATE, RESONANCE, MIX	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate (sync sw) #	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) #/ Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Frequency of modulation
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

9: PHASER 2

This simulates an analog phaser of the past.

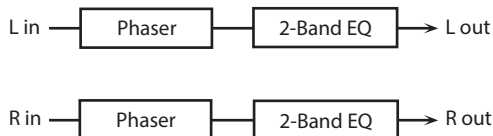
It is particularly suitable for electric piano.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob		Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	RATE, COLOR	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Rate #	0–100	Frequency of modulation
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

10: PHASER 3

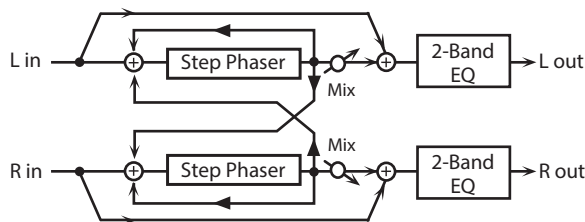
This simulates a different analog phaser than Phaser 2. It is particularly suitable for electric piano.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	SPEED, DEPTH	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Speed #	0–100	Frequency 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

11: STEP PHASER

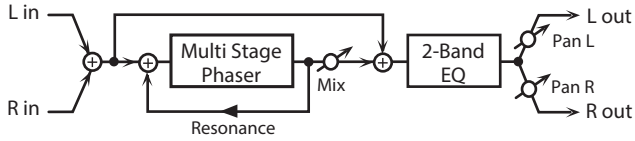
This is a stereo phaser. The phaser effect will be varied gradually.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	MANUAL, RATE, RESONANCE, STEP RATE, MIX	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) #/ Rate (note) #	0.05–10.00 note (p. 31)	Frequency of modulation
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Step Rate (Hz) #/ Step Rate (note)#	0.10–20 [Hz] note (p. 31)	Rate of the step-wise change in the phaser effect
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: MULTI STAGE PHASER

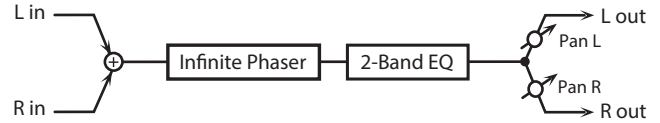
Extremely high settings of the phase difference produce a deep phaser effect.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	MANUAL, RATE, RESONANCE, MIX, PAN	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	MIX, PAN	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Mode	4-STAGE, 8-STAGE, 12-STAGE, 16-STAGE, 20-STAGE, 24-STAGE	Number of phaser stages
Manual #	0-127	Adjusts the basic frequency from which the sound will be modulated.
Rate (sync sw) #	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) # / Rate (note) #	0.05-10.00 [Hz] note (p. 31)	Frequency of modulation
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

13: INFINITE PHASER

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



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	SPEED, RESONANCE, MIX, PAN	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	MIX, PAN	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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	Volume of the phase-shifted sound
Pan #	L64-63R	Panning of the output sound
Low Gain	-15-+15 [dB]	Gain of the low frequency range
High Gain	-15-+15 [dB]	Gain of the high frequency range
Level	0-127	Output volume

14: 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
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	FREQUENCY, SENS, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	FREQUENCY, SENS, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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 (UP) or lower frequencies (DOWN).
Low Gain	-15-+15 [dB]	Gain of the low frequency range
High Gain	-15-+15 [dB]	Gain of the high frequency range
Balance #	D100:0W- D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level

15: TREMOLO

Cyclically modulates the volume to add tremolo effect to the sound.

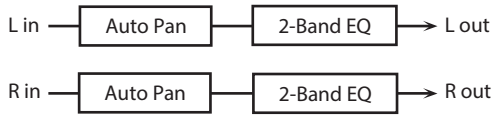


Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	RATE, DEPTH	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Mod Wave	TRI, SQR, SIN, SAW1, SAW2	Modulation wave TRI : triangle wave SQR : square wave SIN : sine wave SAW1/2 : sawtooth wave
Rate (sync sw) #	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) #/ Rate (note) #	0.05-10.00 [Hz] note (p. 31)	Frequency of the change
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

Modulation FX Parameters

16: AUTO PAN

Cyclically modulates the stereo location of the sound.

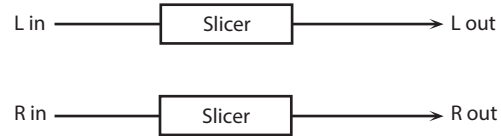


Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	RATE, DEPTH	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Mod Wave	TRI, SQR, SIN, SAW1, SAW2	Modulation wave TRI : triangle wave SQR : square wave SIN : sine wave SAW1/2 : sawtooth wave
	SAW1 R L SAW2 R L	
Rate (sync sw) #	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) #/ Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Frequency of the change
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

17: 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.

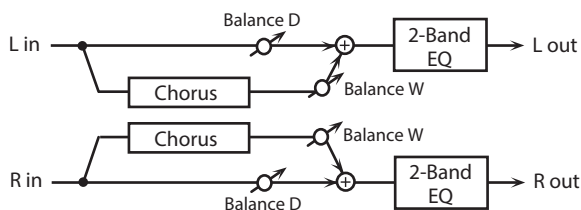
You can use MFX CONTROL to restart the step sequence from the beginning (p. 31).



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	RATE, ATTACK, SHUFFLE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Step 01–16	0–127	Level at each step
Rate (sync sw) #	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) #/ Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Rate at which the 16-step sequence will cycle
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

18: CHORUS

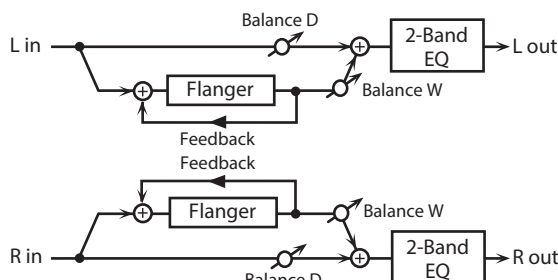
This is a stereo chorus. A filter is provided so that you can adjust the timbre of the chorus sound.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	RATE, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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	200–8000 [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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) #/ Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Frequency of modulation
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

19: FLANGER

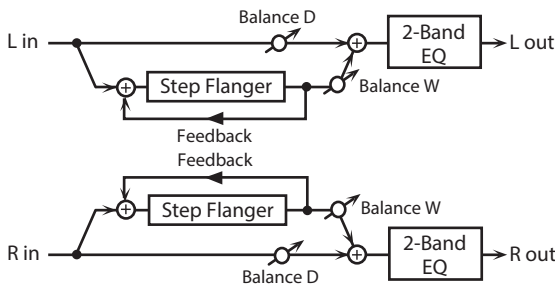
This is a stereo flanger. (The LFO has the same phase for left and right.) It produces a metallic resonance that rises and falls like a jet airplane taking off or landing. A filter is provided so that you can adjust the timbre of the flanged sound.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	RATE, FEEDBACK, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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	200–8000 [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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) #/ Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Frequency of modulation
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

20: STEP FLANGER

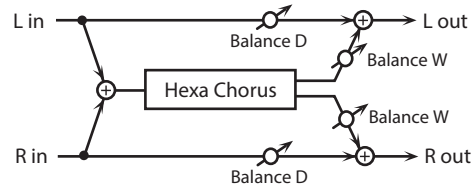
This is a flanger in which the flanger pitch changes in steps. The speed at which the pitch changes can also be specified in terms of a note-value of a specified tempo.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	RATE, FEEDBACK, STEP RATE, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	RATE, FEEDBACK, STEP RATE, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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	200–8000 [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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) #/ Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Frequency of modulation
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Step Rate (Hz) #/ Step Rate (note)#	0.10–20.00 [Hz] note (p. 31)	Rate (period) of pitch change
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

