Roland®

VE-GS Pro

Multi-Effects Parameter Chart

This pamphlet describes the various parameters used in the VE-GS Pro Multi-Effects functions. For more information and instructions on how to use these parameters, pleases refer to the owner's manual for the unit you are using.
In addition, "MIDI Implementation" is required for operation of all parameters mentioned in this pamphlet.
A separate publication titled "MIDI Implementation" is also available. If you should require this publication, please contact the nearest Roland Service Center or authorized Roland distributor.

01679278 '98-11-E2-12K

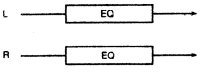
0: Thru

No Effect will be applied. When a GM System On or GS Reset messages is received, 0:Thru will be selected for Insertion Effect.

Effects that modify the tone color (filter type)

1: Stereo-EQ (Stereo Equalizer)

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



Low Freq (Low Frequency) 200/400
Select the frequency of the low range (200 Hz/400 Hz).

Low Gain -12 - +12
Adjust the gain of the low frequency.

Hi Freq (High Frequency) 4k/8k
Select the frequency of the high range (4kHz/8kHz).

Hi Gain -12 - +12
Adjust the gain of the high frequency.

M1 Freq (Mid 1 Frequency) 200 - 6.3k
Adjust the frequency of Mid 1 (mid range1).

M1 Q (Mid 1 Q) 0.5/1.0/2.0/4.0/9.0
This parameter adjusts the width of the area around the M1 Freq parameter that will be affected by the Gain setting. Higher values of Q will result in a narrower area being affected.

M1 Gain (Mid 1 Gain) -12 - +12
Adjust the gain for the area specified by the M1 Freq parameter and M1 Q parameter settings.

M2 Freq (Mid 2 Frequency) 200 - 6.3k
Adjust the frequency of Mid 2 (mid range2).

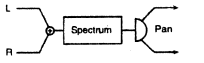
M2 Q (Mid 2 Q) 0.5/1.0/2.0/4.0/9.0
This parameter adjusts the width of the area around the M2 Freq parameter that will be affected by the Gain setting. Higher values of Q will result in a narrower area being affected.

M2 Gain (Mid 2 Gain) -12 - +12
Adjust the gain for the area specified by the M2 Freq parameter and M2 Q parameter settings.

Level (Output Level) 0 - 127
Adjust the output level.

2: Spectrum

Spectrum is a type of filter which modifies the timbre by boosting or cutting the level at specific frequencies. It is similar to an equalizer, but has 8 frequency points fixed at locations most suitable for adding character to the sound.



Band 1 (Band 1 Gain) -12 - +12
Adjust the 250 Hz level.

Band 2 (Band 2 Gain) -12 - +12
Adjust the 500 Hz level.

Band 3 (Band 3 Gain) -12 - +12
Adjust the 1000 Hz level.

Band 4 (Band 4 Gain) -12 - +12
Adjust the 1250 Hz level.

Band 5 (Band 5 Gain) -12 - +12
Adjust the 2000 Hz level.

Band 6 (Band 6 Gain) -12 - +12
Adjust the 3150 Hz level.

Band 7 (Band 7 Gain) -12 - +12
Adjust the 4000 Hz level.

Band 8 (Band 8 Gain) -12 - +12
Adjust the 8000 Hz level.

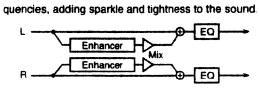
Width (Band Width) 0.5/1.0/2.0/4.0/9.0
Adjust the width of the frequency bands whose gain is being modified (common to all bands). Higher settings will make the frequency band narrower.

Pan (Output Pan) L63 - 0 - R63
Adjust the stereo location of the output sound. L63 is far left, 0 is center, and R63 is far right.

Level (Output Level) 0 - 127
Adjust the output level.

3: Enhancer

The Enhancer controls the overtone structure of the high frequencies, adding sparkle and tightness to the sound.



Sens (Sensitivity) 0 - 127
Adjust the sensitivity of the enhancer.

Mix (Mix Level) 0 - 127
Adjust the ratio with which the overtones generated by the enhancer are combined with the direct sound.

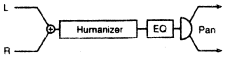
Low Gain -12 - +12
Adjust the gain of the low frequency range.

Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range.

Level (Output Level) 0 - 127
Adjust the output level.

4: Humanizer

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



Drive 0 - 127
Adjust the depth of distortion.

Drive Sw (Drive Switch) Off/On
Turn Drive on/off.

Vowel a/i/u/e/o
Select the vowel.

Accel 0 - 15
Adjust the time over which the sound will move to the specified Vowel. Smaller values will require more time.

Low Gain -12 - +12
Adjust the low frequency gain.

Hi Gain (High Gain) -12 - +12
Adjust the high frequency gain.

Pan (Output Pan) L63 - 0 - R63
Adjust the stereo position of the output sound. L63 is far left, 0 is center, and R63 is far right.

Level (Output Level) 0 - 127
Adjust the output volume.

Effects that distort the sound (distortion type)

5: Overdrive

This effect creates a soft distortion similar to that produced by tube amplifiers.

Drive 0 - 127
Adjust the degree of distortion.

Amp Type (Amp Simulator Type) Small/Bltin/2-Stk/3-Stk
Select the type of guitar amp.
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

Amp Sw (Amp Switch) Off/On
Turn the Amp Type on/off.

Low Gain -12 - +12
Adjust the gain of the low frequency range.

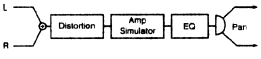
Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range.

Pan (Output Pan) L63 - 0 - R63
Adjust the stereo location of the output sound. L63 is far left, 0 is center, and R63 is far right.

Level (Output Level) 0 - 127
Adjust the output level.

6: Distortion

This effect produces a more intense distortion than Overdrive.



Drive 0 - 127
Adjust the degree of distortion.

Amp Type (Amp Simulator Type) Small/Bltin/2-Stk/3-Stk
Select the type of guitar amp.
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

Amp Sw (Amp Switch) Off/On
Turn the Amp Type on/off.

Low Gain -12 - +12
Adjust the gain of the low frequency range.

Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range.

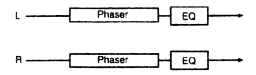
Pan (Output Pan) L63 - 0 - R63
Adjust the stereo location of the output sound. L63 is far left, 0 is center, and R63 is far right.

Level (Output Level) 0 - 127
Adjust the output level.

Effects that modulate the sound (modulation type)

7: Phaser

A phaser adds a phase-shifted sound to the original sound, producing a twisting modulation that creates spaciousness and depth.



Manual 100 - 8.0k
Adjust the basic frequency from which the sound will be modulated.

Rate 0.05 - 10.0
Adjust the frequency (period) of modulation.

Depth 0 - 127
Adjust the depth of modulation.

Reso (Resonance) 0 - 127
Adjust the amount of emphasis added to the frequency range surrounding the basic frequency determined by the Manual parameter setting.

Mix (Mix Level) 0 - 127
Adjust the ratio with which the phase-shifted sound is combined with the direct sound.

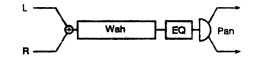
Low Gain -12 - +12
Adjust the gain of the low frequency range.

Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range.

Level (Output Level) 0 - 127
Adjust the output level.

8: Auto Wah

The Auto Wah cyclically controls a filter to create cyclic change in timbre.



Fil Type (Filter Type) LPF/BPF
Select the 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.

Sens (Sensitivity) 0 - 127
Adjust the sensitivity with which the filter is controlled. If this value is increased, the filter frequency will change more readily in response to the input level.

Manual 0 - 127
Adjust the center frequency from which the effect is applied.

Peak 0 - 127
Adjust the amount of the wah effect that will occur in the area of the center frequency. Lower settings will cause the effect to be applied in a broad area around the center frequency. Higher settings will cause the effect to be applied in a more narrow range. In the case of LPF, decreasing the value will cause the wah effect to change less.

Rate 0.05 - 10.0
Adjust the speed of the modulation.

Depth 0 - 127
Adjust the depth of the modulation.

Polarity Down/Up
Set the direction in which the frequency will change when the filter is modulated. With a setting of Up, the filter will change toward a higher frequency. With a setting of Down it will change toward a lower frequency.

Low Gain -12 - +12
Adjust the gain of the low frequency range for EQ.

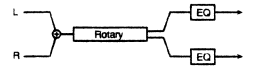
Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range for EQ.

Pan (Output Pan) L63 - 0 - R63
Adjust the stereo location of the output sound. L63 is far left, 0 is center, and R63 is far right.

Level (Output Level) 0 - 127
Adjust the output level.

9: Rotary

The Rotary effect simulates the sound of a classic rotary speakers. Since the movement of the high range and low range rotors can be set independently, the unique type of modulation characteristic of these speakers can be simulated quite closely. This effect is most suitable for electric organ.



Low Slow (Low Frequency Slow Rate) 0.05 - 10.0
Adjust the slow speed of the low frequency rotor.

Low Fast (Low Frequency Fast Rate) 0.05 - 10.0
Adjust the fast speed of the low frequency rotor.

Low Accl (Low Frequency Acceleration) 0 - 15
Adjust the time it takes for the low frequency rotor to reach the newly selected speed when switching from fast to slow (or slow to fast) speed. Lower values will require longer times.

Low Level (Low Frequency Level) 0 - 127
Adjust the volume of the low frequency rotor.

Hi Slow (High Frequency Slow Rate) 0.05 - 10.0
Adjust the slow speed of the high frequency rotor.

Hi Fast (High Frequency Fast Rate) 0.05 - 10.0
Adjust the fast speed of the high frequency rotor.

Hi Accl (High Frequency Acceleration) 0 - 15
Adjust the time it takes for the high frequency rotor to reach the newly selected speed when switching from fast to slow (or slow to fast) speed. Lower values will require longer times.

Hi Level (High Frequency Level) 0 - 127
Adjust the volume of the high frequency rotor.

Separate (Separation) 0 - 127
Adjust the spatial dispersion of the sound.

Speed Slow/Fast
Simultaneously switch the rotational speed of the low frequency rotor and high frequency rotor.
- **Slow** : Slow down the rotation to the specified speed (the Low Slow parameter / Hi Slow parameter values).
- **Fast** : Speed up the rotation to the specified speed (the Low Fast parameter / Hi Fast parameter values).

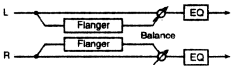
Low Gain -12 - +12
Adjust the gain of the low frequency range for EQ.

Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range for EQ.

Level (Output Level) 0 - 127
Adjust the output level.

10: Stereo Flanger

This is a stereo flanger. 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.



Pre Filter (Pre Filter Type) Off/LPF/HPF
Select the type of filter.
- **Off** : a filter will not be used
- **LPF** : cut the frequency range above the Cutoff parameter
- **HPF** : cut the frequency range below the Cutoff parameter

Cutoff (Cutoff Frequency) 250 - 8k
Adjust the basic frequency of the filter.

Pre Dly (Pre Delay Time) 0 - 100m
Adjust the time delay from when the direct sound begins until the processed sound is heard.

Rate 0.05 - 10.0
Adjust the rate of modulation.

Depth 0 - 127
Adjust the depth of modulation.

Feedback (Feedback Level) -98% - +98%
Adjust the amount (%) of the processed sound that is returned (fed back) into the input. Negative (-) settings will invert the phase.

Phase 0 - 180
Adjust the spatial spread of the sound.

Balance (Effect Balance) 100:0 - 0:100 (D:E)
Adjust the volume balance between the direct and the processed sound.

D and E stand for "dry sound" and "effect sound", respectively.

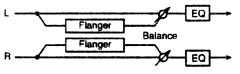
Low Gain -12 - +12
Adjust the gain of the low frequency range.

Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range.

Level (Output Level) 0 - 127
Adjust the output level.

11: Step Flanger

The Step Flanger is an effect in which the flanger pitch changes in steps.



Pre Dly (Pre Delay Time) 0 - 100m
Adjust the time delay from when the direct sound begins until the processed sound is heard.

Rate 0.05 - 10.0
Adjust the rate of modulation.

Depth 0 - 127
Adjust the depth of modulation.

Feedback (Feedback Level) -98% - +98%
Adjust the amount (%) of the processed sound that is returned (fed back) into the input. Negative (-) settings will invert the phase.

Phase 0 - 180
Adjust the spatial spread of the sound.

Step Rate 0.05 - 10.0
Adjust the rate (period) of pitch change.

Balance (Effect Balance) 100:0 - 0:100 (D:E)
Adjust the volume balance between the direct and the processed sound.
D and E stand for "dry sound" and "effect sound", respectively.

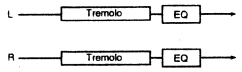
Low Gain -12 - +12
Adjust the gain of the low frequency range.

Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range.

Level (Output Level) 0 - 127
Adjust the output level.

12: Tremolo

Tremolo cyclically modulates the volume to add tremolo effect to the sound.



Mod Wave (Modulation Wave) Tri/Sqr/Sin/Saw1/Saw2
Select the type of modulation.
- **Tri** : The sound will be modulated like a triangle wave.
- **Sqr** : The sound will be modulated like a square wave.
- **Sin** : The sound will be modulated like a sine wave.
- **Saw1,2** : The sound will be modulated like a sawtooth wave. The "teeth" in Saw1 and Saw2 point at opposite directions.

Mod Rate (Modulation Rate) 0.05 - 10.0
Adjust the speed of modulation.

Mod Depth (Modulation Depth) 0 - 127
Adjust the depth of modulation.

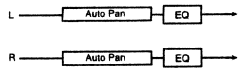
Low Gain -12 - +12
Adjust the gain of the low frequency range.

