

# Roland

# RD-88

## Parameter Guide



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# Scene Parameter

Here's how to edit settings for the currently selected scene.

1. Press the [MENU] button.
2. Use the cursor [▲] [▼] buttons to select "SCENE EDIT," and press the [ENTER] button.
3. Use the cursor [▲] [▼] buttons to select the item that you want to edit, and press the [ENTER] button.
4. Use the cursor [▲] [▼] buttons to select a parameter, and use the [DEC] [INC] buttons to edit the value.

## COMMON

Settings for the entire scene.

| Parameter           | Value  | Explanation                                                                                                                     |
|---------------------|--------|---------------------------------------------------------------------------------------------------------------------------------|
| Level               | 0–127  | Specifies the volume of the scene.                                                                                              |
| Tempo               | 20–250 | Specifies the tempo of the scene. This affects the effect settings, etc.                                                        |
| Voice Reserve Z1–Z3 | 0–10   | Specifies the number of voices that are reserved for each zone when you attempt to play more voices than the maximum available. |

## ZONE EDIT

Settings for zones 1–3 (UP1/UP2/LOW).

\* Settings for sound engine control.

## INTERNAL

Settings for each zone for the internal sound engine of the RD-88 unit.

| Parameter                       | Value                                                                       | Explanation                                                  |
|---------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------|
| Bank                            | SN PR-A, SN PR-B, RD-88, PR-A, PR-B, PR-C, PR-D, PR-E, COMMON, USER, EXZ001 | Selects the tone bank.                                       |
| (Number / Name)                 | ****                                                                        | Selects the tone.                                            |
| Level                           | 0–127                                                                       | Specifies the volume of each zone.                           |
| Pan                             | L64–63R                                                                     | Specifies the panning of each zone when using stereo output. |
| Kbd Sw<br>(Keyboard Switch)     | OFF, ON                                                                     | Switches the zone on/off for playing from the keyboard.      |
| Rx Ch<br>(Rx Channel)           | 1–16                                                                        | Specifies the MIDI receive channel of each zone.             |
| Cho Send<br>(Chorus Send Level) | 0–127                                                                       | Specifies the send level to chorus.                          |
| Rev Send<br>(Reverb Send Level) | 0–127                                                                       | Specifies the send level to reverb.                          |
| Output<br>(Output Assign)       | Selects the output destination.                                             |                                                              |
|                                 | DRY                                                                         | Output without passing through the effects.                  |
|                                 | IFX                                                                         | Send to IFX.                                                 |
|                                 | SYM-RESO                                                                    | Send to Sympathetic Resonance.                               |

| Parameter                              | Value     | Explanation                                                                                                                                                                                                                  |
|----------------------------------------|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Key Rng Low<br>(Key Range Lower)       | C-1–UPPER | Specifies each zone's key range. Make this setting when you want to play different tones in different regions of the keyboard. Specify the lowest key (Key Rng Low) and the highest key (Key Rng Upp) of the desired region. |
| Key Rng Upp<br>(Key Range Upper)       | LOWER–G9  |                                                                                                                                                                                                                              |
| Velo Max<br>(Velocity Max)             | 1–127     | Specifies the maximum velocity when you play a key. With a low value of this setting, the volume will not become very loud even if you play a key strongly.                                                                  |
| Velo Sens<br>(Velocity Sensitivity)    | -63–+63   | Specifies how the volume responds to the key velocity.<br>With positive (+) values, the volume increases as you play more strongly; with negative values (-), the volume decreases as you play more strongly.                |
| Velo Rng Low<br>(Velocity Range Lower) | 1–UPPER   | Specify the lower limit (Velo Rng Low) and upper limit (Velo Rng Upp) of key velocities that will play the tone. Make these settings when you want to use velocity to switch between tones.                                  |
| Velo Rng Upp<br>(Velocity Range Upper) | LOWER–127 |                                                                                                                                                                                                                              |
| Coarse Tune                            | -48–+48   | Specifies the pitch in semitone units.                                                                                                                                                                                       |
| Fine Tune                              | -50–+50   | Finely adjusts the pitch in one-cent units.                                                                                                                                                                                  |
| Ctrl Damper<br>(Damper Pedal)          | OFF, ON   | Specifies whether damper pedal operations are received (ON) or not received (OFF).                                                                                                                                           |
| Ctrl FC1<br>(FC1 Pedal)                | OFF, ON   | Specifies whether FC1 pedal operations are received (ON) or not received (OFF).                                                                                                                                              |
| Ctrl FC2<br>(FC2 Pedal)                | OFF, ON   | Specifies whether FC2 pedal operations are received (ON) or not received (OFF).                                                                                                                                              |
| Ctrl Wheel1<br>(Wheel 1)               | OFF, ON   | Specifies whether WHEEL1 operations are received (ON) or not received (OFF).                                                                                                                                                 |
| Ctrl Wheel2<br>(Wheel 2)               | OFF, ON   | Specifies whether WHEEL2 operations are received (ON) or not received (OFF).                                                                                                                                                 |
| Ctrl Knob1<br>(Control Knob 1)         | OFF, ON   | Specifies whether KNOB1 operations are received (ON) or not received (OFF).                                                                                                                                                  |
| Ctrl Knob2<br>(Control Knob 2)         | OFF, ON   | Specifies whether KNOB2 operations are received (ON) or not received (OFF).                                                                                                                                                  |
| Ctrl Knob3<br>(Control Knob 3)         | OFF, ON   | Specifies whether KNOB3 operations are received (ON) or not received (OFF).                                                                                                                                                  |
| Ctrl Knob4<br>(Control Knob 4)         | OFF, ON   | Specifies whether KNOB4 operations are received (ON) or not received (OFF).                                                                                                                                                  |
| Ctrl Knob5<br>(Control Knob 5)         | OFF, ON   | Specifies whether KNOB5 operations are received (ON) or not received (OFF).                                                                                                                                                  |
| Ctrl Knob6<br>(Control Knob 6)         | OFF, ON   | Specifies whether KNOB6 operations are received (ON) or not received (OFF).                                                                                                                                                  |
| Ctrl Knob7<br>(Control Knob 7)         | OFF, ON   | Specifies whether KNOB7 operations are received (ON) or not received (OFF).                                                                                                                                                  |
| Ctrl Knob8<br>(Control Knob 8)         | OFF, ON   | Specifies whether KNOB8 operations are received (ON) or not received (OFF).                                                                                                                                                  |