21: HEXA-CHORUS

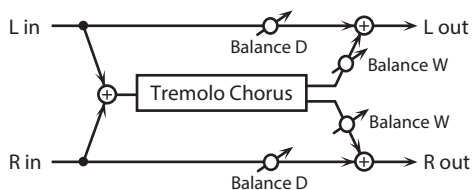
Uses a six-phase chorus (six layers of chorused sound) to give richness and spatial spread to the sound.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	RATE, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	RATE, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) #/ Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Frequency of modulation
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 [deg] 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

22: TREMOLO CHORUS

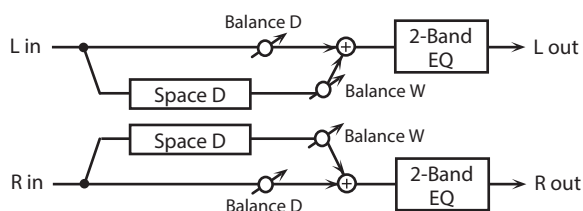
This is a chorus effect with added Tremolo (cyclic modulation of volume).



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	CHORUS RATE, TREMLO RATE, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Chorus Rate (Hz) #/ Chorus Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Modulation frequency of the chorus effect
Chorus Depth	0–127	Modulation depth of the chorus effect
Tremolo Rate (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Tremolo Rate (Hz) #/ Tremolo Rate (note) #	0.05–10.00 note (p. 31)	Modulation frequency of the tremolo effect
Tremolo Separation	0–127	Spread 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

23: SPACE-D

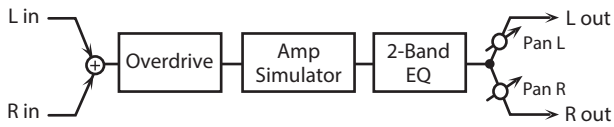
This is a multiple chorus that applies two-phase modulation in stereo. It gives no impression of modulation, but produces a transparent chorus effect.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	RATE, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) #/ Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Frequency of modulation
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: OVERDRIVE

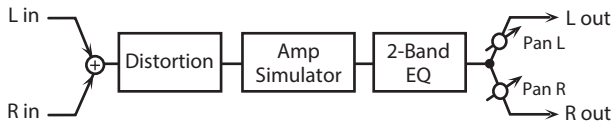
This is an overdrive that provides heavy distortion.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	DRIVE, TONE, PAN	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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

25: DISTORTION

This is a distortion effect that provides heavy distortion. The parameters are the same as for "24: Overdrive."



26: T-SCREAM

This models the analog overdrive of the past.

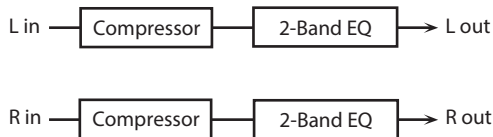
It adds a nice amount of overtones without dirtying the sound.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	DISTORTION, TONE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Distortion	0-127	Degree of distortion Also changes the volume.
Tone	0-127	Sound quality of the Overdrive effect
Level #	0-127	Output Level

27: COMPRESSOR

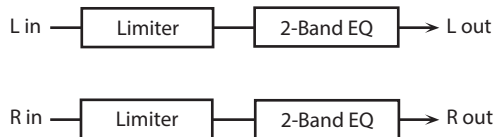
Flattens out high levels and boosts low levels, smoothing out fluctuations in volume.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	ATTACK, THRESHOLD, LEVEL	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Attack #	0–127	Sets the time it takes until the level is compressed after the input exceeds the Threshold.
Threshold #	0–127	Adjusts the volume at which compression begins
Post Gain	0–+18 [dB]	Adjusts the output gain.
Low Gain	-15–+15 [dB]	Gain of the low frequency range
High Gain	-15–+15 [dB]	Gain of the high frequency range
Level #	0–127	Output Level

28: LIMITER

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



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	RELEASE, THRESHOLD, LEVEL	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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 frequency range
High Gain	-15–+15 [dB]	Gain of the high frequency range
Level #	0–127	Output Level

Modulation FX Parameters

29: SUSTAINER

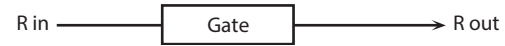
This effect compresses high input and boosts low input, making the volume consistent and producing undistorted sustain.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	SUSTAIN, ATTACK, RELEASE, LEVEL	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Sustain #	0–127	Adjusts the range of volume for which low input signals are boosted to make the volume consistent. Higher settings produce longer sustain.
Attack	0–127	Time until the volume is compressed
Release	0–127	Time until compression ends
Post Gain	-15–+15 [dB]	Adjusts the output gain.
Low Gain	-15–+15 [dB]	Gain of the low frequency range
High Gain	-15–+15 [dB]	Gain of the high frequency range
Level #	0–127	Output Level

30: 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.

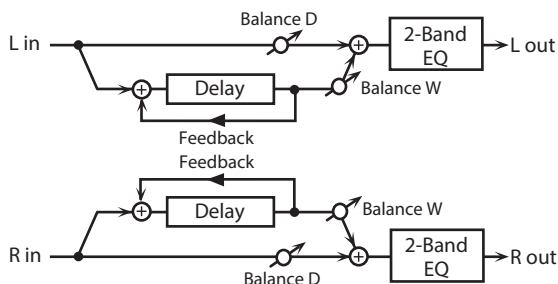


Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob		Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	THRESHOLD, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Threshold #	0–127	Volume level at which 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 (Ducking): 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

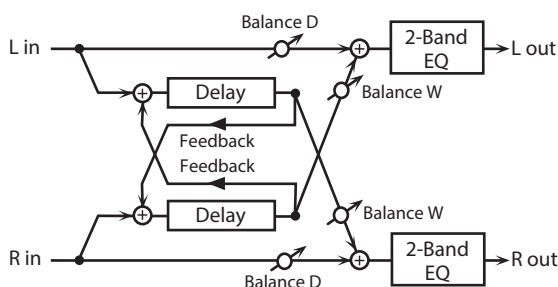
31: DELAY

This is a stereo delay.

When Feedback Mode is NORMAL:



When Feedback Mode is CROSS:

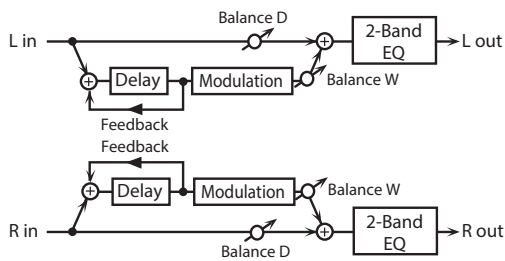


Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	FEEDBACK, RATE, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Delay Left (sync switch)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay Left (msec)/ Delay Left (note)	1-1300 [msec] note (p. 31)	Delay time from the original sound until the left delay sound is heard
Delay Right (sync switch)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay Right (msec)/ Delay Right (note)	1-1300 [msec] note (p. 31)	Delay time from the original sound until the right delay sound is heard
Phase Left	NORMAL, INVERSE	Phase of the delay sound
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 amount of the delay sound that's fed back into the effect. Negative "-" settings invert the phase.
HF Damp	200-8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out (BYPASS : no cut).
Low Gain	-15-+15 [dB]	Gain of the low frequency range
High Gain	-15-+15 [dB]	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0-127	Output Level

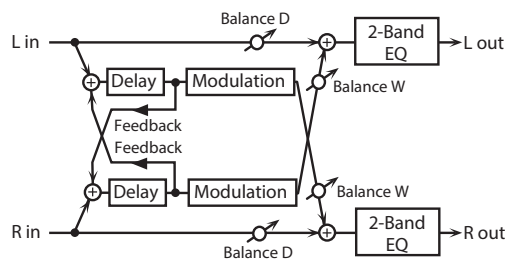
32: MODULATION DELAY

Adds modulation to the delayed sound.