HI Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range.

Level (Output Level) 0 - 127
Adjust the output level.

13: Auto Pan

The Auto Pan effect cyclically modulates the stereo location of the sound.



Mod Wave (Modulation Wave) Tri/Sqr/Sin/Saw1/Saw2
Select the type of modulation.
- **Tri** : The sound will be modulated like a triangle wave.
- **Sqr** : The sound will be modulated like a square wave.
- **Sin** : The sound will be modulated like a sine wave.
- **Saw1,2** : The sound will be modulated like a sawtooth wave. The "teeth" in Saw1 and Saw2 point at opposite direction.

Mod Rate (Modulation Rate) 0.05 - 10.0
Adjust the frequency of modulation.

Mod Depth (Modulation Depth) 0 - 127
Adjust the depth of modulation.

Low Gain -12 - +12
Adjust the gain of the low frequency range.

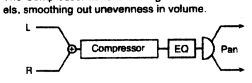
Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range.

Level (Output Level) 0 - 127
Adjust the output level.

Effects that affect the level (compressor type)

14: Compressor

The Compressor flattens out high levels and boosts low levels, smoothing out unevenness in volume.



Attack 0 - 127
Adjust the attack time of an input sound.

Sustain 0 - 127
Adjust the time over which low level sounds are boosted until they reach the specified volume.
Increasing the value will shorten the time. When the value is modified, the level will also change.

Post Gain 0/+6/+12/+18
Adjust the output gain.

Low Gain -12 - +12
Adjust the low frequency gain.

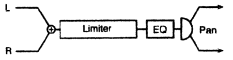
Hi Gain (High Gain) -12 - +12
Adjust the high frequency gain.

Pan (Output Pan) L63 - 0 - R63
Adjust the stereo location of the output sound. L63 is far left, 0 is center, and R63 is far right.

Level (Output Level) 0 - 127
Adjust the output level.

15: Limiter

The Limiter compresses signals that exceed a specified volume level, preventing distortion from occurring.



Threshold (Threshold Level) 0 - 127
Adjust the volume at which compression will begin.

Ratio (Compression Ratio) 1/1.5,1/2,1/4,1/100
This adjusts the compression ratio for signals that are louder than the Threshold Level. 1/100 is the highest compression ratio, and the output level will decrease.

Release (Release Time) 0 - 127
Adjust the time from when the volume falls below the Threshold Level until compression is no longer applied.

Post Gain 0/+6/+12/+18
Adjust the output gain.

Low Gain -12 - +12
Adjust the low frequency gain.

Hi Gain (High Gain) -12 - +12
Adjust the high frequency gain.

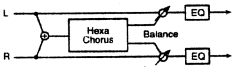
Pan (Output Pan) L63 - 0 - R63
Adjust the stereo location of the output sound. L63 is far left, 0 is center, and R63 is far right.

Level (Output Level) 0 - 127
Adjust the output level.

Effects that broaden the sound (chorus type)

16: Hexa Chorus

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



Pre Dly (Pre Delay Time) 0 - 100m
Adjust the time delay from when the direct sound begins until the processed sound is heard.

Rate 0.05 - 10.0
Adjust the rate of modulation.

Depth 0 - 127
Adjust the depth of modulation.

Pre Dly Dev (Pre Delay Deviation) 0 - 20
The Pre Delay is the time from when the original sound begins until when the chorus sound is heard. This adjusts the difference in Pre Delay between each of the six phases of chorus sound.

Depth Dev (Depth Deviation) -20 - +20
Adjust the difference in modulation depth between each of the six phases of chorus sound.

Pan Dev (Pan Deviation) 0 - 20
Adjust the difference in stereo position between each of the six phases of chorus sound. With a setting of 0, all the chorus sound will be located in the center. With a setting of 20, each chorus sound will be placed in 30 degree intervals relative to the center position.

Balance (Effect Balance) 100:0 - 0:100 (D:E)
Adjust the volume balance between the direct and the processed sound.
D and E stand for "dry sound" and "effect sound", respectively.

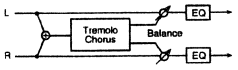
Low Gain -12 - +12
Adjust the low frequency gain.

Hi Gain (High Gain) -12 - +12
Adjust the high frequency gain.

Level (Output Level) 0 - 127
Adjust the output level.

17: Tremolo Chorus

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



Pre Dly (Pre Delay Time) 0 - 100m
Adjust the time delay from when the direct sound begins until the chorus sound is heard.

Cho Rate (Chorus Rate) 0.05 - 10.0
Adjust the modulation speed of the chorus effect.

Cho Depth (Chorus Depth) 0 - 127
Adjust the modulation depth of the chorus effect.

Trem Phase (Tremolo Phase) 0 - 180
Adjust the width of the tremolo sound.

Trem Rate (Tremolo Rate) 0.05 - 10.0
Adjust the modulation speed of the tremolo effect.

Trem Sep (Tremolo Separation) 0 - 127
Adjust the spatial spread of the tremolo effect.

Balance (Effect Balance) 100:0 - 0:100 (D:E)
Adjust the volume balance between the direct and the processed sound.
D and E stand for "dry sound" and "effect sound" respectively.

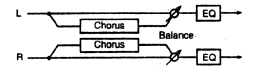
Low Gain -12 - +12
Adjust the low frequency gain.

Hi Gain (High Gain) -12 - +12
Adjust the high frequency gain.

Level (Output Level) 0 - 127
Adjust the output level.

18: Stereo Chorus

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



Pre Filter (Pre Filter Type) Off/LPF/HPF
Select the type of filter.
- **Off** : a filter will not be used
- **LPF** : cut the frequency range above the cutoff
- **HPF** : cut the frequency range below the cutoff

Cutoff (Cutoff Frequency) 250 - 8k
Adjust the center frequency of the filter for the chorus sound.

Pre Dly (Pre Delay Time) 0 - 100m
Adjust the time delay from when the direct sound begins until the processed sound is heard.

Rate 0.05 - 10.0
Adjust the rate of modulation.

Depth 0 - 127
Adjust the depth of modulation.

Phase 0 - 180
Adjust the spatial spread of the sound.

Balance (Effect Balance) 100:0 - 0:100 (D:E)
Adjust the volume balance between the direct and the processed sound.
D and E stand for "dry sound" and "effect sound", respectively.

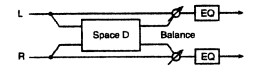
Low Gain -12 - +12
Adjust the gain of the low frequency range.

Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range.

Level (Output Level) 0 - 127
Adjust the output level.

19: Space D

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



Pre Dly (Pre Delay Time) 0 - 100m
Adjust the time delay from when the direct sound begins until the processed sound is heard.

Rate 0.05 - 10.0
Adjust the rate of modulation.

Depth 0 - 127
Adjust the depth of modulation.

Phase 0 - 180
Adjust the spatial spread of the sound.

Balance (Effect Balance) 100:0 - 0:100 (D:E)
Adjust the volume balance between the direct and the processed sound.
D and E stand for "dry sound" and "effect sound", respectively.

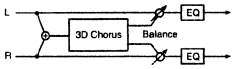
Low Gain -12 - +12
Adjust the gain of the low frequency range.

Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range.

Level (Output Level) 0 - 127
Adjust the output level.

20: 3D Chorus

This applies a 3D effect to the chorus sound. The chorus sound will be positioned 90 degrees left and 90 degrees right.



Pre Dly (Pre Delay Time) 0 - 100m
Adjust the time delay from when the direct sound begins until the processed sound is heard.

Cho Rate (Chorus Rate) 0.05 - 10.0
Adjust the modulation speed of the chorus sound.

Cho Depth (Chorus Depth) 0 - 127
Adjust the modulation depth of the chorus sound.

Out (Output Mode) Speaker/Phones
Specify the method that will be used to hear the sound which is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select Speaker when using speakers, or Phones when using headphones.

Balance (Effect Balance) 100:0 - 0:100 (D:E)
Adjust the volume balance between the direct and the processed sound.
D and E stand for "dry sound" and "effect sound", respectively.

Low Gain -12 - +12
Adjust the gain of the low frequency range.

Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range.

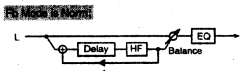
Level (Output Level) 0 - 127
Adjust the output level.

Effects that reverberate the sound (delay/reverb type)

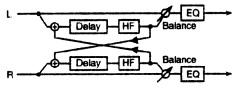
21: Stereo Delay

This is a stereo delay.

Fb Mode is Norm:



Fb Mode is Cross:



Dly Tm L (Delay Time Left) 0 - 500m
Adjust the time from the original sound until when the left delay sound is heard.

Dly Tm R (Delay Time Right) 0 - 500m
Adjust the time from the original sound until when the right delay sound is heard.

Feedback (Feedback Level) -98% - +98%
Adjust the proportion (%) of the processed sound that is fed back into the effect. Negative (-) settings will invert the phase.

Fb Mode (Feedback Mode) Norm/Cross
Select the way in which processed sound is fed back into the effect.
- **Norm** : The left delay sound will be fed back into the left delay, and the right delay sound into the right delay.
- **Cross** : The left delay sound will be fed back into the right delay, and the right delay sound into the left delay.

Phase L (Phase Left) Norm/Invert
Select the phase of the left delay sound.
- **Norm** : Phase will not be changed.
- **Invert** : Phase will be inverted.

Phase R (Phase Right) Norm/Invert
Select the phase of the right delay sound.
- **Norm** : Phase will not be changed.
- **Invert** : Phase will be inverted.

HF Damp 315 - 8k/Bypass
Adjust the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to Bypass.

Balance (Effect Balance) 100:0 - 0:100 (D:E)
Adjust the volume balance between the direct and the processed sound.
D and E stand for "dry sound" and "effect sound", respectively.

Low Gain -12 - +12
Adjust the gain of the low frequency range.

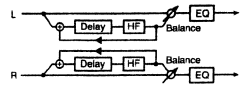
Hi Gain (High Gain) -12 - +12
Adjust the gain of the high frequency range.

Level (Output Level) 0 - 127
Adjust the output level.

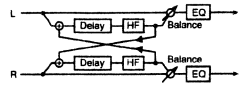
22: Mod Delay (Modulation Delay)

This effect adds modulation to the delayed sound, producing an effect similar to a flanger.

Fb Mode is Norm:



Fb Mode is Cross:



Dly Tm L (Delay Time Left) **0 - 500m**
Adjust the time from the original sound until when the left delay sound is heard.

Dly Tm R (Delay Time Right) **0 - 500m**
Adjust the time from the original sound until when the right delay sound is heard.

Feedback (Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the processed sound that is fed back into the effect. Negative (-) settings will invert the phase.

Fb Mode (Feedback Mode) **Norm/Cross**
Select the way in which processed sound is fed back into the effect.

- **Norm** : The left delay sound will be fed back into the left delay, and the right delay sound into the right delay.
- **Cross** : The left delay sound will be fed back into the right delay, and the right delay sound into the left delay.

Mod Rate (Modulation Rate) **0.05 - 10.0**
Adjust the speed of the modulation.

Mod Depth (Modulation Depth) **0 - 127**
Adjust the depth of the modulation.

Mod Phase (Modulation Phase) **0 - 180**
Adjust the spatial spread of the sound.

HF Damp **315 - 8k/Bypass**
Adjust the frequency above which sound fed back to the effect will be cut. If you do not wish to cut the high frequencies of the feedback, set this parameter to Bypass.

Balance (Effect Balance) **100:0 -0:100 (D:E)**
Adjust the volume balance between the direct and the processed sound.

D and E stand for "dry sound" and "effect sound", respectively.

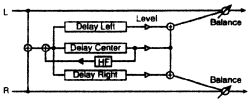
Low Gain **-12 - +12**
Adjust the gain of the low frequency range.

Hi Gain (High Gain) **-12 - +12**
Adjust the gain of the high frequency range.

Level (Output Level) **0 - 127**
Adjust the output level.

23: 3 Tap Delay (Triple Tap Delay)

The Triple Tap Delay produces three delay sounds; center, left and right.



Dly Tm C (Delay Time Center) **200m - 990m/1sec**
Adjust the time delay from the direct sound until when the center delay sound is heard.

Dly Tm L (Delay Time Left) **200m - 990m/1sec**
Adjust the time delay from the direct sound until when the left delay sound is heard.

Dly Tm R (Delay Time Right) **200m - 990m/1sec**
Adjust the time delay from the direct sound until when the right delay sound is heard.

Feedback (Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the Center Delay sound that is fed back into the effect. Negative (-) settings will invert the phase.

Dly Lev C (Delay Level Center) **0 - 127**
Adjust the volume of Center Delay sound.

Dly Lev L (Delay Level Left) **0 - 127**
Adjust the volume of Left Delay sound.

Dly Lev R (Delay Level Right) **0 - 127**
Adjust the volume of Right Delay sound.

HF Damp **315 - 8k/Bypass**
This adjusts the frequency at which the high range is cut when the Center Delay sound is returned to the input. If you do not wish to cut the high range, set this to Bypass.

Balance (Effect Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct and the processed sound.

D and E stand for "dry sound" and "effect sound", respectively.

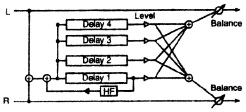
Low Gain **-12 - +12**
Adjust the gain of the low frequency range.

Hi Gain (High Gain) **-12 - +12**
Adjust the gain of the high frequency range.

Level (Output Level) **0 - 127**
Adjust the output level.

24: 4 Tap Delay (Quadruple Tap Delay)

The Quadruple Tap Delay has four delays.



Dly Tm 1 (Delay Time 1) **200m - 990m/1sec**
Adjust the time delay from the direct sound until when the Delay 1 sound is heard.