## EXTERNAL

External MIDI device settings for each zone.

| Parameter                                   | Value            | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tx Mode</b><br>(Tx Mode)                 | ON               | Normally, you'll use this value. The same MIDI messages are transmitted to the RD-88's internal sound engine and to an external MIDI device. Tone selection and switching messages (bank select and program change) will be the settings of the tone selected for that zone.<br><b>MEMO</b><br>If Tx Mode is ON, the settings of the <b>[INTERNAL]</b> tab are enabled, and the settings of the <b>[EXTERNAL]</b> tab are ignored. If you want to enable the parameters of the <b>[EXTERNAL]</b> tab and control an external device, set Tx Mode to "EXT." |
|                                             | INT              | Use this setting if you want a specific zone to not transmit MIDI messages to an external MIDI device. Use the INT setting if you want to play only the internal sounds of the RD-88.                                                                                                                                                                                                                                                                                                                                                                      |
|                                             | EXT              | Choose this setting if you're using the RD-88 as a master keyboard to control an external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Ext Port</b><br>(Output Port)            | ALL, MIDI, USB   | Specifies the connector that transmits control messages.<br>If this is "ALL," messages are transmitted both from the MIDI OUT connector and the USB port.                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Ext Ch</b><br>(Tx Channel)               | 1–16             | Specifies the MIDI transmit channel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Bank MSB</b>                             | OFF, 0–127       | Enter numerical values for the program number and bank select MSB/LSB to switch sounds on an external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Bank LSB</b>                             | OFF, 0–127       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Ext PC</b><br>(Program Change)           | OFF, 1–128       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Ext Volume</b><br>(Volume)               | OFF, 0–127       | Adjusts the volume of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Ext Pan</b><br>(Pan)                     | OFF, L64–63R     | Sets the pan of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Ext Chorus</b><br>(Chorus Send Level)    | OFF, 0–127       | Sets the Chorus Send Level of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Ext Reverb</b><br>(Reverb Send Level)    | OFF, 0–127       | Sets the Reverb Send Level of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Ext Mono/Poly</b><br>(Mono/Poly)         | OFF, MONO, POLY  | Sets the Mono/Poly setting of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Ext Attack</b><br>(Attack Time Offset)   | OFF, 0–127       | Sets the Attack Time Offset of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Ext Decay</b><br>(Decay Time Offset)     | OFF, 0–127       | Sets the Decay Time Offset of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Ext Release</b><br>(Release Time Offset) | OFF, 0–127       | Sets the Release Time Offset of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Ext Cutoff</b><br>(Cutoff Offset)        | OFF, 0–127       | Sets the Cutoff Offset of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Ext Reso</b><br>(Resonance Offset)       | OFF, 0–127       | Sets the Resonance Offset of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Ext Porta Sw</b><br>(Portamento Switch)  | OFF, P-OFF, P-ON | Sets the Portamento of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Ext Porta Tm</b><br>(Portamento Time)    | OFF, 0–127       | Sets the Portamento Time of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Ext C. Tune</b><br>(Coarse Tune)         | OFF, -48–+48     | Sets the Coarse Tune of the external MIDI device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| Parameter                                              | Value        | Explanation                                                                                                                                                                                                          |
|--------------------------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Ext F. Tune</b><br>(Fine Tune)                      | OFF, -50–+50 | Sets the Fine Tune of the external MIDI device.                                                                                                                                                                      |
| <b>Ext Bend Rng</b><br>(Bend Range)                    | OFF, 0–48    | Sets the Bend Range of the external MIDI device.                                                                                                                                                                     |
| <b>Ext Mod Dpth</b><br>(Modulation Depth)              | OFF, 0–127   | Sets the Modulation Depth of the external MIDI device.                                                                                                                                                               |
| <b>Ext M. Vol Sw</b><br>(External Control Volume Knob) | OFF, ON      | Specifies whether master volume operations are transmitted (ON) or not transmitted (OFF).<br>Turn the Ext M. Vol Sh ON when you want to use the master volume to also adjust the volume of the external MIDI device. |
| <b>Ext CC1 Num</b><br>(User Control Change 1 Number)   | OFF, 0–127   | These parameters let you specify and transmit two types of control change message.                                                                                                                                   |
| <b>Ext CC1 Val</b><br>(User Control Change 1 Value)    | 0–127        |                                                                                                                                                                                                                      |
| <b>Ext CC2 Num</b><br>(User Control Change 2 Number)   | OFF, 0–127   |                                                                                                                                                                                                                      |
| <b>Ext CC2 Val</b><br>(User Control Change 2 Value)    | 0–127        |                                                                                                                                                                                                                      |