When Feedback Mode is NORMAL:



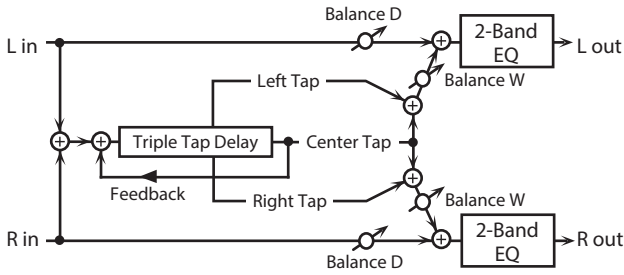
When Feedback Mode is CROSS:



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	FEEDBACK, RATE, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Delay Left (sync switch)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay Left (msec)/ Delay Left (note)	1-1300 [msec] note (p. 31)	Delay time from the original sound until the left delay sound is heard
Delay Right (sync switch)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay Right (msec)/ Delay Right (note)	1-1300 [msec] note (p. 31)	Delay time from the original sound until the right delay sound is heard
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 amount of the delay sound that's fed back into the effect. Negative "-" settings invert the phase.
HF Damp	200-8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out (BYPASS : no cut).
Rate #	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rate (Hz) #/ Rate (note) #	0.05-10.00 [Hz] note (p. 31)	Frequency of modulation
Depth	0-127	Depth of modulation
Phase	0-180 [deg]	Spatial spread of the sound
Low Gain	-15-+15 [dB]	Gain of the low frequency range
High Gain	-15-+15 [dB]	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0-127	Output Level

33: 3TAP PAN DELAY

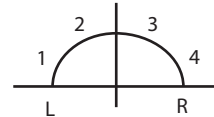
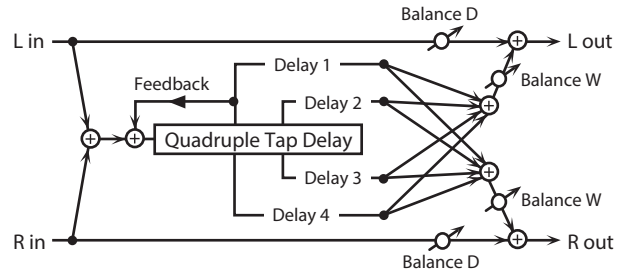
Produces three delay sounds; center, left and right.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	CENTER FEEDBACK, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Delay Left/Right/Center (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay Left/Right/Center (msec) #/ Delay Left/Right/Center (note) #	1-2600 [msec] note (p. 31)	Adjusts the time until the delay sound is heard.
Center Feedback #	-98-+98 [%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative "-" settings invert the phase.
HF Damp	200-8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out (BYPASS : no cut).
Left/Right/Center Level	0-127	Volume of each delay
Low Gain	-15-+15 [dB]	Gain of the low frequency range
High Gain	-15-+15 [dB]	Gain of the high frequency range
Balance #	D100:0W- D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0-127	Output Level

34: 4TAP PAN DELAY

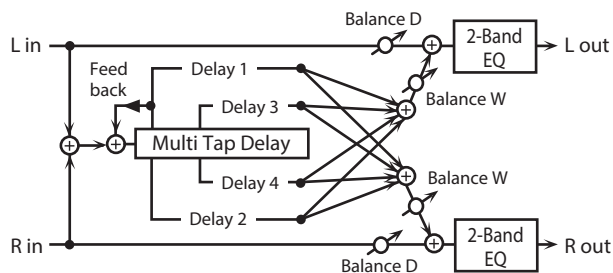
This effect has four delays.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	DLY 1 FBCK, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Delay 1-4 Time (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay 1-4 Time (msec)/ Delay 1-4 Time (note)	1-2600 [msec] note (p. 31)	Adjusts the time until the delay 1-4 sound is heard.
Delay 1 Feedback #	-98-+98 [%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative "-" settings invert the phase.
HF Damp	200-8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out (BYPASS : no cut).
Delay 1-4 Level	0-127	Volume of each delay
Low Gain	-15-+15 [dB]	Gain of the low frequency range
High Gain	-15-+15 [dB]	Gain of the high frequency range
Balance #	D100:0W- D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0-127	Output Level

35: MULTI TAP DELAY

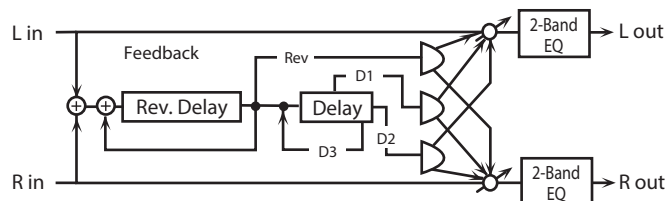
This effect provides four delays. Each of the Delay Time parameters can be set to a note length based on the selected tempo. You can also set the panning and level of each delay sound.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	DLY 1 FBCK, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Delay 1-4 (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay 1-4 Time (msec)/ Delay 1-4 Time (note)	1-2600 [msec] note (p. 31)	Adjusts the time until Delays 1-4 are heard.
Delay 1 Feedback #	-98-+98 [%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative "-" settings invert the phase.
HF Damp	200-8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out (BYPASS : no cut).
Delay 1-4 Pan	L64-63R	Stereo location of Delays 1-4
Delay 1-4 Level	0-127	Output level of Delays 1-4
Low Gain	-15-+15 [dB]	Gain of the low frequency range
High Gain	-15-+15 [dB]	Gain of the high frequency range
Balance #	D100:0W- D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output Level

36: REVERSE DELAY

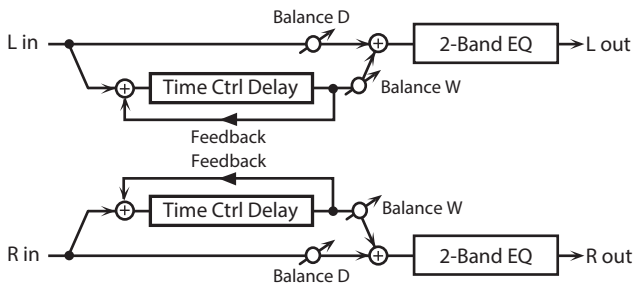
This is a reverse delay that adds a reversed and delayed sound to the input sound. A tap delay is connected immediately after the reverse delay.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	REV DLY FEEDBACK,	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	DLY 3 FEEDBACK, BALANCE	
Threshold	0-127	Volume at which the reverse delay will begin to be applied
Rev Delay Tme (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Rev Delay Tme (msec)/ Rev Delay Tme (note)	1-1300 [msec] note (p. 31)	Delay time from when sound is input into the reverse delay until the delay sound is heard
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	200-8000 [Hz], BYPASS	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 1-3 Time (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay 1-3 Time (msec)/ Delay 1-3 Time (note)	1-1300 [msec] note (p. 31)	Delay time from when sound is input into the tap delay until the delay sound is heard
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	200-8000 [Hz], BYPASS	Frequency at which the low-frequency content of the tap delay sound will be cut (BYPASS : no cut).
Delay 1 Pan, Delay 2 Pan	L64-63R	Panning of the tap delay sounds
Delay 1 Level, Delay 2 Level	0-127	Volume of the tap delay sounds
Low Gain	-15-+15 [dB]	Gain of the low frequency range
High Gain	-15-+15 [dB]	Gain of the high frequency range
Balance #	D100:0W- D0:100W	Volume balance of the original sound (D) and delay sound (W)
Level	0-127	Output Level