Dly Tm 2 (Delay Time 2) **200m - 990m/1sec**
Adjust the time delay from the direct sound until when the Delay 2 sound is heard.

Dly Tm 3 (Delay Time 3) **200m - 990m/1sec**
Adjust the time delay from the direct sound until when the Delay 3 sound is heard.

Dly Tm 4 (Delay Time 4) **200m - 990m/1sec**
Adjust the time delay from the direct sound until when the Delay 4 sound is heard.

Dly Lev 1 (Delay Level 1) **0 - 127**
Adjust the volume of the Delay 1 sound.

Dly Lev 2 (Delay Level 2) **0 - 127**
Adjust the volume of the Delay 2 sound.

Dly Lev 3 (Delay Level 3) **0 - 127**
Adjust the volume of the Delay 3 sound.

Dly Lev 4 (Delay Level 4) **0 - 127**
Adjust the volume of the Delay 4 sound.

Feedback (Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the Delay 1 sound that is fed back into the effect. Negative (-) settings will invert the phase.

HF Damp **315 - 8k/Bypass**
This adjusts the frequency at which the high range is cut when the Delay 1 sound is returned to the input. If you do not wish to cut the high range, set this to Bypass.

Balance (Effect Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct and the processed sound.

D and E stand for "dry sound" and "effect sound", respectively.

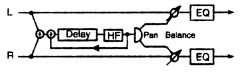
Low Gain **-12 - +12**
Adjust the gain of the low frequency range.

Hi Gain (High Gain) **-12 - +12**
Adjust the gain of the high frequency range.

Level (Output Level) **0 - 127**
Adjust the output level.

25: Tm Ctrl Delay (Time Control Delay)

This effect allows you to use a specified controller (the controller selected in EFX C.Src) to control the delay time and pitch in realtime. Lengthening the delay time will lower the pitch, and shortening it will raise the pitch.



Dly Time (Delay Time) **200m - 990m/1sec**
Adjust the time delay from the direct sound until when each delay sound is heard.

Accel (Acceleration) **0 - 15**
This parameter adjusts the speed over which the Delay Time will change from the current setting to a newly specified setting. The rate of change for the Delay Time directly affects the rate of pitch change.

Feedback (Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the processed sound that is fed back into the effect. Negative (-) settings will invert the phase.

HF Damp **315 - 8k/Bypass**
Adjust the frequency above which sound fed back to the effect will be cut. If you do not wish to cut the high frequencies of the feedback, set this parameter to Bypass.

EFX Pan (Effect Output Pan) **L63 - 0 - R63**
Adjust the stereo location of the processed sound. L63 is far left, 0 is center, and R63 is far right.

Balance (Effect Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct and the processed sound.

D and E stand for "dry sound" and "effect sound", respectively.

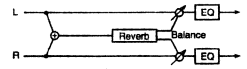
Low Gain **-12 - +12**
Adjust the gain of the low frequency range.

Hi Gain (High Gain) **-12 - +12**
Adjust the gain of the high frequency range.

Level (Output Level) **0 - 127**
Adjust the output level.

26: Reverb

The Reverb effect adds reverberation to the sound, simulating an acoustic space.



Type (ReverbType) **Room1/2/Stage1/2/Hall1/2**
Select the type of Reverb effect.

- **Room1** : dense reverb with short decay
- **Room2** : sparse reverb with short decay
- **Stage1** : reverb with greater late reverberation
- **Stage2** : reverb with strong early reflections
- **Hall1** : reverb with clear reverberance
- **Hall2** : reverb with rich reverberance

Pre Dly (Pre Delay Time) **0 - 100m**
Adjust the time delay from when the direct sound begins until the reverb sound is heard.

Time (Reverb Time) **0 - 127**
Adjust the time length of reverberation.

HF Damp **315 - 8k/Bypass**
Adjust the frequency above which the reverberant sound will be cut. As the frequency is set lower, more of the high frequencies will be cut, resulting in a softer and more muted reverberance. If you do not want the high frequencies to be cut, set this parameter to Bypass.

Balance (Effect Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct and the processed sound.

D and E stand for "dry sound" and "effect sound", respectively.

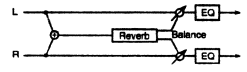
Low Gain **-12 - +12**
Adjust the gain of the low frequency range.

Hi Gain (High Gain) **-12 - +12**
Adjust the gain of the high frequency range.

Level (Output Level) **0 - 127**
Adjust the output level.

27: Gate Reverb

Gate Reverb is a special type of reverb in which the reverberant sound is cut off before its natural length.



Type (Gate Reverb Type) **Norm/Reverse/Sweep1/2**
Select the type of reverb.

- **Norm** : conventional gate reverb
- **Reverse** : backwards reverb
- **Sweep1** : the reverberant sound moves from right to left
- **Sweep2** : the reverberant sound moves from left to right

Pre Dly (Pre Delay Time) **0 - 100m**
Adjust the time delay from when the direct sound begins until the reverb sound is heard.

Gate Time **5 - 500m**
Adjust the time from when the reverb is heard until when it disappears.

Balance (Effect Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct and the processed sound.

D and E stand for "dry sound" and "effect sound", respectively.

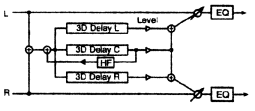
Low Gain **-12 - +12**
Adjust the gain of the low frequency range.

Hi Gain (High Gain) **-12 - +12**
Adjust the gain of the high frequency range.

Level (Output Level) **0 - 127**
Adjust the output level.

28: 3D Delay

This applies a 3D effect to the delay sound. The delay sound will be positioned 90 degrees left and 90 degrees right.



Dly Tm C (Delay Time Center) **0m - 500m**
Adjust the time from the original sound until when the center delay sound begins.

Dly Tm L (Delay Time Left) **0m - 500m**
Adjust the time from the original sound until when the left delay sound begins.

Dly Tm R (Delay Time Right) **0m - 500m**
Adjust the time from the original sound until when the right delay sound begins.

Feedback (Delay Feedback) **-98% - +98%**
Adjust the amount (%) of the center delay sound that will be returned to the input. With negative (-) settings, the phase will be inverted.

Dly Lev C (Delay Level Center) **0 - 127**
Adjust the volume of the Center Delay sound.

Dly Lev L (Delay Level Left) **0 - 127**
Adjust the volume of the Left Delay sound.

Dly Lev R (Dely Level Right) **0 - 127**
Adjust the volume of the Right Delay sound.

HF Damp **315 - 8k/Bypass**
This adjusts the frequency at which the high range is cut when the Center Delay sound is returned to the input. If you do not wish to cut the high range, set this to Bypass.

Out (Output Mode) **Speaker/Phones**
Specify the method that will be used to hear the sound which is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select Speaker when using speakers, or Phones when using headphones.

Balance (Effect Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct and the processed sound.

D and E stand for "dry sound" and "effect sound", respectively.

Low Gain **-12 - +12**
Adjust the gain of the low frequency range.

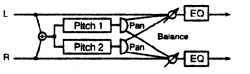
Hi Gain (High Gain) **-12 - +12**
Adjust the gain of the high frequency range.

Level (Output Level) **0 - 127**
Adjust the output level.

Effects that modify the pitch (pitch shift type)

29: 2 Pitch Shifter (2 Voice Pitch Shifter)

A 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.



Coarse 1 (Coarse Pitch 1) **-24 - 0 - +12**
Adjust the pitch of Pitch Shift 1 in semitone steps (-2 - +1 octaves).

Fine 1 (Fine Pitch 1) **-100 - 0 - +100**
Make fine adjustments to the pitch of Pitch Shift 1 in 2-cent steps (-100 - +100 cents).

Pre Dly 1 (Pre Delay Time 1) **0 - 100m**
Adjust the time delay from when the direct sound begins until the Pitch Shift 1 sound is heard.

EFX Pan 1 (Effect Output Pan 1) **L63 - 0 - R63**
Adjust the stereo location of the Pitch Shift 1 sound. L63 is far left, 0 is center, and R63 is far right.

Coarse 2 (Coarse Pitch 2) **-24 - 0 - +12**
Adjust the pitch of Pitch Shift 2 in semitone steps (-2 - +1 octaves).

Fine 2 (Fine Pitch 2) **-100 - 0 - +100**
Make fine adjustments to the pitch of Pitch Shift 2 in 2-cent steps (-100 - +100 cents).

Pre Dly 2 (Pre Delay Time 2) **0 - 100m**
Adjust the time delay from when the direct sound begins until the Pitch Shift 2 sound is heard.

EFX Pan 2 (Effect Output Pan 2) **L63 - 0 - R63**
Adjust the stereo location of the Pitch Shift 2 sound. L63 is far left, 0 is center, and R63 is far right.

Shift Mode (Pitch Shifter Mode) **1 - 5**
Higher settings of this parameter will result in slower response, but steadier pitch.

L.Bal (Level Balance) **100:0 - 0:100 (Pitch1:Pitch2)**
Adjust the volume balance between the Pitch Shift 1 and the Pitch Shift 2 sounds.

Balance (Effect Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct and the processed sound.

D and E stand for "dry sound" and "effect sound", respectively.

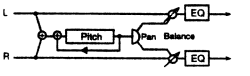
Low Gain **-12 - +12**
Adjust the gain of the low frequency range.

Hi Gain (High Gain) **-12 - +12**
Adjust the gain of the high frequency range.

Level (Output Level) **0 - 127**
Adjust the output level.

30: Fb P.Shifter (Feedback Pitch Shifter)

This pitch shifter allows the pitch shifted sound to be returned into the effect.



P.Coarse (Coarse Pitch) **-24 - 0 - +12**
Adjust the pitch of the pitch shifted sound in semitone steps (-2 - +1 octaves).

P.Fine (Fine Pitch) **-100 - 0 - +100**
Make fine adjustments to the pitch of the pitch shifted sound in 2-cent steps (-100 - +100 cents).

Feedback (Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the processed sound that is fed back into the effect. Negative (-) settings will invert the phase.

Pre Dly (Pre Delay Time) **0 - 100m**
Adjust the time delay from when the direct sound begins until the pitch shifted sound is heard.

Mode (Pitch Shifter Mode) **1 - 5**
Higher settings of this parameter will result in slower response, but steadier pitch.

EFX Pan (Effect Output Pan) **L63 - 0 - R63**
Adjust the stereo location of the pitch shifted sound. L63 is far left, 0 is center, and R63 is far right.

Balance (Effect Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct and the processed sound.

D and E stand for "dry sound" and "effect sound", respectively.

Low Gain **-12 - +12**
Adjust the gain of the low frequency range.

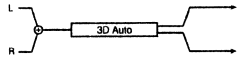
Hi Gain (High Gain) **-12 - +12**
Adjust the gain of the high frequency range.

Level (Output Level) **0 - 127**
Adjust the output level.

Others

31: 3D Auto

The 3D Auto effect rotates the location of the sound.



Azimuth **180/L168 - 0 - R168**
Set the location at which the sound will stop when rotation is stopped.

A setting of 0 positions the sound in the center.

Speed **0.05 - 10.0**
Set the speed of rotation.

Clockwise **-/+**
Set the direction of rotation. A setting of "-" is counter-clockwise, and "+" is clockwise.

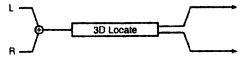
Turn **Off/On**
This stops or starts the rotation. When this is turned On, the sound will rotate. When turned Off, rotation will stop at the location specified by Azimuth.

Out (Output Mode) **Speaker/Phones**
Specify the method that will be used to hear the sound which is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select Speaker when using speakers, or Phones when using headphones.

Level (Output Level) **0 - 127**
Adjust the output level.

32: 3D Manual

This places the 3D effect at a desired location.



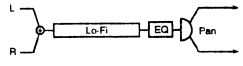
Azimuth **180/L168 - 0 - R168**
Specify the location. A setting of 0 positions the sound in the center.

Out (Output Mode) **Speaker/Phones**
Specify the method that will be used to hear the sound which is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select Speaker when using speakers, or Phones when using headphones.

Level (Output Level) **0 - 127**
Adjust the output level.

33: Lo-Fi 1

Lo-Fi 1 is an effect that intentionally degrades the sound quality.



Pre Filter (Pre Filter Type) **1 - 6**
Specify the type of filter that will be applied before the sound passes through the Lo-Fi effect.

Lo-Fi Type **1 - 9**
Degrade the sound quality. The sound quality will become poorer as this value is increased.

Post Filter (Post Filter Type) **1 - 6**
Specify the type of filter that will be applied after the sound passes through the Lo-Fi effect.

Balance (Effect Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct and the processed sound.

D and E stand for "dry sound" and "effect sound", respectively.

Low Gain **-12 - +12**
Adjust the gain of the low frequency range.

Hi Gain (High Gain) **-12 - +12**
Adjust the gain of the high frequency range.

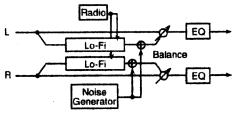
Pan (Mono) (Output Pan (Mono)) **L63 - 0 - R63**
When Mono mode is used, adjust the stereo location of the output sound. L63 is far left, 0 is center, and R63 is far right.

Level (Output Level) **0 - 127**
Adjust the output level.

34: Lo-Fi 2

Lo-Fi 2 is an effect that intentionally degrades the sound quality and allows a variety of noise to be added.

* *If the R.Detune (Radio Detune), W/P Level (White/Pink Noise Level), Disc Nz Lev (Disc Noise Level), or Hum Level settings are raised, there will be noise even when the input sound is silent.*



Lo-Fi Type **1 - 6**
Degrade the sound quality. The sound quality will become poorer as this value is increased.