## KEY TOUCH

External MIDI device settings for each zone.

| Parameter                                            | Value      | Explanation                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Source</b>                                        | SCENE, SYS | Specifies whether the keyboard touch settings are specified by the settings of the scene (SCENE) or by the system settings (SYS).                                                                                                                                                                                                                                         |
| <b>Velo Crv</b><br>(Velocity Curve)                  | SPR LIGHT  | An even lighter setting than LIGHT.                                                                                                                                                                                                                                                                                                                                       |
|                                                      | LIGHT      | Specifies a light keyboard touch response. Since you can produce fortissimo (ff) using an even lighter touch than with the MEDIUM setting, this feels as though the keyboard is lighter. This setting is easy to play even by those whose hands have less strength.                                                                                                       |
|                                                      | MEDIUM     | Specifies the standard keyboard touch response. This allows playing with the most natural touch. This is closest to the touch of an acoustic piano.                                                                                                                                                                                                                       |
|                                                      | HEAVY      | Specifies a heavy keyboard touch response. Since producing fortissimo (ff) requires you to play with a stronger touch than with the MEDIUM setting, this feels as though the keyboard is heavier. This setting allows even greater expressiveness when you play dynamically.                                                                                              |
|                                                      | SPR HEAVY  | An even heavier setting than HEAVY.                                                                                                                                                                                                                                                                                                                                       |
| <b>Velo Offset</b><br>(Velocity Sense Offset)        | -10→+9     | Finely adjusts the keyboard touch response in greater detail than the Velocity Curve setting. This lets you specify detailed settings between the various Velocity Curve values. Higher values make the touch feel heavier.<br><br>If this value exceeds the upper or lower limit, the Velocity Curve also switches automatically between its five values as appropriate. |
| <b>Velocity</b>                                      | REAL       | The volume and character of the sound responds to your keyboard playing dynamics.                                                                                                                                                                                                                                                                                         |
|                                                      | 1–127      | The volume and character of the sound remains fixed regardless of your keyboard playing dynamics.                                                                                                                                                                                                                                                                         |
| <b>Velo Dly Sens</b><br>(Velocity Delay Sense)       | -63→+63    | Specifies the delay from the moment you press the key until the sound is heard.<br><br>Negative values delay the timing at which the sound is heard when you press the key strongly. Positive values delay the timing at which the sound is heard when you press the key softly.                                                                                          |
| <b>Velo Keyfollow</b><br>(Velocity Key Follow Sense) | -63→+63    | Specifies how keyboard touch is affected by the keyboard range.<br><br>With higher values, the keyboard feels heavier as you play upward and lighter as you play downward.                                                                                                                                                                                                |
| <b>KeyOff Pos</b><br>(Key Off Position)              | STANDARD   | Note-off occurs at the same key depth as a conventional piano.                                                                                                                                                                                                                                                                                                            |
|                                                      | DEEP       | Note-off occurs at a deeper key depth. This is appropriate for sounds such as electric piano.                                                                                                                                                                                                                                                                             |

## ASSIGN

Keyboard touch settings (for each individual scene).

## PEDAL

| Parameter                    | Value                                                                                          | Explanation                                                                                                                                   |
|------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Source</b>                | SCENE, SYS                                                                                     | Specifies whether the parameters controlled by the pedals are specified by the settings of the scene (SCENE) or by the system settings (SYS). |
| <b>FC1</b><br>(FC1 Function) | <b>Specifies the function that is assigned to the FC1 pedal when Source is set to "SCENE."</b> |                                                                                                                                               |
|                              | OFF                                                                                            | No function is assigned.                                                                                                                      |
|                              | CC01–31, 32 (OFF), 33–95                                                                       | Controller number 1–31, 32, 33–95                                                                                                             |
|                              | AFT                                                                                            | Aftertouch                                                                                                                                    |
|                              | BEND DOWN                                                                                      | Lower the pitch.                                                                                                                              |
| <b>FC2</b><br>(FC2 Function) | <b>Specifies the function that is assigned to the FC2 pedal when Source is set to "SCENE."</b> |                                                                                                                                               |
|                              | OFF                                                                                            | No function is assigned.                                                                                                                      |
|                              | CC01–31, 32 (OFF), 33–95                                                                       | Controller number 1–31, 32, 33–95                                                                                                             |
|                              | AFT                                                                                            | Aftertouch                                                                                                                                    |
|                              | BEND DOWN                                                                                      | Lower the pitch.                                                                                                                              |
|                              | BEND UP                                                                                        | Raise the pitch.                                                                                                                              |