37: TIME CTRL DELAY

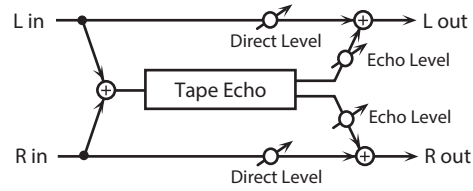
A stereo delay in which the delay time can be varied smoothly.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	DELAY TIME, FEEDBACK, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Delay Time (sync sw) #	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay Time (msec) #/ Delay Time (note) #	1-1300 [msec] note (p. 31)	Adjusts the time until the delay is heard.
Acceleration	0-15	Adjusts the speed which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change.
Feedback #	-98-+98 [%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative "-" settings invert the phase.
HF Damp	200-8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out (BYPASS : no cut).
Low Gain	-15-+15 [dB]	Gain of the low frequency range
High Gain	-15-+15 [dB]	Gain of the high frequency range
Balance #	D100:0W- D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0-127	Output Level

38: TAPE ECHO

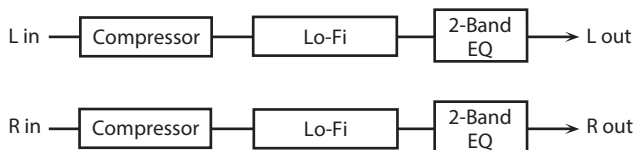
A virtual tape echo that produces a realistic tape delay sound. This simulates the tape echo section of a Roland RE-201 Space Echo.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	REPEAT RATE, INTENSITY, ECHO LEVEL, DIRECT LEVEL	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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		
Head L Pan		
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

39: LOFI COMPRESS

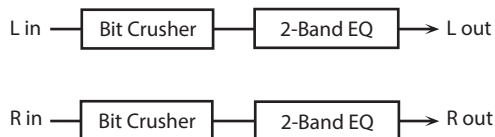
This is an effect that intentionally degrades the sound quality for creative purposes.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	BALANCE, LEVEL	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Pre Filt Type	1-6	Selects the type of filter applied to the sound before it passes through the Lo-Fi effect. 1: Compressor off 2-6: Compressor on
LoFi Type	1-9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	OFF, LPF, HPF	Type of filter OFF: no filter is used LPF: cuts the frequency range above the Cutoff HPF: cuts the frequency range below the Cutoff
Post Filter Cutoff	200-8000 [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

40: BIT CRUSHER

This creates a lo-fi sound.

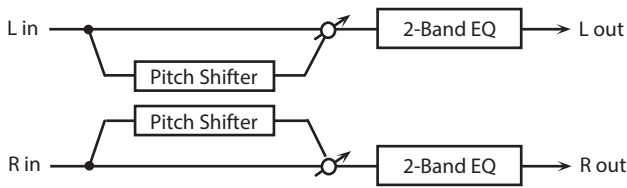


Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	SAMPLE RATE, BIT DOWN, FILTER	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Sample Rate #	0-127	Adjusts 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 frequency range
High Gain	-15-+15 [dB]	Gain of the high frequency range
Level	0-127	Output Level

Modulation FX Parameters

41: PITCH SHIFTER

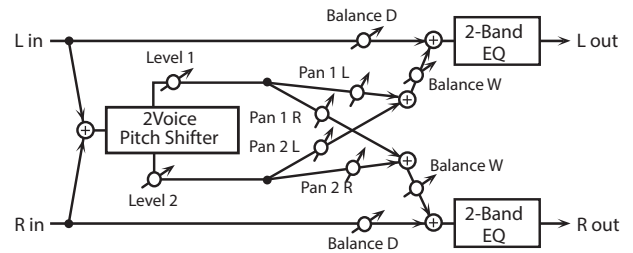
A stereo pitch shifter.



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	COARSE, FINE, FEEDBACK, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Coarse #1	-24+12 [semi]	Adjusts the pitch of the pitch shifted sound in semitone steps.
Fine #1	-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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay Time (msec)/ Delay Time (note)	1-1300 [msec] note (p. 31)	Adjusts the delay time from the direct sound until the pitch shifted sound is heard.
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

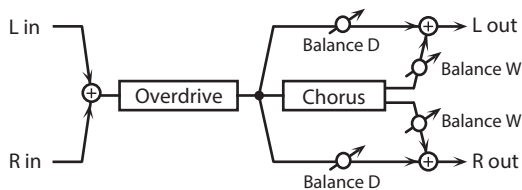
42: 2VOICE PITCH SHIFTER

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.



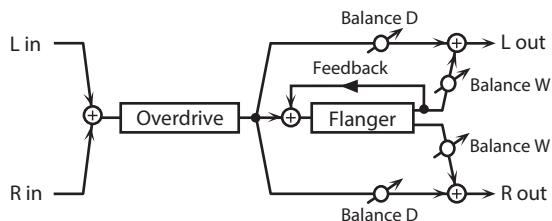
Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	PITCH1 COARSE, PITCH1 FINE, PITCH1 FEEDBACK, PITCH1 PAN, PITCH2 COARSE, PITCH2 FINE, PITCH2 FEEDBACK, PITCH2 PAN, BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Pitch1 Coarse #1	-24+12 semi	Adjusts the pitch of Pitch Shift 1 in semitone steps.
Pitch1 Fine #1	-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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Pitch1 Delay (msec)/ Pitch1 Delay (note)	1-1300 [msec] note (p. 31)	Adjusts the delay time from the direct sound until the Pitch Shift 1 sound is heard.
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 #2	-24+12 semi	Settings of the Pitch Shift 2 sound. The parameters are the same as for the Pitch Shift 1 sound.
Pitch2 Fine #2	-100+100 cent	
Pitch2 Delay	OFF, ON	
Pitch2 Delay (msec)/ Pitch2 Delay (note)	1-1300 [msec] note (p. 31)	
Pitch2 Feedback #	-98+98 [%]	
Pitch2 Pan #	L64-63R	
Pitch2 Level	0-127	
Low Gain	-15+15 [dB]	
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

43: OD → CHORUS



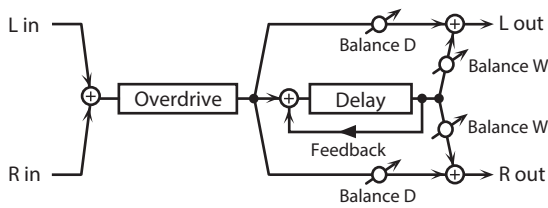
Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	OVERDRIVE DRIVE, OVERDRIVE PAN, CHORUS RATE, CHORUS BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	OVERDRIVE DRIVE, OVERDRIVE PAN, CHORUS RATE, CHORUS BALANCE	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Overdrive Drive #	0–127	Degree of distortion Also changes the volume.
Overdrive Pan #	L64–63R	Stereo location of the overdrive sound
Chorus Pre Delay	0.0–100.0 [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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Chorus Rate (Hz) #/ Chorus Rate (note) #	0.05–10.00 [Hz] note (p. 31)	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

44: OD → FLANGER



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	OVERDRIVE DRIVE, OVERDRIVE PAN, FLN RATE, FLN FEEDBACK, FLN BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	OVERDRIVE DRIVE, OVERDRIVE PAN, FLN RATE, FLN FEEDBACK, FLN BALANCE	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Flanger Rate (Hz) #/ Flanger Rate (note) #	0.05–10.00 [Hz] note (p. 31)	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

45: OD → DELAY

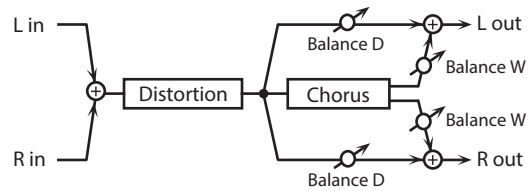


Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	OVERDRIVE DRIVE, OVERDRIVE PAN, DELAY FEEDBACK, DELAY BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	DELAY FEEDBACK, DELAY BALANCE	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay Time (msec)/ Delay Time (note)	1–2600 [msec] note (p. 31)	Adjusts the delay time from the direct sound until 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	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect 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

46: DS → CHORUS

The parameters are essentially the same as in "43: OD → CHORUS," with the exception of the following two.