Fil Type (Filter Type) **Off/LPF/HPF**
Specify the type of filter that is applied after the sound passes through the Lo-Fi effect.

Cutoff (Cutoff Frequency) **250 - 8 k**
Specify the cutoff frequency of the filter that is applied after the sound passes through the Lo-Fi effect.

R.Detune (Radio Detune) **0 - 127**
This simulates the tuning noise of a radio. As this value is raised, the tuning will drift further.

R.Nz Lev (Radio Noise Level) **0 - 127**
Adjust the volume of the radio noise.

W/P Sel (White/Pink Noise Select) **White/Pink**
Select either white noise or pink noise.

W/P LPF (White/Pink Noise LPF) **250 - 6.3 k/Bypass**
Specify the cutoff frequency of the low pass filter that is applied to the white noise or pink noise.

W/P Level (White/Pink Noise Level) **0 - 127**
Specify the volume of the white noise or pink noise.

Disc Type (Disc Noise Type) **LP/EP/SP/RND**
Select the type of record noise. The frequency at which the noise is heard will depend on the selected type.

Disc LPF (Disc Noise LPF) **250 - 6.3 k/Bypass**
Specify the cutoff frequency of the low pass filter that is applied to the record noise.

Disc Nz Lev (Disc Noise Level) **0 - 127**
Specify the volume of the record noise.

Hum Type (Hum Noise Type) **50/60 Hz**
Select the type of hum noise.

Hum LPF (Hum Noise LPF) **250 - 6.3 k/Bypass**
Specify the cutoff frequency of the low pass filter that is applied to the hum noise.

Hum Level (Hum Noise Level) **0 - 127**
Specify the volume of the hum noise.

M/S (Mono/Stereo Switch) **Mono/Stereo**
Select whether the effect sound will be monaural or stereo.

Balance (Effect Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct and the effect sound.

D and E stand for "dry sound" and "effect sound", respectively.

Low Gain **-12 - +12**
Adjust the gain of the low frequency range.

Hi Gain (High Gain) **-12 - +12**
Adjust the gain of the high frequency range.

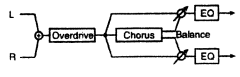
Pan (Output Pan) **L63 - 0 - R63**
Adjust the stereo location of the output sound. L63 is far left, 0 is center, and R63 is far right.

Level (Output Level) **0 - 127**
Adjust the output level.

Effects that connect two types of effect in series (series 2)

35: OD → Chorus (Overdrive → Chorus)

This effect connects an overdrive and a chorus in series.



OD Drive (Overdrive Drive) **0 - 127**
Adjust the degree of overdrive distortion. The volume will change together with the degree of distortion.

OD Pan (Overdrive Drive Output Pan) **L63 - 0 - R63**
Adjust the stereo location of the overdrive sound. L63 is far left, 0 is center, and R63 is far right.

OD Amp (Overdrive Amp Simulator Type) **Small/Bltin/2-Stk/3-Stk**
Select the type of guitar amp.
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

OD Amp Sw (Overdrive Amp Switch) **Off/On**
Turn OD Amp on/off.

Cho Dly (Chorus Pre Delay) **0 - 100m**
Adjust the time delay from when the direct sound begins until the chorus sound is heard.

Cho Rate (Chorus Rate) **0.05 - 10.0**
Adjust the modulation speed of the chorus effect.

Cho Depth (Chorus Depth) **0 - 127**
Adjust the modulation depth of the chorus effect.

Cho Bal (Chorus Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the sound which passes through the chorus and the sound which does not. With a setting of 100:0, only the overdrive sound will be output, and with a setting of 0:100, the overdrive sound which passes through the chorus will be output.

D and E stand for "dry sound" and "effect sound", respectively.

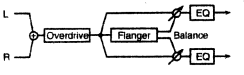
Low Gain **-12 - +12**
Adjust the low frequency gain.

Hi Gain (High Gain) **-12 - +12**
Adjust the high frequency gain

Level (Output Level) **0 - 127**
Adjust the output level.

36: OD → Flanger (Overdrive → Flanger)

This effect connects an overdrive and a flanger in series.



OD Drive (Overdrive Drive) **0 - 127**
Adjust the degree of overdrive distortion. The volume will change together with the degree of distortion.

OD Pan (Overdrive Output Pan) **L63 - 0 - R63**
Adjust the stereo location of the overdrive sound. L63 is far left, 0 is center, and R63 is far right.

OD Amp (Overdrive Amp Simulator Type) **Small/Bltin/2-Stk/3-Stk**
Select the type of guitar amp.
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

OD Amp Sw (Overdrive Amp Switch) **Off/On**
Turn OD Amp on/off.

FL Dly (Flanger Pre Delay) **0 - 100m**
Adjust the time delay from when the direct sound begins until the flanger sound is heard.

FL Rate (Flanger Rate) **0.05 - 10.0**
Adjust the modulation speed of the flanger effect.

FL Depth (Flanger Depth) **0 - 127**
Adjust the modulation depth of the flanger effect.

FL Fb (Flanger Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.

FL Bal (Flanger Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the sound which passes through the flanger and the sound which does not. With a setting of 100:0, only the overdrive sound will be output, and with a setting of 0:100, the overdrive sound which passes through the flanger will be output.

D and E stand for "dry sound" and "effect sound", respectively.

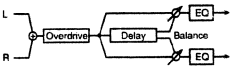
Low Gain **-12 - +12**
Adjust the low frequency gain.

Hi Gain (High Gain) **-12 - +12**
Adjust the high frequency gain.

Level (Output Level) **0 - 127**
Adjust the output level.

37: OD → Delay (Overdrive → Delay)

This effect connects an overdrive and a delay in series.



OD Drive (Overdrive Drive) **0 - 127**
Adjust the degree of overdrive distortion. The volume will change together with the degree of distortion.

OD Pan (Overdrive Output Pan) **L63 - 0 - R63**
Adjust the stereo location of the overdrive sound. L63 is far left, 0 is center, and R63 is far right.

OD Amp (Overdrive Amp Simulator Type) **Small/Bltin/2-Stk/3-Stk**
Select the type of guitar amp.
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

OD Amp Sw (Overdrive Amp Switch) **Off/On**
Turn OD Amp on/off.

Dly Time (Delay Time) **0 - 500m**
Adjust the time delay from when the direct sound begins until the delay sound is heard.

Dly Fb (Delay Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.

Dly HF (Delay HF Damp) **315 - 8k/Bypass**
Adjust the frequency above which delayed sound fed back to the effect will be cut. If you do not wish to cut the high frequencies of the feedback, set this parameter to Bypass.

Dly Bal (Delay Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the sound which passes through the delay and the sound which does not. With a setting of 100:0, only the overdrive sound will be output, and with a setting of D 0:100, the overdrive sound which passes through the delay will be output.

D and E stand for "dry sound" and "effect sound", respectively.

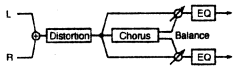
Low Gain **-12 - +12**
Adjust the low frequency gain.

Hi Gain (High Gain) **-12 - +12**
Adjust the high frequency gain.

Level (Output Level) **0 - 127**
Adjust the output level.

38: DS → Chorus (Distortion → Chorus)

This effect connects a distortion and a chorus in series.



DS Drive (Distortion Drive) **0 - 127**
Adjust the degree of distortion. The volume will change together with the degree of distortion.

DS Pan (Distortion Output Pan) **L63 - 0 - R63**
Adjust the stereo location of the distortion sound. L63 is far left, 0 is center, and R63 is far right.

DS Amp (Distortion Amp Simulator Type) **Small/Bltin/2-Stk/3-Stk**
Select the type of guitar amp.
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

DS Amp Sw (Distortion Amp Switch) **Off/On**
Turn DS Amp on/off.

Cho Dly (Chorus Pre Delay) **0 - 100m**
Adjust the time delay from when the direct sound begins until the chorus sound is heard.

Cho Rate (Chorus Rate) **0.05 - 10.0**
Adjust the modulation speed of the chorus effect.

Cho Depth (Chorus Depth) **0 - 127**
Adjust the modulation depth of the chorus effect.

Cho Bal (Chorus Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the sound which passes through the chorus and the sound which does not. With a setting of 100:0, only the distortion sound will be output, and with a setting of 0:100, the distortion sound which passes through the chorus will be output.

D and E stand for "dry sound" and "effect sound", respectively.

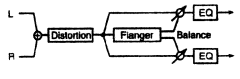
Low Gain **-12 - +12**
Adjust the low frequency gain.

Hi Gain (High Gain) **-12 - +12**
Adjust the high frequency gain.

Level (Output Level) **0 - 127**
Adjust the output level.

39: DS → Flanger (Distortion → Flanger)

This effect connects a distortion and a flanger in series.



DS Drive (Distortion Drive) **0 - 127**
Adjust the degree of distortion. The volume will change together with the degree of distortion.

DS Pan (Distortion Output Pan) **L63 - 0 - R63**
Adjust the stereo location of the distortion sound. L63 is far left, 0 is center, and R63 is far right.

DS Amp (Distortion Amp Simulator Type) **Small/Bltin/2-Stk/3-Stk**
Select the type of guitar amp.

- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

DS Amp Sw (Distortion Amp Switch) **Off/On**
Turn DS Amp on/off.

FL Dly (Flanger Pre Delay) **0 - 100m**
Adjust the time delay from when the direct sound begins until the flanger sound is heard.

FL Rate (Flanger Rate) **0.05 - 10.0**
Adjust the modulation speed of the flanger effect.

FL Depth (Flanger Depth) **0 - 127**
Adjust the modulation depth of the flanger effect.

FL Fb (Flanger Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase

FL Bal (Flanger Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the sound which passes through the flanger and the sound which does not. With a setting of 100:0, only the distortion sound will be output, and with a setting of 0:100, the distortion sound which passes through the flanger will be output.

D and E stand for "dry sound" and "effect sound", respectively.

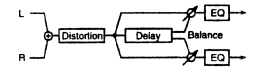
Low Gain **-12 - +12**
Adjust the low frequency gain.

Hi Gain (High Gain) **-12 - +12**
Adjust the high frequency gain.

Level (Output Level) **0 - 127**
Adjust the output level.

40: DS → Dday (Distortion → Delay)

This effect connects a distortion and a delay in series.



DS Drive (Distortion Drive) **0 - 127**
Adjust the degree of distortion. The volume will change together with the degree of distortion.

DS Pan (Distortion Output Pan) **L63 - 0 - R63**
Adjust the stereo location of the distortion sound. L63 is far left, 0 is center, and R63 is far right.

DS Amp (Distortion Amp Simulator Type) **Small/Bltin/2-Stk/3-Stk**
Select the type of guitar amp.

- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

DS Amp Sw (Distortion Amp Switch) **Off/On**
Turn DS Amp on/off.

Dly Time (Delay Time) **0 - 500m**
Adjust the time delay from when the direct sound begins until the delay sound is heard.

Dly Fb (Delay Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.

Dly HF (Delay HF Damp) **315 - 8k/Bypass**
Adjust the frequency above which delayed sound fed back to the effect will be cut. If you do not wish to cut the high frequencies of the feedback, set this parameter to Bypass.

Dly Bal (Delay Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the sound which passes through the delay and the sound which does not. With a setting of 100:0, only the distortion sound will be output, and with a setting of 0:100, the distortion sound which passes through the delay will be output.

D and E stand for "dry sound" and "effect sound", respectively.

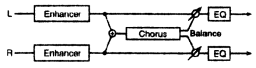
Low Gain **-12 - +12**
Adjust the low frequency gain.

Hi Gain (High Gain) **-12 - +12**
Adjust the high frequency gain.

Level (Output Level) **0 - 127**
Adjust the output level.

41: EH → Chorus (Enhancer → Chorus)

This effect connects an enhancer and a chorus in series.



EH Sens (Enhancer Sensitivity) **0 - 127**
Adjust the sensitivity of the enhancer.

EH Mix (Enhancer Mix Level) **0 - 127**
Adjust the ratio with which the overtones generated by the enhancer are combined with the direct sound.

Cho Dly (Chorus Pre Delay) **0 - 100m**
Adjust the time delay from when the direct sound begins until the chorus sound is heard.

Cho Rate (Chorus Rate) **0.05 - 10.0**
Adjust the modulation speed of the chorus effect.

Cho Depth (Chorus Depth) **0 - 127**
Adjust the modulation depth of the chorus effect.

Cho Bal (Chorus Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the sound which passes through the chorus and the sound which does not. With a setting of 100:0, only the enhancer sound will be output, and with a setting of 0:100, the enhancer sound which passes through the chorus will be output.

D and E stand for "dry sound" and "effect sound", respectively.

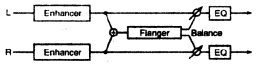
Low Gain **-12 - +12**
Adjust the low frequency gain.

Hi Gain (High Gain) **-12 - +12**
Adjust the high frequency gain.

Level (Output Level) **0 - 127**
Adjust the output level.

42: EH → Flanger (Enhancer → Flanger)

This effect connects an enhancer and a flanger in series.



EH Sens (Enhancer Sensitivity) **0 - 127**
Adjust the sensitivity of the enhancer.

EH Mix (Enhancer Mix Level) **0 - 127**
Adjust the ratio with which the overtones generated by the enhancer are combined with the direct sound.

FL Dly (Flanger Pre Delay) **0 - 100m**
Adjust the time delay from when the direct sound begins until the flanger sound is heard.

FL Rate (Flanger Rate) **0.05 - 10.0**
Adjust the modulation speed of the flanger effect.

FL Depth (Flanger Depth) **0 - 127**
Adjust the modulation depth of the flanger effect.

FL Fb (Flanger Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.