## WHEEL

| Parameter                            | Value                                                                                   | Explanation                                                                                                                             |
|--------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Wheel1 Src</b><br>(Wheel1 Source) | SCENE, SYS                                                                              | Specifies whether the parameter controlled by WHEEL1 is specified by the settings of the scene (SCENE) or by the system settings (SYS). |
| <b>Wheel1</b><br>(Wheel1 Function)   | <b>Specifies the function that is assigned to WHEEL1 when Source is set to "SCENE."</b> |                                                                                                                                         |
|                                      | OFF                                                                                     | No function is assigned.                                                                                                                |
|                                      | CC01–31, 32 (OFF), 33–95                                                                | Controller number 1–31, 32, 33–95                                                                                                       |
|                                      | AFT                                                                                     | Aftertouch                                                                                                                              |
| <b>Wheel2 Src</b><br>(Wheel2 Source) | <b>Specifies the function that is assigned to WHEEL2 when Source is set to "SCENE."</b> |                                                                                                                                         |
|                                      | PITCH BEND                                                                              | Raise or lower the pitch.                                                                                                               |
| <b>Wheel2</b><br>(Wheel2 Function)   | SCENE, SYS                                                                              | Specifies whether the parameter controlled by WHEEL2 is specified by the settings of the scene (SCENE) or by the system settings (SYS). |
|                                      | <b>Specifies the function that is assigned to WHEEL2 when Source is set to "SCENE."</b> |                                                                                                                                         |
|                                      | OFF                                                                                     | No function is assigned.                                                                                                                |
|                                      | CC01–31, 32 (OFF), 33–95                                                                | Controller number 1–31, 32, 33–95                                                                                                       |
|                                      | AFT                                                                                     | Aftertouch                                                                                                                              |
|                                      | BEND DOWN                                                                               | Lower the pitch.                                                                                                                        |
|                                      | BEND UP                                                                                 | Raise the pitch.                                                                                                                        |

## KNOB

| Parameter                                                  | Value                                                                                     | Explanation                                                                                                                                 |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Source</b>                                              | SCENE, SYS                                                                                | Specifies whether the parameters controlled by KNOB 1–8 are specified by the settings of the scene (SCENE) or by the system settings (SYS). |
| <b>Knob1–Knob8<br/>Knob1 Function–<br/>Knob 8 Function</b> | <b>Specify the functions that are assigned to KNOB 1–8 when Source is set to “SCENE.”</b> |                                                                                                                                             |
|                                                            | OFF                                                                                       | No function is assigned.                                                                                                                    |
|                                                            | CC01–31, 32 (OFF), 33–95                                                                  | Controller number 1–31, 32, 33–95                                                                                                           |
|                                                            | AFT                                                                                       | Aftertouch                                                                                                                                  |
|                                                            | BEND DOWN                                                                                 | Lower the pitch.                                                                                                                            |
|                                                            | BEND UP                                                                                   | Raise the pitch.                                                                                                                            |

## CTRL SRC SEL

| Parameter                           | Value                                | Explanation                                           |
|-------------------------------------|--------------------------------------|-------------------------------------------------------|
| <b>Src1</b><br>(Control Source (1)) | OFF, CC01–CC31, CC33–CC95, BEND, AFT | Specify the MIDI message that modifies the parameter. |
| <b>Src2</b><br>(Control Source (2)) |                                      |                                                       |
| <b>Src3</b><br>(Control Source (3)) |                                      |                                                       |
| <b>Src4</b><br>(Control Source (4)) |                                      |                                                       |

## ZONE SOUND

Settings for zones 1–3 (UP1/UP2/LOW).

\* Settings for sound engine control.

## TONE COLOR

| Parameter                          | Value        | Explanation                                                                                                                                                                                                                                                                                             |
|------------------------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Type</b><br>(Tone Color Type)   | EQ           | Lets you adjust EQ with a single knob. Turning the knob toward the left boosts the mid-frequency range, and turning the knob toward the right boosts the high- and low-frequency ranges. By adjusting this appropriately for the conditions of your performance, you can make the sound easier to hear. |
|                                    | STEREO WIDTH | If the sound is being output in stereo, turning the knob toward the left gradually changes the output to mono, and turning the knob toward the right gradually changes to stereo. Depending on the conditions of your performance, mono output might be easier to hear.                                 |
| <b>Level</b><br>(Tone Color Level) | 0–127        | Adjusts the depth of TONE COLOR.                                                                                                                                                                                                                                                                        |