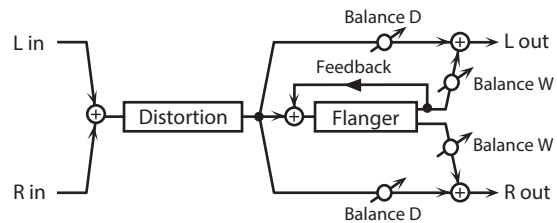
- Overdrive Drive → Distortion Drive
- Overdrive Pan → Distortion Pan



47: DS → FLANGER

The parameters are essentially the same as in "44: OD → FLANGER," with the exception of the following two.

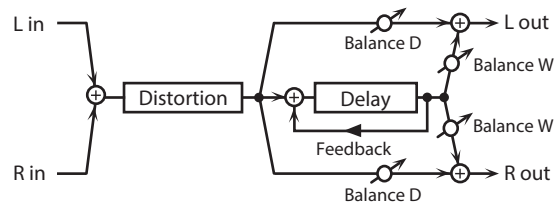
- Overdrive Drive → Distortion Drive
- Overdrive Pan → Distortion Pan



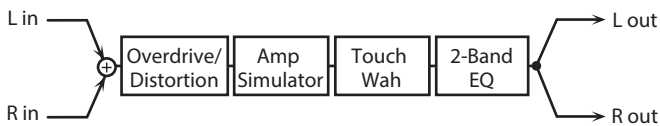
48: DS → DELAY

The parameters are essentially the same as in "45: OD → DELAY," with the exception of the following two.

- Overdrive Drive → Distortion Drive
- Overdrive Pan → Distortion Pan

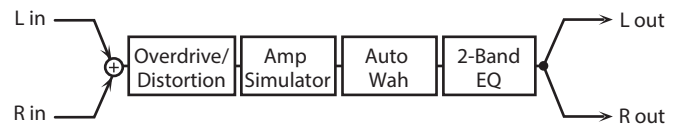


49: OD/DS → TWAH



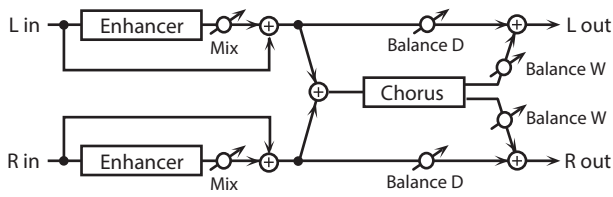
Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	DRIVE, TONE, TWAH SENS, TWAH MANUAL, TWAH PEAK, TWAH BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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 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.
TWah Polarity	DOWN, UP	Direction in which the filter will move UP: Move toward a higher frequency DOWN: Move toward a lower frequency
TWah Sens #	0–127	Sensitivity with which the filter is modified
TWah Manual #	0–127	Basic 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 direct 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

50: OD/DS → AWAH



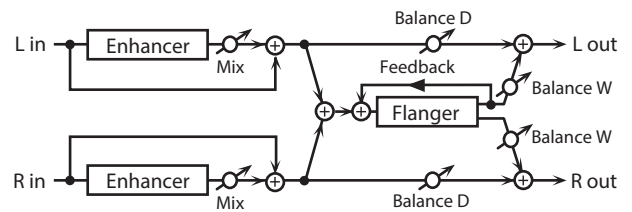
Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	DRIVE, TONE, AUTOWAH MANUAL, AUTOWAH PEAK, AUTOWAH RATE, AUTOWAH DEPTH, AUTOWAH BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob		Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
Drive Switch	OFF, ON	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 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.
AutoWah Manual #	0–127	Basic 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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
AutoWah Rate (Hz) #/ AutoWah Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Rate at which the wah effect is modulated
AutoWah Depth #	0–127	Depth at which the wah effect is modulated
AutoWah Balance #	D100:0W–D0:100W	Volume balance of the sound that passes through the wah (W) and the direct 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

51: ENHANCER → CHORUS



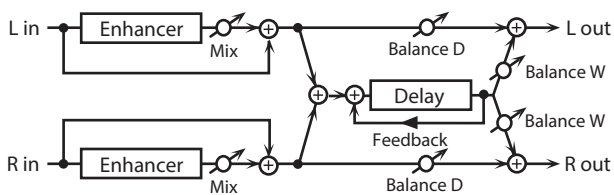
Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	ENHANCER SENS, ENHANCER MIX, CHORUS RATE, CHORUS BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	ENHANCER SENS, ENHANCER MIX, CHORUS RATE, CHORUS BALANCE	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Chorus Rate (Hz) #/ Chorus Rate (note) #	0.05–10.00 [Hz] note (p. 31)	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

52: ENHANCER → FLANGER



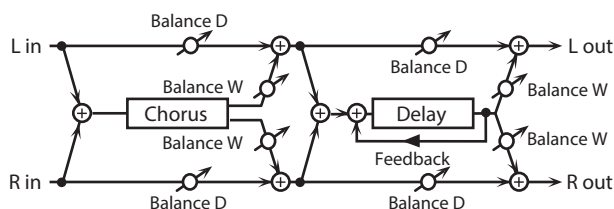
Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	ENHANCER SENS, ENHANCER MIX, FLN RATE, FLN FEEDBACK, FLN BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	ENHANCER SENS, ENHANCER MIX, FLN RATE, FLN FEEDBACK, FLN BALANCE	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Flanger Rate (Hz) #/ Flanger Rate (note) #	0.05–10.0 [Hz] note (p. 31)	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

53: ENHANCER → DELAY



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	ENHANCER SENS, ENHANCER MIX, DELAY FEEDBACK, DELAY BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	ENHANCER SENS, ENHANCER MIX, DELAY FEEDBACK, DELAY BALANCE	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay Time (msec)/ Delay Time (note)	1–2600 [msec] note (p. 31)	Adjusts the delay time from the direct sound until 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	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect 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

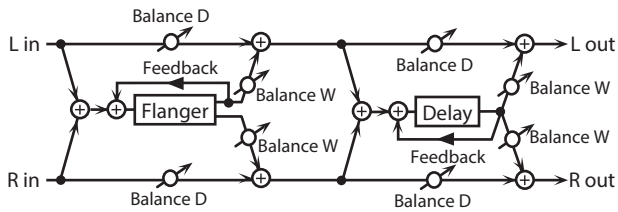
54: CHORUS → DELAY



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	CHORUS RATE, CHORUS BALANCE, DELAY FEEDBACK, DELAY BALANCE	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	CHORUS RATE, CHORUS BALANCE, DELAY FEEDBACK, DELAY BALANCE	Specifies the parameter that is controlled by the MODULATION FX [RATE] knob.
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Chorus Rate (Hz) #/ Chorus Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Frequency of modulation
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay Time (msec)/ Delay Time (note)	1–2600 [msec] note (p. 31)	Adjusts the delay time from the direct sound until 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	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect 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