FL Bal (Flanger Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the sound which passes through the flanger and the sound which does not. With a setting of 100:0, only the enhancer sound will be output, and with a setting of 0:100, the enhancer sound which passes through the flanger will be output.

D and E stand for "dry sound" and "effect sound", respectively.

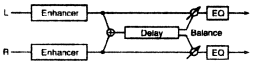
Low Gain **-12 - +12**
Adjust the low frequency gain.

Hi Gain (High Gain) **-12 - +12**
Adjust the high frequency gain.

Level (Output Level) **0 - 127**
Adjust the output level.

43: EH → Delay (Enhancer → Delay)

This effect connects an enhancer and a delay in series.



EH Sens (Enhancer Sensitivity) **0 - 127**
Adjust the sensitivity of the enhancer.

EH Mix (Enhancer Mix Level) **0 - 127**
Adjust the ratio with which the overtones generated by the enhancer are combined with the direct sound.

Dly Time (Delay Time) **0 - 500m**
Adjust the time delay from when the direct sound begins until the delay sound is heard.

Dly Fb (Delay Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the delay sound that is fed back into the delay input. Negative (-) settings will invert the phase.

Dly HF (Delay HF Damp) **315 - 8k/Bypass**
Adjust the frequency above which delayed sound fed back to the delay input will be cut. If you do not wish to cut the high frequencies of the delay feedback, set this parameter to Bypass.

Dly Bal (Delay Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the sound which passes through the delay and the sound which does not. With a setting of 100:0, only the enhancer sound will be output, and with a setting of 0:100, the enhancer sound which passes through the delay will be output.

D and E stand for "dry sound" and "effect sound", respectively.

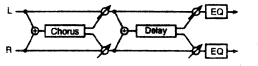
Low Gain **-12 - +12**
Adjust the low frequency gain.

Hi Gain (High Gain) **-12 - +12**
Adjust the high frequency gain.

Level (Output Level) **0 - 127**
Adjust the output level.

44: Cho → Delay (Chorus → Delay)

This effect connects a chorus and a delay unit in series.



Cho Dly (Chorus Pre Delay) **0 - 100m**
Adjust the time delay from when the direct sound begins until the chorus sound is heard.

Cho Rate (Chorus Rate) **0.05 - 10.0**
Adjust the modulation speed of the chorus effect.

Cho Depth (Chorus Depth) **0 - 127**
Adjust the modulation depth of the chorus effect.

Cho Bal (Chorus Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct sound and the chorus sound. With a setting of 100:0, only the direct sound will be output. With a setting of 0:100, only the chorus sound will be output.

D and E stand for "dry sound" and "effect sound", respectively.

Dly Time (Delay Time) **0 - 500m**
Adjust the time delay from when the direct sound begins until the delay sound is heard.

Dly Fb (Delay Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the delay sound that is fed back into the delay input. Negative (-) settings will invert the phase.

Dly HF (Delay HF Damp) **315 - 8k/Bypass**
Adjust the frequency above which delayed sound fed back to the delay input will be cut. If you do not wish to cut the high frequencies of the feedback, set this parameter to Bypass.

Dly Bal (Delay Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the sound which passes through the delay and the sound which does not. With a setting of 100:0, only the chorus sound will be output, and with a setting of 0:100, the chorus sound which passes through the delay will be output.

D and E stand for "dry sound" and "effect sound", respectively.

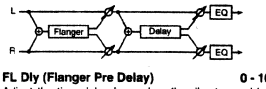
Low Gain **-12 - +12**
Adjust the low frequency gain.

Hi Gain (High Gain) **-12 - +12**
Adjust the high frequency gain.

Level (Output Level) **0 - 127**
Adjust the output level.

45: FL → Delay (Flanger → Delay)

This effect connects a flanger and a delay in series.



FL Dly (Flanger Pre Delay) **0 - 100m**
Adjust the time delay from when the direct sound begins until the flanger sound is heard.

FL Rate (Flanger Rate) **0.05 - 10.0**
Adjust the modulation speed of the flanger effect.

FL Depth (Flanger Depth) **0 - 127**
Adjust the modulation depth of the flanger effect.

FL Fb (Flanger Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.

FL Bal (Flanger Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct sound and the flanger sound. With a setting of 100:0, only the direct sound will be output. With a setting of 0:100, only the flanger sound will be output.

D and E stand for "dry sound" and "effect sound", respectively.

Dly Time (Delay Time) **0 - 500m**
Adjust the time delay from when the direct sound begins until the delay sound is heard.

Dly Fb (Delay Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the delay sound that is fed back into the delay input. Negative (-) settings will invert the phase.

Dly HF (Delay HF Damp) **315 - 8k/Bypass**
Adjust the frequency above which delayed sound fed back to the delay input will be cut. If you do not wish to cut the high frequencies of the delay feedback, set this parameter to Bypass.

Dly Bal (Delay Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the sound which passes through the delay and the sound which does not. With a setting of 100:0, only the flanger sound will be output, and with a setting of 0:100, the flanger sound which passes through the delay will be output.

D and E stand for "dry sound" and "effect sound", respectively.

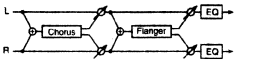
Low Gain **-12 - +12**
Adjust the low frequency gain.

Hi Gain (High Gain) **-12 - +12**
Adjust the high frequency gain.

Level (Output Level) **0 - 127**
Adjust the output level.

46: Cho → Flanger (Chorus → Flanger)

This effect connects a chorus and a flanger in series.



Cho Dly (Chorus Pre Delay) **0 - 100m**
Adjust the time delay from when the direct sound begins until the chorus sound is heard.

Cho Rate (Chorus Rate) **0.05 - 10.0**
Adjust the modulation speed of the chorus effect.

Cho Depth (Chorus Depth) **0 - 127**
Adjust the modulation depth of the chorus effect.

Cho Bal (Chorus Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct sound and the chorus sound. With a setting of 100:0, only the direct sound will be output. With a setting of 0:100, only the chorus sound will be output.

D and E stand for "dry sound" and "effect sound", respectively.

FL Dly (Flanger Pre Delay Time) **0 - 100m**
Adjust the time delay from when the direct sound begins until the flanger sound is heard.

FL Rate (Flanger Rate) **0.05 - 10.0**
Adjust the modulation speed of the flanger effect.

FL Depth (Flanger Depth) **0 - 127**
Adjust the modulation depth of the flanger effect.

FL Fb (Flanger Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.

FL Bal (Flanger Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the sound which passes through the flanger and the sound which does not. With a setting of 100:0, only the chorus sound will be output, and with a setting of 0:100, the chorus sound which passes through the flanger will be output.

D and E stand for "dry sound" and "effect sound", respectively.

Low Gain **-12 - +12**
Adjust the low frequency gain.

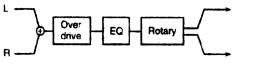
Hi Gain (High Gain) **-12 - +12**
Adjust the high frequency gain.

Level (Output Level) **0 - 127**
Adjust the output level.

Effects that connect three or more types of effect in series (series 3 / series 4 / series 5)

47: Rotary Multi

This connects Overdrive (OD), 3-band equalizer (EQ), and Rotary (RT) effects in series.



OD (Overdrive)

OD Drive **0 - 127**
Adjust the degree of distortion. The volume will change together with the degree of distortion.

OD Sw (Overdrive Switch) **Off/On**
Turn the Overdrive effect on/off.

EQ (Equalizer)

EQ L Gain (EQ Low Gain) **-12 - +12**
Adjust the low range gain of the equalizer.

EQ M Fq (EQ Mid Frequency) **200 - 6.3k**
Set the center frequency for the equalizer mid-range.

EQ M Q (EQ Mid Q) **0.5/1.0/2.0/4.0/9.0**
Adjust the width of the area centered at the EQ M Fq setting in which the gain will be affected. The area affected will become narrower as this value is increased.

EQ M Gain (EQ Mid Gain) **-12 - +12**
Adjust the gain of the area specified by the EQ M Fq parameter and the EQ M Q parameter.

EQ H Gain (EQ High Gain) **-12 - +12**
Adjust the high-range gain of the equalizer.

RT (Rotary)

RT L Slow (RT Low Frequency Slow Rate)
0.05 - 10.0
Adjust the speed of the low-range rotor for the slow-speed setting.

RT L Fast (RT Low Frequency Fast Rate)
0.05 - 10.0
Adjust the speed of the low-range rotor for the fast-speed setting.

RT Lo Accl (RT Low Frequency Accelaration)
0 - 15
Adjust the time over which the rotation speed of the low-range rotor will change from slow-speed to fast-speed (or fast-speed to slow-speed) rotation. Smaller values will require greater time to reach the new rotational speed.

RT Lo Lev (RT Low Frequency Level) **0 - 127**
Adjust the volume of the low-range rotor.

RT H Slow (RT High Frequency Slow Rate) **0.05 - 10.0**
Adjust the speed of the high-range rotor for the slow-speed setting.

RT H Fast (RT High Frequency Fast Rate) **0.05 - 10.0**
Adjust the speed of the high-range rotor for the fast-speed setting.

RT HI Accl (RT High Frequency Acceleration) **0 - 15**
Adjust the time over which the rotation speed of the high-range rotor will change from slow-speed to fast-speed (or fast-speed to slow-speed) rotation. Smaller values will require greater time to reach the new rotational speed.

RT HI Lev (RT High Frequency Level) **0 - 127**
Adjust the volume of the high-range rotor.

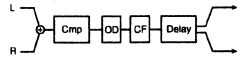
RT Sept (RT Separation) **0 - 127**
Adjust the spatial spread of the rotary sound.

RT Speed **Slow/Fast**
Simultaneously switch the rotational speed of both the low-range and the high-range rotors.
- **Slow** : Slow down the rotation to the specified speeds (RT L Slow parameter / RT H Slow parameter values).
- **Fast** : Speed up the rotation to the specified speeds (RT L Fast parameter / RT H Fast parameter values).

Level (Output Level) **0 - 127**
Adjust the output level.

48: GTR Multi 1 (Guitar Multi 1)

Guitar Multi 1 connects Compressor (Cmp), Overdrive or Distortion (OD), Chorus or Flanger (CF), and Delay (Dly) effects in series.



Cmp (Compressor)

Cmp Atck (Compressor Attack) **0 - 127**
Adjust the time over which the sound will rise after input.

Cmp Sus (Compressor Sustain) **0 - 127**
Adjust the time over which low-level sounds are boosted until they reach a specified volume.
Increasing the value will shorten the time. When the value is modified, the level will also change.

Cmp Level (Compressor Level) **0 - 127**
Adjust the volume of the compressor sound.

Cmp Sw (Compressor Switch) **Off/On**
Turn the compressor on/off.

OD (Overdrive/Distortion)

OD Sel (OD Select) **Odrv/Dist**
Select either Overdrive or Distortion.

OD Drive **0 - 127**
Adjust the depth of distortion. The volume will change together with the depth of distortion.

OD Amp (OD Amp Simulator Type) **Small/Bltin/2-Stk/3-Stk**
Select the type of guitar amp.
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

OD Amp Sw (OD Amp Switch) **Off/On**
Turn OD Amp on/off.

OD L Gain (OD Low Gain) **-12 - +12**
Adjust the low-range gain.

OD H Gain (OD High Gain) **-12 - +12**
Adjust the high-range gain.

OD Sw (OD Switch) **Off/On**
Turn Overdrive or Distortion on/off.

CF (Chorus/Flanger)

CF Sel (CF Select) **Chorus/Flangr**
Select either Chorus or Flanger.

CF Rate **0.05 - 6.40**
Adjust the speed of modulation

CF Depth **0 - 127**
Adjust the depth of modulation.

CF Fb (CF Feedback) **-98% - +98%**
Adjust the amount (%) of the flanger sound that is returned to the input. Negative (-) values will invert the phase.
* *In the case of Chorus, this will have no effect.*

CF Mix **0 - 127**
Adjust the volume of the chorus or flanger sound.

Dly(Delay)

Dly Time (Delay Time) **0m - 635m**
Adjust the time from the original sound until when the delay sound is heard.

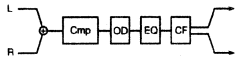
Dly Fb (Delay Feedback Level) **0 - 127**
Adjust the amount of the delay sound that is returned to the input.

Dly Mix (Delay Mix) **0 - 127**
Adjust the volume of the delay sound.

Level (Output Level) **0 - 127**
Adjust the output level.

49: GTR Multi 2 (Guitar Multi 2)

Guitar Multi 2 provides Compressor (Cmp), Overdrive or Distortion (OD), Equalizer (EQ), and Chorus or Flanger (CF) effects connected in series.



Cmp (Compressor)

Cmp Atck (Compressor Attack) **0 - 127**
Adjust the time over which the sound will rise after it is input.

Cmp Sus (Compressor Sustain) **0 - 127**
Adjust the time over which low-level sounds are boosted until they reach a specified volume.
Increasing the value will shorten the time. When the value is modified, the level will also change.

Cmp Level (Compressor Level) **0 - 127**
Adjust the volume of the compressor sound.

Cmp Sw (Compressor Switch) **Off/On**
Turn the compressor on/off.

OD (Overdrive/Distortion)

OD Sel (OD Select) **Odrv/Dist**
Select either Overdrive or Distortion.

OD Drive (OD Drive) **0 - 127**
Adjust the degree of distortion. The volume will change together with the degree of distortion.

OD Amp (OD Amp Simulator Type) **Small/Bltin/2-Stk/3-Stk**
Select the type of guitar amp
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

OD Amp Sw (OD Amp Switch) **Off/On**
Turn OD Amp on/off.

OD Sw (OD Switch) **Off/On**
Turn Overdrive or Distortion on/off.