## GENERAL

| Parameter                                     | Value            | Explanation                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mono/Poly</b>                              | MONO, POLY, TONE | Choose “ <b>MONO</b> ” if you want the tone assigned to the zone to play monophonically, or “ <b>POLY</b> ” if you want it to play polyphonically. Choose “ <b>TONE</b> ” if you want to use the setting of the tone.                                                                                                                                                                                               |
| <b>Legato Sw</b><br>(Legato Switch)           | OFF, ON, TONE    | When playing monophonically, you can apply legato. “ <b>Legato</b> ” is a playing technique in which notes are played smoothly without a break between them. This produces an effect similar to the guitar technique of hammering-on and pulling-off. Choose “ <b>ON</b> ” to apply legato, or “ <b>OFF</b> ” if you don’t want to apply legato. Choose “ <b>TONE</b> ” if you want to use the setting of the tone. |
| <b>Porta Sw</b><br>(Portamento Switch)        | OFF, ON, TONE    | Specifies whether portamento is applied. Choose “ <b>ON</b> ” if you want to apply portamento, or “ <b>OFF</b> ” if you don’t want to apply portamento. Choose “ <b>TONE</b> ” if you want to use the setting of the tone.                                                                                                                                                                                          |
| <b>Porta Time</b><br>(Portamento Time)        | 0–127, TONE      | Specifies the time over which the pitch changes when applying portamento. With higher values, the pitch change to the next note takes longer. Choose “ <b>TONE</b> ” if you want to use the setting of the tone.                                                                                                                                                                                                    |
| <b>Unison Sw</b><br>(Unison Switch)           | OFF, ON, TONE    | This function layers a single sound. Choose “ <b>ON</b> ” if you want to apply unison, or “ <b>OFF</b> ” if not. Choose “ <b>TONE</b> ” if you want to use the setting of the tone.                                                                                                                                                                                                                                 |
| <b>Velo Crv Type</b><br>(Velocity Curve Type) | OFF, 1–4         | For each zone, selects one of four velocity curves suitable for the keyboard touch of your MIDI keyboard. If you want to play the sounds using the velocity curve of this unit’s keyboard, choose “ <b>OFF</b> .”                                                                                                                                                                                                   |

## Pitch

| Parameter         | Value                                                                                       | Explanation                                                                                                                                                                                                                                   |
|-------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bend Range</b> | 0–24, TONE                                                                                  | Specifies the amount of pitch change that occurs when you move a controller if pitch bend is assigned to that controller (maximum two octaves).                                                                                               |
| <b>Bend Mode</b>  | <b>Specifies the behavior of a controller if pitch bend is assigned to that controller.</b> |                                                                                                                                                                                                                                               |
|                   | NORMAL                                                                                      | The conventional pitch bend effect is applied.                                                                                                                                                                                                |
|                   | C+L<br>(CATCH+LAST)                                                                         | The pitch bend effect applies only to the last-played note. If a note-on occurs while pitch bend is already applied, that note sounds at its center pitch. Its pitch begins changing after the controller passes through the center position. |
|                   | TONE                                                                                        | The setting of the tone is used.                                                                                                                                                                                                              |

## MODIFY

| Parameter                                  | Value   | Explanation                                                                                                                                                                                                                                                |
|--------------------------------------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cutoff</b><br>(Cutoff Offset)           | -64—+63 | Adjusts the openness of the filter. Higher values make the sound brighter, and lower values make it darker.                                                                                                                                                |
| <b>Resonance</b><br>(Resonance Offset)     |         | Boosts the sound in the region of the cutoff frequency, giving it a distinctive character. Raising this value excessively might cause oscillation and distortion. Higher values produce a stronger character, and lower values produce a weaker character. |
| <b>Attack</b><br>(Attack Time Offset)      |         | Adjusts the time from when the key is pressed until the attack is completed. Higher values make the attack more gradual, and lower values make the attack sharper.                                                                                         |
| <b>Decay</b><br>(Decay Time Offset)        |         | Adjusts the time over which the volume decreases after the attack. Higher values lengthen this decay time, and lower values shorten it.                                                                                                                    |
| <b>Release</b><br>(Release Time Offset)    |         | Adjusts the time from when the key is released until the sound diminishes to silence. Higher values lengthen this release time, and lower values produce a crisper sound.                                                                                  |
| <b>Vib Rate</b><br>(Vibrato Rate)          |         | Adjusts the vibrato rate (the speed at which the pitch is modulated). Higher values make pitch modulation faster, and lower values make it slower.                                                                                                         |
| <b>Vib Depth</b><br>(Vibrato Depth)        |         | Adjusts the vibrato depth (the depth to which the pitch is modulated). Higher values make vibrato deeper, and lower values make it less deep.                                                                                                              |
| <b>Vib Delay</b><br>(Vibrato Delay)        |         | Adjusts the time until the vibrato (pitch modulation) effect starts being applied. Higher values produce a longer delay until the effect is applied, and lower values produce a shorter delay.                                                             |
| <b>Velo Sens</b><br>(Velocity Sens Offset) |         | Adjusts the velocity sensitivity. Higher values make the sensitivity greater.                                                                                                                                                                              |