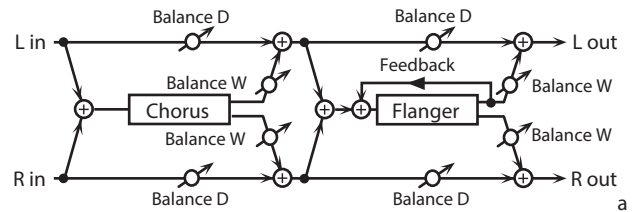
Modulation FX Parameters

55: FLANGER → DELAY



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	FLN RATE, FLN FEEDBACK, FLN BALANCE,	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	DELAY FEEDBACK, DELAY BALANCE	
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Flanger Rate (Hz) #/ Flanger Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Frequency of modulation
Flanger Depth	0–127	
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay Time (msec)/ Delay Time (note)	1–2600 [msec] note (p. 31)	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98–+98 [%]	
Delay HF Damp	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect 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

56: CHORUS → FLANGER



Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
Depth Knob	CHORUS RATE, CHORUS BALANCE,	Specifies the parameter that is controlled by the MODULATION FX [DEPTH] knob.
Rate Knob	FLN RATE, FLN FEEDBACK, FLN BALANCE	
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Chorus Rate (Hz) #/ Chorus Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Modulation frequency of the chorus effect
Chorus Depth	0–127	
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 modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Flanger Rate (Hz) #/ Flanger Rate (note) #	0.05–10.00 [Hz] note (p. 31)	Modulation frequency of the flanger effect
Flanger Depth	0–127	
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

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				

Controlling a Modulation FX via MIDI (Modulation FX CONTROL)

You can use MIDI messages such as control change messages to control the principal Modulation FX parameters. This capability is called “Modulation FX CONTROL (modulation-effects control).”

The parameters that can be controlled are preset for each Modulation FX type, and are the parameters marked by a “#” symbol in the following explanations of each Modulation FX parameter. Up to four modulation-effects control settings can be assigned using Modulation FX 1–16.

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

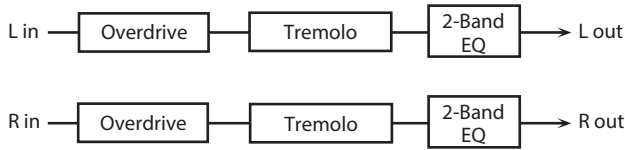
Parameter	Value	Explanation
Source (1–4)		Specifies the MIDI message that will control the corresponding Modulation FX CONTROL parameter.
	OFF	Modulation FX CONTROL will not be used.
	CC01–31	Controller number 1–31
	CC33–95	Controller number 33–95
	PITCH BEND	Pitch bend
	AFTERTOUCH	Aftertouch
	SYS CTRL1–4	Use the controller that is assigned by the System Parameter setting System Control 1–4 Source.
Destination (1–4)		Selects the multi-effect parameter that will be controlled by control source 1–4.
	Refer to the parameters marked “#” on p. 4 and following	The type of parameters that can be selected will depend on the type of multi-effect you’ve selected in Modulation FX Type.
Sens (1–4)	-63–+63	Specifies the depth of Modulation FX 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.

Tremolo/Amp Simulator Parameters

The Tremolo/Amp Simulator effect is included in the tone.

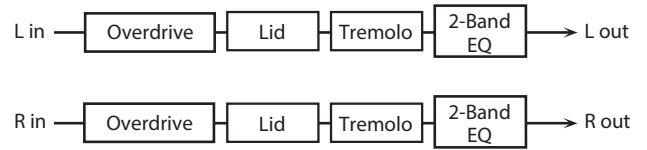
You can choose from five types of tremolo and amp simulator that are optimized in different ways.

1: NORMAL



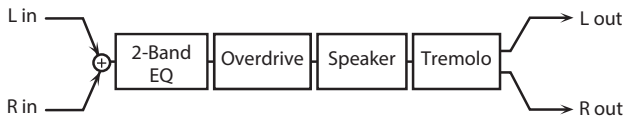
Parameter	Value	Explanation
OD Switch	OFF, ON	Overdrive on/off
OD Drive	0–127	Degree of distortion
Tremolo Switch	OFF, ON	Tremolo on/off
Tremolo Mod Wave	TRI, SQR, SIN, SAW1, SAW2, TRP	Modulation Wave TRI: triangle wave SQR: square wave SIN: sine wave SAW1/2: sawtooth wave TRP: Trapezoidal wave
Tremolo Rate (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Tremolo Rate (Hz)/ Tremolo Rate (note)	0.05–10.00 [Hz] note (p. 31)	Rate of the tremolo effect
Tremolo Depth	0–127	Depth of the tremolo effect
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

2: A.PIANO



Parameter	Value	Explanation
Lid	1–7	Amount by which the lid of the grand piano is open. Higher settings open the lid more, producing a brighter sound.
OD Switch	OFF, ON	Overdrive on/off
OD Drive	0–127	Degree of distortion
Tremolo Switch	OFF, ON	Tremolo on/off
Tremolo 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
Tremolo Rate (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Tremolo Rate (Hz)/ Tremolo Rate (note)	0.05–10.00 [Hz] note (p. 31)	Rate of the tremolo effect
Tremolo Depth	0–127	Depth of the tremolo effect
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

3: E. PIANO



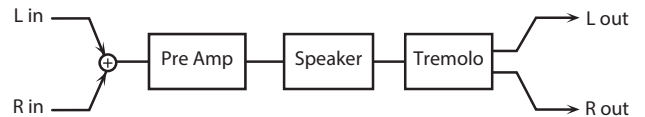
Parameter	Value	Explanation
Bass	-50+50	Gain of the low range
Treble	-50+50	Gain of the high range
Tremolo Switch	OFF, ON	Tremolo on/off
Tremolo Type	OLDCASE MONO, OLDCASE STEREO, NEWCASE, DYNO, WURLY	Type of tremolo effect
Tremolo Speed (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Tremolo Speed (Hz)/ Tremolo Speed (note)	0.05-10.00 [Hz] note (p. 31)	Rate of the tremolo effect
Tremolo Depth	0-127	Depth of the tremolo effect
Tremolo Shape	0-20	Adjusts the waveform of the tremolo.
AMP Switch	OFF, ON	If this is off, speaker and overdrive are not applied.
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
Level	0-127	Output Level

Characteristics of the tremolo types

Tremolo types of differing character are available, allowing you to reproduce the character of classic electric pianos when combined with an electric piano sound.

Type	Explanation
OLDCASE MONO	Used in conjunction with TINE EP, this simulates an early model of a classic electric piano of the 60s.
OLDCASE STEREO	Used in conjunction with TINE EP, this simulates a classic electric piano sound of the early 70s.
NEWCASE	Used in conjunction with TINE EP, this simulates a classic electric piano sound of the late 70s and early 80s.
DYNO	This model allows you to vary the shape of the tremolo waveform. Used in conjunction with TINE EP, this simulates an electric piano sound used in many recordings of the early 80s.
WURLY	Used in conjunction with REED E. PIANO, this simulates a classic electric piano sound of the 60s.