EQ (Equalizer)

EQ L Gain (EQ Low Gain) **-12 - +12**
Adjust the low-range gain of the equalizer.

EQ M Fq (EQ Mid Frequency) **200 - 6.3k**
Set the center frequency for the equalizer mid-range.

EQ M Q (EQ Mid Q) **0.5/1.0/2.0/4.0/9.0**
Adjust the width of the area centered at the EQ M Fq setting in which the gain will be affected. The area affected will become narrower as this value is increased.

EQ M Gain (EQ Mid Gain) **-12 - +12**
Adjust the gain of the area specified by the EQ M Fq parameter and the EQ M Q parameter.

EQ H Gain (EQ High Gain) **-12 - +12**
Adjust the high-range gain of the equalizer.

CF (Chorus/Flanger)

CF Sel (CF Select) **Chorus/Flangr**
Select either Chorus or Flanger.

CF Rate **0.05 - 6.40**
Adjust the speed of modulation for the chorus or flanger.

CF Depth **0 - 127**
Adjust the depth of modulation for the chorus or flanger.

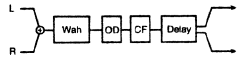
CF Fb (CF Feedback) **-98% - +98%**
Adjust the amount (%) of the flanger sound that will be returned to the input. Negative (-) values will invert the phase.
* *In the case of Chorus, this will have no effect.*

CF Mix (CF Mix) **0 - 127**
Adjust the volume of the chorus or flanger sound.

Level (Output Level) **0 - 127**
Adjust the output level.

50: GTR Multi 3 (Guitar Multi 3)

Guitar Multi 3 connects Wah (Wah), Overdrive or Distortion (OD), Chorus or Flanger (CF), and Delay (Dly) effects in series.



Wah

Wah Fil (Wah Filter Type) **LPF/BPF**
Select the type of filter.
- **LPF** : The wah effect will be produced over a broad frequency range.
- **BPF** : The wah effect will be produced in a narrow frequency range.

Wah Man (Wah Manual) **0 - 127**
Set the center frequency at which the effect will be produced.

Wah Peak **0 - 127**
Adjust the way in which the wah effect will be applied to the region of the center frequency. Lower settings will produce a wah effect in a broad area around the center frequency, and higher settings will produce a wah effect in a narrower area around the center frequency.

Wah Sw (Wah Switch) **Off/On**
Turn Wah on/off.

OD (Overdrive/Distortion)

OD Sel (OD Select) **Odrv/Dist**
Select either Overdrive or Distortion.

OD Drive (Overdrive Drive) **0 - 127**
Adjust the depth of distortion. The volume will change together with the depth of distortion.

OD Amp (OD Amp Simulator Type) **Small/Bltin/2-Stk/3-Stk**
Select the type of guitar amp
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

OD Amp Sw (OD Amp Switch) **Off/On**
Turn OD Amp on/off.

OD L Gain (OD Low Gain) **-12 - +12**
Adjust the low-range gain for the overdrive (or distortion) sound.

OD H Gain (OD High Gain) **-12 - +12**
Adjust the high-range gain for the overdrive (or distortion) sound.

OD Sw (OD Switch) **Off/On**
Turn overdrive or distortion on/off.

CF (Chorus/Flanger)

CF Sel (CF Select) **Chorus/Flangr**
Select either Chorus or Flanger.

CF Rate **0.05 - 6.40**
Adjust the modulation speed for the chorus or flanger.

CF Depth **0 - 127**
Adjust the modulation depth for the chorus or flanger.

CF Fb (CF Feedback) **-98% - +98%**
Adjust the amount (%) of the flanger sound that is returned to the input. Negative (-) values will invert the phase.
* *In the case of Chorus, this will have no effect.*

CF Mix **0 - 127**
Adjust the volume of the chorus or flanger sound.

Dly (Delay)

Dly Time (Delay Time) **0m - 635m**
Adjust the time from the original sound until when the delay sound is heard.

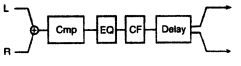
Dly Fb (Delay Feedback Level) **0 - 127**
Adjust the amount of the delay sound that is returned to the input.

Dly Mix (Delay Mix) **0 - 127**
Adjust the volume of the delay sound.

Level (Output Level) **0 - 127**
Adjust the output level.

51: Clean Gt Multi1 (Clean Guitar Multi 1)

Clean Guitar Multi 1 connects Compressor (Cmp), Equalizer (EQ), Chorus or Flanger (CF), and Delay (Dly) effects in series.



Cmp (Compressor)

Cmp Atck (Compressor Attack) **0 - 127**
Adjust the time over which the sound will rise after it is input.

Cmp Sus (Compressor Sustain) **0 - 127**
Adjust the time over which low-level sounds are boosted until they reach a specified volume.
Increasing the value will shorten the time. When the value is modified, the level will also change.

Cmp Level (Compressor Level) **0 - 127**
Adjust the volume of the compressor sound.

Cmp Sw (Compressor Switch) **Off/On**
Turn the compressor on/off.

EQ (Equalizer)

EQ L Gain (EQ Low Gain) **-12 - +12**
Adjust the low-range gain of the equalizer.

EQ M Fq (EQ Mid Frequency) **200 - 6.3k**
Set the center frequency for the equalizer mid-range.

EQ M Q (EQ Mid Q) **0.5/1.0/2.0/4.0/9.0**
Adjust the width of the area centered at the EQ M Fq setting in which the gain will be affected. The area affected will become narrower as this value is increased.

EQ M Gain (EQ Mid Gain) **-12 - +12**
Adjust the gain of the area specified by the EQ M Fq parameter and the EQ M Q parameter.

EQ H Gain (EQ High Gain) **-12 - +12**
Adjust the high-range gain of the equalizer.

CF (Chorus/Flanger)

CF Sel (CF Select) **Chorus/Flangr**
Select either Chorus or Flanger.

CF Rate **0.05 - 6.40**
Adjust the speed of modulation for the chorus or flanger.

CF Depth **0 - 127**
Adjust the depth of modulation for the chorus or flanger.

CF Fb (CF Feedback) **-98% - +98%**
Adjust the amount (%) of the flanger sound that will be returned to the input. Negative (-) values will invert the phase.
* *In the case of Chorus, this will have no effect.*

CF Mix **0 - 127**
Adjust the volume of the chorus or flanger sound.

Dly (Delay)

Dly Time (Delay Time) **0m - 635m**
Adjust the time from the original sound until when the delay sound is heard.

Dly Fb (Delay Feedback Level) **0 - 127**
Adjust the amount of the delay sound that is returned to the input.

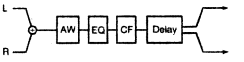
Dly HF (Delay HF Dump) **315-8k/Bypass**
Adjust the frequency at which the high range will be cut from the delay sound that is returned to the input. If you do not wish to cut the high range of the returned sound, select Bypass.

Dly Mix (Delay Mix) **0 - 127**
Adjust the volume of the delay sound.

Level (Output Level) **0 - 127**
Adjust the output level.

52: Clean Gt Multi2 (Clean Guitar Multi 2)

Clean Guitar Multi 2 provides Auto-wah (AW), Equalizer (EQ), Chorus or Flanger (CF), and Delay (Dly) effects connected in series.



AW (Auto-wah)

AW Filter (Auto-wah Filter Type) **LPF/BPF**
Select the type of filter for the Auto-wah.
- **LPF** : The wah effect will be produced over a broad frequency range.
- **BPF** : The wah effect will be produced over a narrow frequency range.

AW Man (Auto-wah Manual) **0 - 127**
Set the center frequency at which the auto-wah effect will be produced.

AW Peak (Auto-wah Peak) **0 - 127**
Adjust the way in which the wah effect will be applied to the region of the center frequency. Lower settings will produce a wah effect in a broad area around the center frequency, and higher settings will produce a wah effect in a narrower area around the center frequency.

AW Rate (Auto-wah Rate) **0.05 - 6.40**
Adjust the modulation speed of the Auto-wah.

AW Depth (Auto-wah Depth) **0 - 127**
Adjust the modulation depth of the Auto-wah.

AW Sw (Auto-wah Switch) **Off/On**
Turn Auto-wah on/off.

EQ (Equalizer)

EQ L Gain (EQ Low Gain) **-12 - +12**
Adjust the low-range gain of the equalizer.

EQ M Fq (EQ Mid Frequency) **200 - 6.3k**
Set the center frequency for the equalizer mid-range.

EQ M Q (EQ Mid Q) **0.5/1.0/2.0/4.0/9.0**
Adjust the width of the area centered at the EQ M Fq setting in which the gain will be affected. The area affected will become narrower as this value is increased.

EQ M Gain (EQ Mid Gain) **-12 - +12**
Adjust the gain of the area specified by the EQ M Fq parameter and the EQ M Q parameter.

EQ H Gain (EQ High Gain) **-12 - +12**
Adjust the high-range gain of the equalizer.

CF (Chorus/Flanger)

CF Sel (CF Select) **Chorus/Flangr**
Select either Chorus or Flanger.

CF Rate **0.05 - 6.40**
Adjust the speed of modulation for the chorus or flanger.

CF Depth **0 - 127**
Adjust the depth of modulation for the chorus or flanger.

CF Fb (CF Feedback) **-98% - +98%**
Adjust the amount (%) of the flanger sound that will be returned to the input. Negative (-) values will invert the phase.
* *In the case of Chorus, this will have no effect.*

CF Mix **0 - 127**
Adjust the volume of the chorus or flanger sound.

Dly (Delay)

Dly Time (Delay Time) **0m - 635m**
Adjust the time from the original sound until when the delay sound is heard.

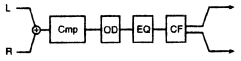
Dly Fb (Delay Feedback Level) **0 - 127**
Adjust the amount of the delay sound that is returned to the input.

Dly Mix (Delay Mix) 0 - 127
Adjust the volume of the delay sound.

Level (Output Level) 0 - 127
Adjust the output level.

53: Bass Multi

Bass Multi provides Compressor (Cmp), Overdrive or Distortion (OD), Equalizer (EQ), and Chorus or Flanger (CF) effects connected in series.



Cmp (Compressor)

Cmp Atck (Compressor Attack) 0 - 127
Adjust the time over which the sound will rise after it is input.

Cmp Sus (Compressor Sustain) 0 - 127
Adjust the time over which low-level sounds are boosted until they reach a specified volume.

Increasing the value will shorten the time. When the value is modified, the level will also change.

Cmp Level (Compressor Level) 0 - 127
Adjust the volume of the compressor sound.

Cmp Sw (Compressor Switch) Off/On
Turn the compressor on/off.

OD (Overdrive/Distortion)

OD Sel (OD Select) Odrv/Dist
Select either bass guitar Overdrive or Distortion.

OD Drive (OD Drive) 0 - 127
Adjust the depth of distortion. The volume will change together with the depth of distortion.

OD Amp (OD Amp Simlation Type) Small/Bltin/2-Stk
Select the type of bass amp

- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp

OD Amp Sw (OD Amp Switch) Off/On
Turn OD Amp on/off.

OD Sw (OD Switch) Off/On
Turn Overdrive/Distortion on/off.

EQ (Equalizer)

EQ L Gain (EQ Low Gain) -12 - +12
Adjust the low-range gain of the equalizer.

EQ M Fq (EQ Mid Frequency) 200 - 6.3k
Set the center frequency for the equalizer mid-range.

EQ M Q (EQ Mid Q) 0.5/1.0/2.0/4.0/9.0
Adjust the width of the area centered at the EQ M Fq setting in which the gain will be affected. The area affected will become narrower as this value is increased.

EQ M Gain (EQ Mid Gain) -12 - +12
Adjust the gain of the area specified by the EQ M Fq parameter and the EQ M Q parameter.

EQ H Gain (EQ High Gain) -12 - +12
Adjust the high-range gain of the equalizer.

CF(Chorus/Flanger)

CF Sel (CF Select) Chorus/Flangr
Select either Chorus or Flanger.

CF Rate 0.05 - 6.40
Adjust the speed of modulation for the chorus or flanger.

CF Depth 0 - 127
Adjust the depth of modulation for the chorus or flanger.

CF Fb (CF Feedback Level) -98% - +98%
Adjust the amount (%) of the flanger sound that will be returned to the input. Negative (-) values will invert the phase.

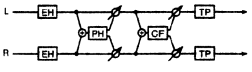
* *In the case of Chorus, this will have no effect.*

CF Mix 0 - 127
Adjust the volume of the chorus or flanger sound.

Level (Output Level) 0 - 127
Adjust the output level.

54: Rhodes Multi

Rhodes Multi provides Enhancer (EH), Phaser (PH), Chorus or Flanger (CF), and Tremolo or Pan (TP) effects connected in series.



EH (Enhancer)

EH Sens (Enhancer Sensitivity) 0 - 127
Adjust the sensitivity of the enhancer.

EH Mix (Enhancer Mix Level) 0 - 127
Adjust the level at which the overtones generated by the enhancer will be mixed with the direct sound.

PH (Phaser)

PH Man (Phaser Manual) 100 - 8.0k
Adjust the center frequency at which the sound will be modulated.

PH Rate (Phaser Rate) 0.05 - 6.40
Adjust the modulation speed.

PH Depth (Phaser Depth) 0 - 127
Adjust the modulation depth.

PH Reso (Phaser Resonance) 0 - 127
Adjust the emphasis for the region around the center frequency specified by the PH Man parameter.

PH Mix (Phaser Mix) 0 - 127
Adjust the proportion of the phase-shifted sound that will be mixed with the direct sound.

CF (Chorus/Flanger)

CF Sel (CF Select) Chorus/Flangr
Select either Chorus or Flanger.