## SCALE TUNE

| Parameter                        | Value      | Explanation                                                                                                                                                                                                    |
|----------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Source</b>                    | SCENE, SYS | Specifies whether scale tune is specified by the scene setting (SCENE) or by the system setting (SYS).                                                                                                         |
| <b>Type</b><br>(Scale Tune Type) | CUSTOM     | Custom: Allows you to specify a custom temperament.                                                                                                                                                            |
|                                  | EQUAL      | Equal temperament: This temperament divides the octave into 12 equal parts. Slight inharmonicity is equally present in all intervals.                                                                          |
|                                  | JUST-MAJ   | Just intonation (major): This temperament produces pure fifths and thirds. It is not suitable for melodic playing and does not allow modulation to another key, but produces beautiful-sounding chords.        |
|                                  | JUST-MIN   | Just intonation (minor): Just intonation differs between major and minor. This produces the same effect as “ <b>Just intonation (major)</b> ” but for a minor key.                                             |
|                                  | PYTHAGORE  | Pythagorean temperament: This is based on the theories of the philosopher Pythagoras, and eliminates inharmonicity in the fourth and fifth. Third interval chords are imperfect, but melodies will sound good. |
|                                  | KIRNBERGE  | Kirnberger: This temperament improves meantone temperament and just intonation to allow greater freedom of modulation. It allows performance in all keys (Type III).                                           |
|                                  | MEANTONE   | Meantone temperament: This temperament is a partial compromise of just intonation that allows modulation.                                                                                                      |
|                                  | WERCKMEIS  | Werckmeister: This temperament combines meantone temperament and Pythagorean temperament. It allows performance in all keys (Werckmeister I (III)).                                                            |
|                                  | ARABIC     | Arabic temperament: This temperament is suitable for Arabic music.                                                                                                                                             |
|                                  |            |                                                                                                                                                                                                                |
| <b>Key</b><br>(Scale Tune Key)   | C–B        | Sets the keynote.                                                                                                                                                                                              |
| <b>C–B</b>                       | -64—+63    | Finely adjusts the pitch.                                                                                                                                                                                      |

## ZONE EFFECTS

Settings for zones 1–3 (UP1/UP2/LOW).

\* Effect-related settings.

### EQ

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

### MFX

| Parameter                               | Value                 | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FllwToneMFX</b><br>(Follow Tone MFX) | OFF, ON               | Turn this <b>“ON”</b> if you want to use the MFX settings of the tone. If this is <b>“OFF,”</b> you can edit the MFX type and parameters.<br><br>Press the <b>[Enter]</b> button to enter the MFX Edit screen and edit the MFX parameters. To exit the MFX Edit screen, press the <b>[EXIT]</b> button.<br><br>If FllwToneMfx is ON, the MFX settings of the tone are used, so you can't change the value.<br>➔ <b>“MFX/IFX Parameters”</b> (p. 21) |
| <b>Type</b><br>(MFX Type)               | Selects the MFX type. |                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Switch</b>                           | OFF, ON               | Turns MFX on/off.                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Cho Send</b><br>(Chorus Send Level)  | 0–127                 | Specifies the chorus send level of the sound after MFX is applied.<br><br>* If FllwToneMfx is ON, the MFX settings of the tone are used, so you can't change the value.                                                                                                                                                                                                                                                                             |
| <b>Rev Send</b><br>(Reverb Send Level)  | 0–127                 | Specifies the reverb send level of the sound after MFX is applied.<br><br>* If FllwToneMfx is ON, the MFX settings of the tone are used, so you can't change the value.                                                                                                                                                                                                                                                                             |

## SCENE EFFECTS

Settings for the effects applied to the entire scene.

### SYMPATHETIC RESO

These parameters adjust the resonance (sympathetic resonance) that occurs when you hold down the damper pedal. On an acoustic piano, holding down the damper pedal allows strings other than those that you play to resonate sympathetically with the played strings, creating a richly expansive resonance. This effect simulates that behavior.

| Parameter            | Value                    | Explanation                                                                                                                                      |
|----------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Switch</b>        | OFF, ON                  | With the ON setting, the effect is applied.                                                                                                      |
| <b>Depth</b>         | 0–127                    | Effect depth                                                                                                                                     |
| <b>Cabinet Reso</b>  | 0–127                    | Depth of the resonance when the damper pedal is not pressed.                                                                                     |
| <b>Atk LPF</b>       | 16–15000 [Hz],<br>BYPASS | Frequency of the filter that cuts the high-frequency portion of the input sound.<br>(BYPASS: no cut)                                             |
| <b>Atk HPF</b>       | BYPASS, 16–15000 [Hz]    | Frequency of the filter that cuts the low-frequency portion of the input sound.<br>(BYPASS: no cut)                                              |
| <b>AtkPkg Freq</b>   | 16–15000 [Hz]            | Center frequency of the filter that boosts/cuts the specified region of the input sound.                                                         |
| <b>AtkPkg Gain</b>   | -15--+15 [dB]            | Amount of boost/cut for the filter that boosts/cuts the specified region of the input sound.                                                     |
| <b>AtkPkg Q</b>      | 0.5, 1.0, 2.0, 4.0, 8.0  | Width of the frequency region boosted/cut by Peaking Gain (higher values make the region narrower).                                              |
| <b>Rev HF Damp</b>   | 16–15000 [Hz],<br>BYPASS | Frequency at which the high-frequency portion of the resonance sound is cut.<br>(BYPASS: no cut)                                                 |
| <b>Rev LF Damp</b>   | BYPASS, 16–15000 [Hz]    | Frequency at which the low-frequency portion of the resonance sound is cut.<br>(BYPASS: no cut)                                                  |
| <b>Aliquot Level</b> | 0–127                    | Adjusts the level of the sound of an acoustic piano's resonating aliquot strings (duplex scaling). Higher values make the resonant sound louder. |
| <b>Level</b>         | 0–127                    | Output Level                                                                                                                                     |