4: GUITAR AMP



Parameter	Value	Explanation
Pre Amp Switch	OFF, ON	Turns the amp switch on/off.
Pre Amp Type	JC-120, CLEAN TWIN, MATCH DRIVE, BG LEAD, MS1959I, MS1959II, MS1959I+II, SLDN LEAD, METAL 5150, METAL LEAD, OD-1, OD-2 TURBO, DISTORTION, FUZZ	Type of guitar amp
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	* Middle cannot be set if "Match Drive" is selected as the Pre Amp Type.
Pre Amp Treble	0-127	
Speaker Switch	OFF, ON	Selects whether the sound will be sent through the speaker simulation (ON) or not (OFF)
Speaker Type	SMALL 1, SMALL 2, MIDDLE, JC-120, BUILT-IN 1, BUILT-IN 2, BUILT-IN 3, BUILT-IN 4, BUILT-IN 5, BG STACK 1, BG STACK 2, MS STACK 1, MS STACK 2, METAL STACK, 2-STACK, 3-STACK	Type of speaker
Tremolo Switch	OFF, ON	Turns the tremolo effect on/off
Tremolo 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
Tremolo Rate (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Tremolo Rate (Hz)/ Tremolo Rate (note)	0.05-10.00 [Hz] note (p. 31)	Rate of the tremolo effect
Tremolo Depth	0-127	Depth of the tremolo effect
Level	0-127	Output Level

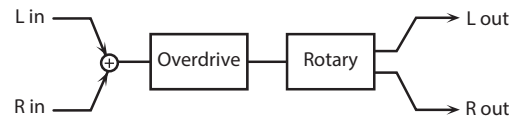
Tremolo/Amp Simulator Parameters

Specifications of each Speaker Type

The speaker column indicates the diameter of each speaker unit (in inches) and the number of units.

Type	Cabinet	Speaker	Microphone
SMALL 1	Small open-back enclosure	10	Dynamic
SMALL 2	Small open-back enclosure	10	Dynamic
MIDDLE	Open back enclosure	12 x 1	Dynamic
JC-120	Open back enclosure	12 x 2	Dynamic
BUILT-IN 1	Open back enclosure	12 x 2	Dynamic
BUILT-IN 2	Open back enclosure	12 x 2	Condenser
BUILT-IN 3	Open back enclosure	12 x 2	Condenser
BUILT-IN 4	Open back enclosure	12 x 2	Condenser
BUILT-IN 5	Open back enclosure	12 x 2	Condenser
BG STACK 1	Sealed enclosure	12 x 2	Condenser
BG STACK 2	Large sealed enclosure	12 x 2	Condenser
MS STACK 1	Large sealed enclosure	12 x 4	Condenser
MS STACK 2	Large sealed enclosure	12 x 4	Condenser
METAL STACK	Large double stack	12 x 4	Condenser
2-STACK	Large double stack	12 x 4	Condenser
3-STACK	Large triple stack	12 x 4	Condenser

5: ROTARY



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.
Rotary Switch	OFF, ON	Switches the rotation of the rotary speaker. When this is turned off, the rotation will gradually stop. When it is turned on, the rotation will gradually resume.
Woofers Slow Speed	0.05–10.00 [Hz]	Slow speed (SLOW) of the low frequency rotor
Woofers Fast Speed	0.05–10.00 [Hz]	Fast speed (FAST) of the low frequency rotor
Woofers Trans Up	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Slow to Fast.
Woofers Trans Down	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Fast to Slow.
Woofers Level	0–127	Volume of the woofer
Tweeters Slow Speed	0.05–10.00 [Hz]	Settings of the tweeter The parameters are the same as for the woofer.
Tweeters Fast Speed	0.05 - 10.00 [Hz]	
Tweeters Trans Up	0–127	
Tweeters Trans Down	0–127	
Tweeters Level	0–127	
Spread	0–10	Sets the rotary speaker stereo image. The higher the value set, the wider the sound is spread out.
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

Sympathetic Resonance Parameters

You can adjust this resonance when the damper pedal is depressed (Sympathetic Resonance).

On an acoustic piano, holding down the damper pedal will allow the remaining strings to resonate in sympathy with the sounds that you played from the keyboard, adding a rich resonance. This feature reproduces that resonance sound.

MEMO

This setting is available only for certain piano tones.

For details on the tones to which this applies, refer to "Sound List" (PDF).

Parameter	Value	Explanation
Switch	OFF, ON	When set to ON, the effect is applied.
Depth	0–127	Depth of the effect
Damper	0–127	Depth to which the damper pedal is pressed (controls the resonant sound)
Pre LPF	16–15000 [Hz], BYPASS	Frequency of the filter that cuts the high-frequency content of the input sound (BYPASS : no cut)
Pre HPF	BYPASS, 16–15000 [Hz]	Frequency of the filter that cuts the low-frequency content of the input sound (BYPASS : no cut)
Peaking Freq	16–15000 [Hz]	Frequency of the filter that boosts/cuts a specific frequency region of the input sound
Peaking Gain	-15–+15 [dB]	Amount of boost/cut produced by the filter at the specified frequency region of the input sound
Peaking Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the frequency region boosted/cut by the Peaking Gain parameter (larger values make the region narrower)
HF Damp Freq	16–15000 [Hz], BYPASS	Frequency at which the high-frequency content of the resonant sound will be cut (BYPASS : no cut)
LF Damp Freq	BYPASS, 16–15000 [Hz]	Frequency at which the low-frequency content of the resonant sound will be cut (BYPASS : no cut)
Level	0–127	Output Level
Damper Offset	0–127	Volume of additional slight resonance when the damper pedal is not pressed

Delay Parameters

This is a delay that is applied to the entire Live Set. You can choose from five types.

You can also adjust the amount of delay that is applied to each layer by editing the DLY (Delay Send Level: owner's manual p. 28) from each of the layers Upper 1–3 and Lower.

Settings common to all Delay types

Parameter	Value	Explanation
Type	DELAY	A stereo delay.
	T-CTRL DELAY	A delay that allows you to smoothly change the delay time.
	DELAY → TREMOLO	Tremolo is applied to the delay sound.
	2TAP DELAY	Delayed sound is heard from two locations that you specify.
	3TAP DELAY	Delayed sound is heard from three locations that you specify.
Level	0–127	Delay volume.

1: DELAY

Parameter	Value	Explanation
Switch	OFF, ON	Delay on/off
Off Mode	IMMEDIATE, REMAIN	Specifies what happens to the delay decays of the previously-played phrase when you turn delay off. IMMEDIATE: The delay sound disappears immediately. REMAIN: The delay sound decays naturally.
Output Select	MAIN, REV, MAIN+REV	Specifies the output destination of the sound from the delay.
Delay (sync sw)	OFF, ON	If this is ON, the modulation is synchronized to the tempo of the rhythm (owner's manual p. 24).
Delay (msec)/ Delay (note)	1–1300 [msec] note (p. 31)	Adjusts the delay time from the direct sound until the delay sound is heard.
Feedback	-98–+98 [%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative "-" settings invert the phase.
HF Damp	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out (BYPASS: no cut).

2: T-CTRL DELAY

Parameter	Value	Explanation
Switch	OFF, ON	Delay on/off
Off Mode	IMMEDIATE, REMAIN	Specifies what happens to the delay decays of the previously-played phrase when you turn delay off. IMMEDIATE: The delay sound disappears immediately. REMAIN: The delay sound decays naturally.
Output Select	MAIN, REV, MAIN+REV	Specifies the output destination of the sound from the delay.
Delay (sync sw)	OFF, ON	If this is on, the delay is synchronized with the tempo.
Delay (msec)/ Delay (note)	1–1300 [msec] note (p. 31)	Adjusts the delay time from the direct sound until the delay sound is heard.
Acceleration	0–15	Specifies the time over which the current delay time changes to the newly specified delay time when you change the delay time. This changes the speed of the 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 (BYPASS: no cut).