CF LPF (CF Low Pass Filter) 250 - 6.3k/Bypass
Cut the high frequency range of the chorus or flanger sound.

CF Dly (CF Pre Dealy) 0 - 100m
Adjust the time from the direct sound until when the chorus or flanger sound is heard.

CF Rate 0.05 - 6.40
Adjust the modulation speed.

CF Depth 0 - 127
Adjust the modulation depth.

CF Fb (CF Feedback Level) -98% - +98%
Adjust the amount (%) of the flanger sound that will be returned to the input. Negative (-) values will invert the phase.

* *In the case of Chorus, this will have no effect*

CF Mix 0 - 127
Adjust the volume of the chorus or flanger sound.

TP (Tremolo/Pan)

TP Sel (TP Select) Trem/Pan
Select either Tremolo or Pan.

TP Mod WV (TP Modulation Wave) Trl/Sqr/Sin/Saw1/Saw2
Select the way in which tremolo or pan will be modulated.

- **Trl** : The sound will be modulated like a triangle wave.
- **Sqr** : The sound will be modulated like a square wave.
- **Sin** : The sound will be modulated like a sine wave.
- **Saw1,2** : The sound will be modulated like a sawtooth wave. The "teeth" in Saw1 and Saw2 point in opposite directions.

TP Mod RT (TP Modulation Rate) 0.05 - 6.40
Adjust the modulation speed.

TP Mod Dep (TP Modulation Depth) 0 - 127
Adjust the modulation depth.

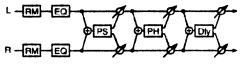
TP Sw (TP Switch) Off/On
Turn tremolo or pan on/off.

Level (Output Level) 0 - 127
Adjust the output level.

55: Keyboard Multi

Keyboard Multi provides Ring Modulator (RM), Equalizer (EQ), Pitch Shifter (PS), Phaser (PH) and Delay (Dly) effects connected in series.

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



RM (Ring Modulator)

RM Mod Freq (RM Modulation Frequency) 0 - 127
Set the frequency at which modulation will be applied.

RM Bal (RM Balance) 100:0 - 0:100 (D:E)
Adjust the balance between the direct and the ring modulated sound.

D and E stand for "dry sound" and "effect sound", respectively.

EQ (Equalizer)

EQ L Gain (EQ Low Gain) -12 - +12
Adjust the low range gain of the equalizer.

EQ M Fq (EQ Mid Frequency) 200 - 6.3k
Set the center frequency for the equalizer mid-range.

EQ M Q (EQ Mid Q) 0.5/1.0/2.0/4.0/9.0
Adjust the width of the area centered at the EQ M Fq setting in which the gain will be affected. The area affected will become narrower as this value is increased.

EQ M Gain (EQ Mid Gain) -12 - +12
Adjust the gain of the area specified by the EQ M Fq parameter and the EQ M Q parameter.

EQ H Gain (EQ High Gain) -12 - +12
Adjust the high-range gain of the equalizer.

PS (Pitch Shifter)

PS Coarse (PS Coarse Pitch) -24 - 0 - +12
Adjust the amount of pitch shift in semitone steps (-2 to +1 octaves).

PS Fine (PS Fine Pitch) -100 - 0 - +100
Make fine adjustments to the pitch shift in 2-cent steps (-100 to +100 cents).

PS Mode (PS Shifter Mode) 1 - 5
As this value is increased, the response will become slower but the sound will be more stable.

PS Bal (PS Balance) 100:0 - 0:100 (D:E)
Adjust the volume balance between the direct and the pitch shifted sound.

D and E stand for "dry sound" and "effect sound", respectively.

PH (Phaser)

PH Man (Phaser Manual) 100 - 8.0k
Set the center frequency at which the phaser sound will be modulated.

PH Rate (Phaser Rate) 0.05 - 6.40
Adjust the modulation speed of the phaser.

PH Depth (Phaser Depth) 0 - 127
Adjust the modulation depth of the phaser.

PH Reso (Phaser Resonance) 0 - 127
Adjust the emphasis for the region in the area of the center frequency specified by the PH Man parameter.

PH Mix (Phaser Mix) 0 - 127
Adjust the proportion at which the phase-shifted sound will be mixed with the original sound.

Dly (Delay)

Dly Time (Delay Time) 0m - 635m
Adjust the time from the original sound until when the delay sound is heard.

Dly Fb (Delay Feedback Level) 0 - 127
Adjust the amount of the delay sound that is returned to the input.

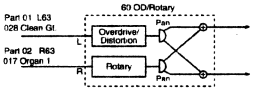
Dly Mix (Delay Mix Level) 0 - 127
Adjust the proportion at which the delay sound is mixed with the direct sound.

Level (Output Level) 0 - 127
Adjust the output level.

Effects that connect two types of effect in parallel (parallel 2)

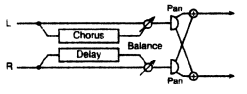
Effect types in which two different effects are connected in parallel allow you to apply different effects to L and R independently. By using parallel effects for the sound of two Parts, you can achieve a result as if two separate effect units were used.

For example you might select a guitar sound for Part 1 and an organ sound for Part 2. Then set the pan setting to L63 (far left) for Part 1, and to R63 (far right) for Part 2. Apply the effect "60: OD/Rotary" to both Parts 1 and 2. By then making appropriate settings for the "OD Pan" and "RT Pan" effect parameters, you can apply Overdrive to the guitar sound and Rotary to the organ sound, effectively allowing you to use two separate effects at once.



56: Cho / Delay (Chorus / Delay)

This effect connects a chorus and a delay in parallel.



Cho Dly (Chorus Pre Delay) 0 - 100m
Adjust the time delay from when the direct sound begins until the chorus sound is heard.

Cho Rate (Chorus Rate) 0.05 - 10.0
Adjust the modulation speed of the chorus effect.

Cho Depth (Chorus Depth) 0 - 127
Adjust the modulation depth of the chorus effect.

Cho Bal (Chorus Balance) 100:0 - 0:100 (D:E)
Adjust the volume balance between the direct and the chorus sound.

D and E stand for "dry sound" and "effect sound", respectively.

Cho Pan (Chorus Output Pan) L63 - 0 - R63
Adjust the stereo position of the chorus sound. L63 is far left, 0 is center, and R63 is far right.

Cho Level (Chorus Level) 0 - 127
Adjust the volume of the chorus sound.

Dly Time (Delay Time) 0 - 500m
Adjust the time delay from when the direct sound begins until the delay sound is heard.

Dly Fb (Delay Feedback Level) -98% - +98%
Adjust the proportion (%) of the delay sound that is fed back into the delay input. Negative (-) settings will invert the phase.

Dly HF (Delay HF Damp) 315 - 8k/Bypass
Adjust the frequency above which delayed sound fed back to the delay input will be cut. If you do not wish to cut the high frequencies of the feedback, set this parameter to Bypass.

Dly Bal (Delay Balance) 100:0 - 0:100 (D:E)
Adjust the volume balance between the direct and the delay sound.

D and E stand for "dry sound" and "effect sound", respectively.

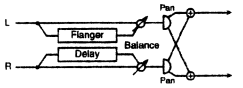
Dly Pan (Delay Output Pan) L63 - 0 - R63
Adjust the stereo position of the delay sound. L63 is far left, 0 is center, and R63 is far right.

Dly Level (Delay Level) 0 - 127
Adjust the volume of the delay sound.

Level (Output Level) 0 - 127
Adjust the output level.

57: FL / Delay (Flanger / Delay)

This effect connects a flanger and a delay in parallel.



FL Dly (Flanger Pre Delay) 0 - 100m
Adjust the time delay from when the direct sound begins until the flanger sound is heard.

FL Rate (Flanger Rate) 0.05 - 10.0
Adjust the modulation speed of the flanger effect.

FL Depth (Flanger Depth) 0 - 127
Adjust the modulation depth of the flanger effect.

FL Fb (Flanger Feedback Level) -98% - +98%
Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.

FL Bal (Flanger Balance) 100:0 - 0:100
Adjust the volume balance between the direct sound and the flanger sound.

D and E stand for "dry sound" and "effect sound", respectively.

FL Pan (Flanger Output Pan) L63 - 0 - R63
Adjust the stereo position of the flanger sound. L63 is far left, 0 is center, and R63 is far right.

FL Level (Flanger Level) 0 - 127
Adjust the volume of the flanger sound.

Dly Time (Delay Time) 0 - 500m
Adjust the time delay from when the direct sound begins until the delay sound is heard.

Dly Fb (Delay Feedback Level) -98% - +98%
Adjust the proportion (%) of the delay sound that is fed back into the delay input. Negative (-) settings will invert the phase.

Dly HF (Delay HF Damp) 315 - 8k/Bypass
Adjust the frequency above which delayed sound fed back to the delay input will be cut. If you do not want to cut the high frequencies of the delay feedback, set this parameter to Bypass.

Dly Bal (Delay Balance) 100:0 - 0:100 (D:E)
Adjust the volume balance between the direct and the delay sound.

D and E stand for "dry sound" and "effect sound", respectively.

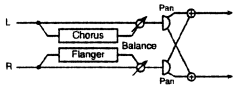
Dly Pan (Delay Output Pan) L63 - 0 - R63
Adjust the stereo position of the delay sound. L63 is far left, 0 is center, and R63 is far right.

Dly Level (Delay Level) 0 - 127
Adjust the volume of the delay sound.

Level (Output Level) 0 - 127
Adjust the output level.

58: Cho / Flanger (Chorus / Flanger)

This effect connects a chorus and a flanger in parallel.



Cho Dly (Chorus Pre Delay) 0 - 100m
Adjust the time delay from when the direct sound begins until the chorus sound is heard.

Cho Rate (Chorus Rate) 0.05 - 10.0
Adjust the modulation speed of the chorus effect.

Cho Depth (Chorus Depth) 0 - 127
Adjust the modulation depth of the chorus effect.

Cho Bal (Chorus Balance) **100:0 - 0:100**
Adjust the volume balance between the direct and the chorus sound.

D and E stand for "dry sound" and "effect sound", respectively.

Cho Pan (Chorus Output Pan) **L63 - 0 - R63**
Adjust the stereo position of the chorus sound. L63 is far left, 0 is center, and R63 is far right.

Cho Level (Chorus Level) **0 - 127**
Adjust the volume of the chorus sound.

FL Dly (Flanger Pre Delay) **0 - 100m**
Adjust the time delay from when the direct sound begins until the flanger sound is heard.

FL Rate (Flanger Rate) **0.05 - 10.0**
Adjust the modulation speed of the flanger effect.

FL Depth (Flanger Depth) **0 - 127**
Adjust the modulation depth of the flanger effect.

FL Fb (Flanger Feedback Level) **-98% - +98%**
Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.

FL Bal (Flanger Balance) **100:0 - 0:100 (D:E)**
Adjust the volume balance between the direct sound and the flanger sound.

D and E stand for "dry sound" and "effect sound", respectively.

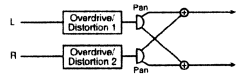
FL Pan (Flanger Output Pan) **L63 - 0 - R63**
Adjust the stereo position of the flanger sound. L63 is far left, 0 is center, and R63 is far right.

FL Level (Flanger Level) **0 - 127**
Adjust the volume of the flanger sound.

Level (Output Level) **0 - 127**
Adjust the output level.

59: OD1 / OD2 (Overdrive / Distortion 1, 2)

This connects two effect units in parallel, each of which allows you to select Overdrive or Distortion.



OD1 (Overdrive/Distortion 1)

OD1 Sel (OD1 Select) **Odrv/Dist**
Select either Overdrive or Distortion for set 1.

OD1 Drive (OD1 Drive) **0 - 127**
Adjust the degree of distortion for set 1. The volume will change together with the degree of distortion.

OD1 Amp (OD1 Amp Simulator Type)
Small/Bltin/2-Stk/3-Stk
Select the type of guitar amp for set 1.
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

OD1 Amp Sw (OD1 Amp Switch) **Off/On**
Turn OD1 Amp on/off.

OD1 Pan (OD1 Output Pan) **L63 - 0 - R63**
Set the stereo location of the overdrive or distortion sound for set 1. L63 is far left, 0 is center, and R63 is far right.

OD1 Level **0 - 127**
Adjust the overdrive or distortion volume for set 1.

OD2 (Overdrive/Distortion 2)

OD2 Sel (OD2 Select) **Odrv/Dist**
Select either Overdrive or Distortion for set 2.

OD2 Drive (OD2 Drive) **0 - 127**
Adjust the degree of distortion for set 2. The volume will change together with the degree of distortion.

OD2 Amp (OD2 Amp Simulator Type)
Small/Bltin/2-Stk/3-Stk
Select the type of guitar amp for set 2.
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

OD2 Amp Sw (OD2 Amp Switch) **Off/On**
Turn OD2 Amp on/off.

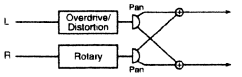
OD2 Pan (OD2 Output Pan) **L63 - 0 - R63**
Set the stereo location of the overdrive or distortion sound for set 2. L63 is far left, 0 is center, and R63 is far right.

OD2 Level **0 - 127**
Adjust the overdrive or distortion volume for set 2.

Level (Output Level) **0 - 127**
Adjust the output level.

60: OD / Rotary (Overdrive/Distortion, Rotary)

This connects Overdrive or Distortion in parallel with Rotary.



OD (Overdrive/Distortion)

OD Sel (OD Select) **Odrv/Dist**
Select either Overdrive or Distortion.

OD Drive (OD Drive) **0 - 127**
Adjust the depth of overdrive or distortion. The volume will change together with the depth of distortion.