### IFX

These are settings for the IFX (insertion effect) of which the scene can use one instance.

| Parameter                              | Value                                                                                                                                                                                                                                                                                                                                 | Explanation                                                        |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>Type</b><br>(IFX Type)              | Selects the IFX type.<br><br>If you press the <b>[Enter]</b> button, you enter the IFX Edit screen where you can edit the IFX parameters. To leave the IFX Edit screen, press the <b>[EXIT]</b> button.<br><br>* The types and parameters that can be selected are the same for MFX and IFX.<br>➔ <b>“MFX/IFX Parameters”</b> (p. 21) |                                                                    |
| <b>Switch</b>                          | OFF, ON                                                                                                                                                                                                                                                                                                                               | Turns IFX on/off.                                                  |
| <b>Cho Send</b><br>(Chorus Send Level) | 0–127                                                                                                                                                                                                                                                                                                                                 | Specifies the chorus send level of the sound after MFX is applied. |
| <b>Rev Send</b><br>(Reverb Send Level) | 0–127                                                                                                                                                                                                                                                                                                                                 | Specifies the reverb send level of the sound after MFX is applied. |

## CHORUS

These parameters are chorus settings for each scene.

| Parameter                        | Value                                                                                                                                                                                                                      | Explanation                                                                                                  |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Source</b>                    | SCENE, SYS                                                                                                                                                                                                                 | Specifies whether the chorus settings follow the settings of the scene (SCENE) or the system settings (SYS). |
| <b>Type</b><br>(Chorus Type)     | If Source is <b>"SCENE,"</b> you can edit the chorus type and the other parameters.<br>In the chorus type page, press the <b>[Enter]</b> button to enter the chorus parameter page.<br>➔ <b>"CHORUS Parameter"</b> (p. 10) |                                                                                                              |
| <b>Switch</b>                    | OFF, ON                                                                                                                                                                                                                    | Turns chorus on/off.                                                                                         |
| <b>Level</b><br>(Chorus Level)   | 0–127                                                                                                                                                                                                                      | Specifies the output level of the sound to which chorus is applied.                                          |
| <b>Rev Send</b><br>(Reverb Send) | 0–127                                                                                                                                                                                                                      | Specifies the send level to reverb.                                                                          |

## CHORUS Parameter

### Chorus

This is a stereo chorus.

| Parameter       | Value | Explanation                                                          |
|-----------------|-------|----------------------------------------------------------------------|
| <b>Rate</b>     | 0–127 | Adjusts the rate of modulation.                                      |
| <b>Depth</b>    | 0–127 | Adjusts the depth of modulation.                                     |
| <b>Feedback</b> | 0–127 | Adjusts the level of the chorus sound that is returned to the input. |

### CE-1

This models the classic CE-1 chorus effect unit made by BOSS in years past. It produces a chorus sound with distinctive analog warmth.

| Parameter        | Value | Explanation                  |
|------------------|-------|------------------------------|
| <b>Intensity</b> | 0–127 | Adjusts the depth of chorus. |

### SDD-320

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

| Parameter   | Value              | Explanation        |
|-------------|--------------------|--------------------|
| <b>Mode</b> | 1–4, 1+4, 2+4, 3+4 | Switches the mode. |

### Delay

This is a stereo delay.

| Parameter                    | Value                    | Explanation                                                                                                                    |
|------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Dly Sync</b><br>(sync sw) | OFF, ON                  | If this is ON, the delay is synchronized to the tempo.                                                                         |
| <b>Dly Msec</b><br>(msec)    | 1–1300 [msec]            | Adjusts the delay time from the original sound until the delay sound is heard.                                                 |
| <b>Dly Note</b><br>(note)    | Note<br>➔ "Note" (p. 64) |                                                                                                                                |
| <b>Feedback</b>              | -98–+98 [%]              | Adjusts the proportion at which the delay sound is returned to the input (negative values: reverse phase).                     |
| <b>HF Damp</b>               | 200–8000 [Hz],<br>BYPASS | Adjusts the frequency above which the high-frequency portion of the delay sound returned to the input is cut (BYPASS: no cut). |

### T-Ctrl Dly

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

| Parameter                    | Value                    | Explanation                                                                                                                                                                                     |
|------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dly Sync</b><br>(sync sw) | OFF, ON                  | If this is on, the delay is synchronized to the tempo.                                                                                                                                          |
| <b>Dly Msec</b><br>(msec)    | 1–1300 [msec]            | Adjusts the delay time from the original sound until the delay sound is heard.                                                                                                                  |
| <b>Dly Note</b><br>(note)    | Note<br>➔ "Note" (p. 64) |                                                                                                                                                                                                 |
| <b>Acceleration</b>          | 0–15                     | Adjusts the duration between when you vary the delay time until it changes from the current delay time to the specified delay time. The speed of pitch change also changes with the delay time. |
| <b>Feedback</b>              | -98–+98 [%]              | Adjusts the proportion at which the delay sound is returned to the input (negative values: reverse phase).                                                                                      |
| <b>HF Damp</b>               | 200–8000 [Hz],<br>BYPASS | Adjusts the frequency above which the high-frequency portion of the delay sound returned to the input is cut (BYPASS: no cut).                                                                  |