3: DELAY → TREMOLO

Parameter	Value	Explanation
Switch	OFF, ON	Delay on/off
Off Mode	IMMEDIATE, REMAIN	Specifies what happens to the delay decays of the previously-played phrase when you turn delay off. IMMEDIATE: The delay sound disappears immediately. REMAIN: The delay sound decays naturally.
Output Select	MAIN, REV, MAIN+REV	Specifies the output destination of the sound from the delay.
Input Mode	MONAURAL, STEREO	MONAURAL: The input is mixed to mono.
Delay (sync sw)	OFF, ON	If this is on, the delay is synchronized with the tempo.
Delay (msec)/ Delay (note)	1–1300 [msec] note (p. 31)	Adjusts the delay time from the direct sound until the delay sound is heard.
Feedback	-98–+98 [%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative "-" settings invert the phase.
HF Damp	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out (BYPASS: no cut).
Tremolo Switch	OFF, ON	Tremolo on/off
Tremolo 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
Tremolo Rate (sync sw)	OFF, ON	If this is on, the tremolo is synchronized with the tempo.
Tremolo Rate (Hz)/ Tremolo Rate (note)	0.05–10.00 [Hz] note (p. 31)	Rate of the tremolo effect
Tremolo Depth	0–127	Modulation depth of the flanger effect

4: 2TAP DELAY

Parameter	Value	Explanation
Switch	OFF, ON	Delay on/off
Off Mode	IMMEDIATE, REMAIN	Specifies what happens to the delay decays of the previously-played phrase when you turn delay off. IMMEDIATE: The delay sound disappears immediately. REMAIN: The delay sound decays naturally.
Output Select	MAIN, REV, MAIN+REV	Specifies the output destination of the sound from the delay.
Delay (sync sw)	OFF, ON	If this is on, the delay is synchronized with the tempo.
Delay (msec)/ Delay (note)	1–1300 [msec] note (p. 31)	Adjusts the delay time from the direct sound until the delay sound is heard.
Feedback	-98–+98 [%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative "-" settings invert the phase.
HF Damp	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out (BYPASS: no cut).
Delay 1 Pan	L64–63R	Pan position of delay 1
Delay 2 Pan	L64–63R	Pan position of delay 2
Delay 1 Level	0–127	Volume of delay 1
Delay 2 Level	0–127	Volume of delay 2

5: 3TAP TAP DELAY

Parameter	Value	Explanation
Switch	OFF, ON	Delay on/off
Off Mode	IMMEDIATE, REMAIN	Specifies what happens to the delay decays of the previously-played phrase when you turn delay off. IMMEDIATE: The delay sound disappears immediately. REMAIN: The delay sound decays naturally.
Output Select	MAIN, REV, MAIN+REV	Specifies the output destination of the sound from the delay.
Delay Time (sync sw)	OFF, ON	If this is on, the delay is synchronized with the tempo.
Delay Time (msec)/ Delay Time (note)	1–2600 [msec] note (p. 31)	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay 1 Feedback	-98–+98 [%]	Adjusts the amount of the delay sound that's fed back into the effect. Negative "-" settings invert the phase.
HF Damp	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out (BYPASS: no cut).
Delay 1 Pan	L64–63R	Pan position of delay 1
Delay 2 Pan	L64–63R	Pan position of delay 2
Delay 3 Pan	L64–63R	Pan position 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 Parameters

This is a reverb that is applied to the entire Live Set. You can choose from six types.

You can also adjust the amount of reverb that is applied to each layer by editing the REV (Reverb Send Level: owner's manual p. 28) from each of the layers Upper 1–3 and Lower.

Settings common to all Reverb types

Parameter	Value	Explanation
Type	1: Room 1 2: Room 2 3: Hall 1 4: Hall 2 5: Plate 6: GM2 Reverb	Type of reverb Room 1/2: Reverb that simulates the reverberation of a room Hall 1/2: Reverb that simulates the reverberation of a hall Plate: Simulation of a plate echo (a reverb device that uses a metal plate) GM2 Reverb: GM2 reverb
Level	0–127	Volume of the reverb sound

1–5: Room 1/2, Hall 1/2, Plate

Parameter	Value	Explanation
Pre Delay	0–100 [msec]	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time	0.1–10 [sec]	Time length of reverberation
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

6: GM2 Reverb

Parameter	Value	Explanation
Character	SMALL_ROOM, MEDIUM_ROOM, LARGE_ROOM, MEDIUM_HALL, LARGE_HALL, PLATE	Type of reverb
Time	0–127	Time length of reverberation

EQ Parameters

This is a five-band equalizer that is applied to the entire Live Set.

Parameter	Value	Explanation
Low Gain	-12–+12 [dB]	Gain of the low range
Low Freq	16–16000 [Hz]	Frequency of the low range
Mid1 Gain	-12–+12 [dB]	Gain of the middle range 1
Mid1 Freq	16–16000 [Hz]	Frequency of the middle range 1
Mid1 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 1 Set a higher value for Q to narrow the range to be affected.
Mid2 Gain	-12–+12 [dB]	Gain of the middle range 2
Mid2 Freq	16–16000 [Hz]	Frequency of the middle range 2
Mid2 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 2 Set a higher value for Q to narrow the range to be affected.
Mid3 Gain	-12–+12 [dB]	Gain of the middle range 3
Mid3 Freq	16–16000 [Hz]	Frequency of the middle range 3
Mid3 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 3 Set a higher value for Q to narrow the range to be affected.
High Gain	-12–+12 [dB]	Gain of the high range
High Freq	16–16000 [Hz]	Frequency of the high range
Input Gain	-15–+15 [dB]	Gain of the Input

System Compressor Parameters

This is a stereo compressor (limiter) that is applied to the final output.

With separate settings for the high-frequency range, midrange, and low-frequency range, this reduces inconsistencies in volume levels by compressing the sound when the volume exceeds a preset volume level.

Parameter	Value	Explanation
Compressor Switch	OFF, ON	Turns the compressor on/off.
Type	When you change this parameter, the Compressor parameters will be automatically adjusted to the optimal values. You can make the settings easily by first setting the Compressor Type and then changing only the necessary parameters.	
	HARD COMP	Applies strong compression.
	SOFT COMP	Applies mild compression.
	LOW BOOST	Boosts the low end.
	MID BOOST	Boosts the midrange.
	HI BOOST	Boosts the high end.
	USER	The saved settings are written.
Split Freq Low	40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800 [Hz]	Sets the frequency separating the low-frequency range (LOW) and midrange (MID).
Split Freq High	400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Sets the frequency separating the high-frequency range (HIGH) and midrange (MID).

Common to Low, Mid, and High

Parameter	Value	Explanation
Level	0–24 [dB] (1 dB Step)	Output Level
Attack Time	0–100	Sets the time it takes until the level is compressed after the input exceeds the Threshold.
Release Time	0–100	Sets the time it takes for the compression to be released after the input falls below the Threshold.
Threshold	-60–0 [dB] (1 dB Step)	Sets the level at which compression begins.
Ratio	1:1.0, 1:1.1, 1:1.2, 1:1.4, 1:1.6, 1:1.8, 1:2.0, 1:2.5, 1:3.2, 1:4.0, 1:5.6, 1:8.0, 1:16, 1:INF	Compression Ratio