OD Amp (OD Amp Simulator Type)
Small/Bltin/2-Stk/3-Stk
Select the type of guitar amp for overdrive or distortion.
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

OD Amp Sw (OD Amp Switch) **Off/On**
Turn the OD Amp parameter on/off.

OD Pan (OD Output Pan) **L63 - 0 - R63**
Set the stereo location of the overdrive or distortion sound. L63 is far left, 0 is center, and R63 is far right.

OD Level **0 - 127**
Adjust the volume of the overdrive or distortion sound.

RT (Rotary)

RT L Slow (RT Low Frequency Slow Rate)
0.05 - 10.0
Adjust the speed of the low-range rotor for the slow-speed setting.

RT L Fast (RT Low Frequency Fast Rate)
0.05 - 10.0
Adjust the speed of the low-range rotor for the fast-speed setting.

RT Lo Accl (RT Low Frequency Acceleration)
0 - 15
Adjust the time over which the rotation speed of the low-range rotor will change from low-speed to high-speed (or high-speed to low-speed) rotation. Smaller values will require greater time to reach the new rotational speed.

RT Lo Lev (RT Low Frequency Level) **0 - 127**
Adjust the volume of the low-range rotor.

RT H Slow (RT High Frequency Slow Rate)
0.05 - 10.0
Adjust the speed of the high-range rotor for the slow-speed setting.

RT H Fast (RT High Frequency Fast Rate)
0.05 - 10.0
Adjust the speed of the high-range rotor for the fast-speed setting.

RT Hi Accl (RT High Frequency Acceleration)
0 - 15
Adjust the time over which the rotation speed of the high-range rotor will change from slow-speed to fast-speed (or fast-speed to slow-speed) rotation. Smaller values will require greater time to reach the new rotational speed.

RT HI Lev (RT High Frequency Level)
0 - 127
Adjust the volume of the high-range rotor.

RT Sept (RT Separation) **0 - 127**
Adjust the spatial spread of the rotary sound.

RT Speed **Slow/Fast**
Simultaneously switch the rotational speed of both the low-range and the high-range rotors.
- **Slow** : Slow down the rotation to the specified speeds (RT L Slow parameter / RT H Slow parameter values).
- **Fast** : Speed up the rotation to the specified speeds (RT L Fast parameter / RT H Fast parameter values).

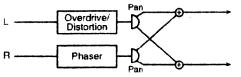
RT Pan (RT Output Pan) **L63 - 0 - R63**
Adjust the stereo position of the rotary sound. L63 is far left, 0 is center, and R63 is far right.

RT Level **0 - 127**
Adjust the volume of the rotary sound.

Level (Output Level) **0 - 127**
Adjust the output level.

61: OD / Phaser(Overdrive/Distortion, Phaser)

This connects an overdrive or distortion in parallel with a phaser.



OD (Overdrive/Distortion)

OD Sel (OD Select) **Odrv/Dist**
Select either Overdrive or Distortion.

OD Drive (OD Drive) **0 - 127**
Adjust the degree of distortion. The volume will change together with the degree of distortion.

OD Amp (OD Amp Simulator Type)
Smal/Bltin/ 2-Stk/3-Stk
Select the type of guitar amp.
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

OD Amp Sw (OD Amp Switch) **Off/On**
Turn the OD Amp parameter on/off.

OD Pan (OD Output Pan) **L63 - 0 - R63**
Set the stereo location of the overdrive or distortion sound. L63 is far left, 0 is center, and R63 is far right.

OD Level **0 - 127**
Adjust the overdrive or distortion volume.

PH (Phaser)

PH Man (Phaser Manual) **100 - 8.0k**
Adjust the center frequency at which the sound will be modulated.

PH Rate (Phaser Rate) **0.05 - 10.0**
Adjust the modulation speed.

PH Depth (Phaser Depth) **0 - 127**
Adjust the modulation depth.

PH Reso (Phaser Resonance) **0 - 127**
Adjust the emphasis for the region around the center frequency specified by the PH Man parameter.

PH Mix (Phaser Mix Level) **0 - 127**
Adjust the proportion of the phase-shifted sound that will be mixed with the direct sound.

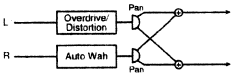
PH Pan (Phaser Output Pan) **L63 - 0 - R63**
Set the stereo location of the phaser sound. L63 is far left, 0 is center, and R63 is far right.

PH Level **0 - 127**
Adjust the volume of the phaser sound.

Level (Output Level) **0 - 127**
Adjust the output level.

62: OD / Auto Wah (Overdrive/Distortion, Auto-wah)

This connects an Overdrive or Distortion in parallel with an Auto-wah.



OD (Overdrive/Distortion)

OD Sel (OD Select) **Odrv/Dist**
Select either Overdrive or Distortion.

OD Drive (OD Drive) **0 - 127**
Adjust the degree of overdrive or distortion. The volume will change together with the degree of distortion.

OD Amp (OD Amp Simulator Type)
Small/Bltin/2-Stk/3-Stk
Select the type of guitar amp for overdrive or distortion.
- **Small** : small amp
- **Bltin** : single-unit type amp
- **2-Stk** : large double stack amp
- **3-Stk** : large triple stack amp

OD Amp Sw (OD Amp Switch) **Off/On**
Turn the OD Amp parameter on/off.

OD Pan (OD Output Pan) **L63 - 0 - R63**
Set the stereo location of the overdrive or distortion sound. L63 is far left, 0 is center, and R63 is far right.

OD Level **0 - 127**
Adjust the volume of the overdrive or distortion sound.

AW (Auto-wah)

AW Filter (Auto-wah Filter Type) **LPF/BPF**
Select the type of filter for the auto-wah.
- **LPF** : The wah effect will be produced over a broad frequency range.
- **BPF** : The wah effect will be produced over a narrow frequency range.

AW Sens (Auto-wah Sensitivity) **0 - 127**
Adjust the sensitivity with which the auto-wah filter will be controlled.

AW Man (Auto-wah Manual) **0 - 127**
Set the center frequency at which the auto-wah effect will be produced.

AW Peak (Auto-wah Peak) **0 - 127**
Adjust the way in which the wah effect will be applied to the region of the center frequency. Lower settings will produce a wah effect in a broad area around the center frequency, and higher settings will produce a wah effect in a narrower area around the center frequency.

AW Rate (Auto-wah Rate) **0.05 - 10.0**
Adjust the modulation speed of the auto-wah.

AW Depth (Auto-wah Depth) **0 - 127**
Adjust the modulation depth of the auto-wah.

AW Pol (Auto-wah Polarity) **Down/Up**
Set the direction in which the frequency will change when the auto-wah filter is modulated. With a setting of Up, the filter will change toward a higher frequency. With a setting of Down, it will change toward a lower frequency.

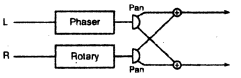
AW Pan (Auto-wah Output Pan)
L63 - 0 - R63
Adjust the stereo position of the auto-wah sound. L63 is far left, 0 is center, and R63 is far right.

AW Level (Auto-wah Level) **0 - 127**
Adjust the volume of the auto-wah sound.

Level (Output Level) **0 - 127**
Adjust the output level.

63: PH / Rotary (Phaser, Rotary)

This connects a Phaser effect in parallel with a Rotary effect.



PH (Phaser)

PH Man (Phaser Manual) **100 - 8.0k**
Adjust the center frequency at which the sound will be modulated.

PH Rate (Phaser Rate) **0.05 - 10.0**
Adjust the modulation speed of the phaser.

PH Depth (Phaser Depth) **0 - 127**
Adjust the modulation depth of the phaser.

PH Reso (Phaser Resonance) **0 - 127**
Adjust the emphasis for the region around the center frequency specified by the PH Man parameter.

PH Mix (Phaser Mix Level) **0 - 127**
Adjust the proportion of the phase-shifted sound that will be mixed with the direct sound.

PH Pan (Phaser Output Pan) **L63 - 0 - R63**
Set the stereo location of the phaser sound. L63 is far left, 0 is center, and R63 is far right.

PH Level (Phaser Level) **0 - 127**
Adjust the volume of the phaser sound.

RT (Rotary)

RT L Slow (RT Low Frequency Slow Rate)
0.05 - 10.0
Adjust the speed of the low-range rotor for the slow-speed setting.

RT L Fast (RT Low Frequency Fast Rate)
0.05 - 10.0
Adjust the speed of the low-range rotor for the fast-speed setting.

RT Lo Accl (RT Low Frequency Acceleration)
0 - 15
Adjust the time over which the rotation speed of the low-range rotor will change from slow-speed to fast-speed (or fast-speed to slow-speed) rotation. Smaller values will require greater time to reach the new rotational speed.

RT Lo Lev (RT Low Frequency Level) **0 - 127**
Adjust the volume of the low-range rotor.

RT H Slow (RT High Frequency Slow Rate)
0.05 - 10.0
Adjust the speed of the high-range rotor for the slow-speed setting.

RT H Fast (RT High Frequency Fast Rate)
0.05 - 10.0
Adjust the speed of the high-range rotor for the fast-speed setting.

RT Hi Accl (RT High Frequency Acceleration)
0 - 15
Adjust the time over which the rotation speed of the high-range rotor will change from slow-speed to fast-speed (or fast-speed to slow-speed) rotation. Smaller values will require greater time to reach the new rotational speed.

RT HI Lev (RT High Frequency Level) **0 - 127**
Adjust the volume of the high-range rotor.

RT Sept (RT Separation) **0 - 127**
Adjust the spread of the rotary sound.

RT Speed **Slow/Fast**
Simultaneously switch the rotational speed of both the low-range and the high-range rotors.
- **Slow** : Slow down the rotation to the specified speeds (RT L Slow parameter / RT H Slow parameter values).
- **Fast** : Speed up the rotation to the specified speeds (RT L Fast parameter / RT H Fast parameter values).

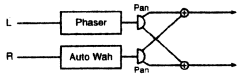
RT Pan (RT Output Pan) **L63 - 0 - R63**
Adjust the stereo position of the rotary sound. L63 is far left, 0 is center, and R63 is far right.

RT Level **0 - 127**
Adjust the volume of the rotary sound.

Level (Output Level) **0 - 127**
Adjust the output level.

64: PH / Auto Wah (Phaser Auto-wah)

This connects a Phaser effect and an Auto-wah effect in parallel.



PH (Phaser)

PH Man (Phaser Manual) **100 - 8.0k**
Adjust the center frequency at which the phaser sound will be modulated.

PH Rate (Phaser Rate) **0.05 - 10.0**
Adjust the modulation speed of the phaser.

PH Depth (Phaser Depth) **0 - 127**
Adjust the modulation depth of the phaser.

PH Reso (Phaser Resonance) **0 - 127**
Adjust the emphasis for the region around the center frequency specified by the PH Man parameter.

PH Mix (Phaser Mix Level) **0 - 127**
Adjust the proportion of the phase-shifted sound that will be mixed with the direct sound.

PH Pan (Phaser Output Pan) **L63 - 0 - R63**
Set the stereo location of the phaser sound. L63 is far left, 0 is center, and R63 is far right.

PH Level (Phaser Level) **0 - 127**
Adjust the volume of the phaser sound.

AW (Auto-wah)

AW Filter (Auto-wah Filter Type) **LPF/BPF**
Select the type of filter for the auto-wah.

- **LPF** : The wah effect will be produced over a broad frequency range.
- **BPF** : The wah effect will be produced over a narrow frequency range.

AW Sens (Auto-wah Sensitivity) **0 - 127**
Adjust the sensitivity with which the auto-wah filter will be modulated.

AW Man (Auto-wah Manual) **0 - 127**
Set the center frequency at which the auto-wah effect will be produced.

AW Peak (Auto-wah Peak) **0 - 127**
Adjust the way in which the wah effect will be applied to the region of the center frequency. Lower settings will produce a wah effect in a broad area around the center frequency, and higher settings will produce a wah effect in a narrower area around the center frequency.

AW Rate (Auto-wah Rate) **0.05 - 10.0**
Adjust the modulation speed of the auto-wah.

AW Depth (Auto-wah Depth) **0 - 127**
Adjust the modulation depth of the auto-wah.

AW Pol (Auto-wah Polarity) **Down/Up**
Set the direction in which the frequency will change when the auto-wah filter is modulated. With a setting of Up, the filter will change toward a higher frequency. With a setting of Down it will change toward a lower frequency.

AW Pan (Auto-wah Output Pan) **L63 - 0 - R63**
Adjust the stereo position of the auto-wah sound. L63 is far left, 0 is center, and R63 is far right.

AW Level (Auto-wah Level) **0 - 127**
Adjust the volume of the auto-wah sound.

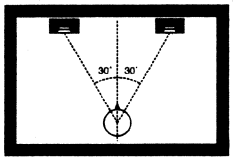
Level (Output Level) **0 - 127**
Adjust the output level.

When using 3D effects

The following four 3D effects utilize RSS (Roland Sound Space) technology to create a spaciousness that cannot be produced by delay, reverb, or chorus etc.

- 20: 3D Chorus
- 28: 3D Delay
- 31: 3D Auto
- 32: 3D Manual

When using these effects, we recommend that you place your speakers as follows. Also, make sure that the speakers are at a sufficient distance from the walls on either side.



If the left and right speakers are too far apart, or if there is too much reverberation, the full 3D effect may not appear.

Each of these effects has an "Out (Output Mode)" parameter. If the sound from the OUTPUT jacks will be heard through speakers, set this parameter to Speaker. If the sound will be heard through headphones, set it to Phones. This will ensure that the optimal 3D effect will be heard. If this parameter is not set correctly, the full 3D effect may not appear.

Roland®

11459

Roland