### Delay → Trem

This applies tremolo to the delay sound.

| Parameter                    | Value                    | Explanation                                                                                                                    |
|------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Input</b>                 | MONAURAL                 | Mixes the input to mono.                                                                                                       |
|                              | STEREO                   | Inputs in stereo.                                                                                                              |
| <b>Dly Sync</b><br>(sync sw) | OFF, ON                  | If this is on, the delay is synchronized to the tempo.                                                                         |
| <b>Dly Msec</b><br>(msec)    | 1–1300 [msec]            | Adjusts the delay time from the original sound until the delay sound is heard.                                                 |
| <b>Dly Note</b><br>(note)    | Note<br>➔ "Note" (p. 64) |                                                                                                                                |
| <b>Feedback</b>              | -98–+98 [%]              | Adjusts the proportion at which the delay sound is returned to the input (negative values: reverse phase).                     |
| <b>HF Damp</b>               | 200–8000 [Hz],<br>BYPASS | Adjusts the frequency above which the high-frequency portion of the delay sound returned to the input is cut (BYPASS: no cut). |
| <b>Trm Switch</b>            | OFF, ON                  | Turns the tremolo effect on/off.                                                                                               |
| <b>Trm ModWave</b>           | Modulation Wave          |                                                                                                                                |
|                              | TRI                      | Triangle wave                                                                                                                  |
|                              | SQR                      | Square wave                                                                                                                    |
|                              | SIN                      | Sine wave                                                                                                                      |
|                              | SAW1                     | Sawtooth wave                                                                                                                  |
|                              | SAW2                     |                                                                                                                                |
|                              | TRP                      | Trapezoid wave                                                                                                                 |
| <b>Trm Sync</b><br>(sync sw) | OFF, ON                  | If this is ON, the tremolo is synchronized to the tempo.                                                                       |
| <b>Trm Hz</b><br>(Hz)        | 0.05–10.00 [Hz]          | Adjusts the rate at which tremolo is applied.                                                                                  |
| <b>Trm Note</b><br>(note)    | Note<br>➔ "Note" (p. 64) |                                                                                                                                |
| <b>Trm Depth</b>             | 0–127                    | Adjusts the depth to which tremolo is applied.                                                                                 |

## 2Tap PanDly

This produces delay sound in the two directions that you specify.

| Parameter                    | Value                    | Explanation                                                                                                                    |
|------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Dly Sync</b><br>(sync sw) | OFF, ON                  | If this is on, the delay is synchronized to the tempo.                                                                         |
| <b>Dly Msec</b><br>(msec)    | 1–1300 [msec]            | Adjusts the delay time from the original sound until the second delay sound is heard.                                          |
| <b>Dly Note</b><br>(note)    | Note<br>➔ “Note” (p. 64) |                                                                                                                                |
| <b>Feedback</b>              | -98–+98 [%]              | Adjusts the proportion at which the delay sound is returned to the input (negative values: reverse phase).                     |
| <b>HF Damp</b>               | 200–8000 [Hz],<br>BYPASS | Adjusts the frequency above which the high-frequency portion of the delay sound returned to the input is cut (BYPASS: no cut). |
| <b>Dly 1 Pan</b>             | L64–63R                  | Adjusts the panning of delay 1.                                                                                                |
| <b>Dly 2 Pan</b>             | L64–63R                  | Adjusts the panning of delay 2.                                                                                                |
| <b>Dly 1 Level</b>           | 0–127                    | Adjusts the volume of delay 1.                                                                                                 |
| <b>Dly 2 Level</b>           | 0–127                    | Adjusts the volume of delay 2.                                                                                                 |

## 3Tap PanDly

This produces delay sound in the three directions that you specify.

| Parameter                    | Value                    | Explanation                                                                                                                    |
|------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Dly Sync</b><br>(sync sw) | OFF, ON                  | If this is on, the delay is synchronized to the tempo.                                                                         |
| <b>Dly Msec</b><br>(msec)    | 1–2600 [msec]            | Adjusts the delay time from the original sound until the third delay sound is heard.                                           |
| <b>Dly Note</b><br>(note)    | Note<br>➔ “Note” (p. 64) |                                                                                                                                |
| <b>Feedback</b>              | -98–+98 [%]              | Adjusts the proportion at which the delay sound is returned to the input (negative values: reverse phase).                     |
| <b>HF Damp</b>               | 200–8000 [Hz],<br>BYPASS | Adjusts the frequency above which the high-frequency portion of the delay sound returned to the input is cut (BYPASS: no cut). |
| <b>Dly 1 Pan</b>             | L64–63R                  | Adjusts the panning of delay 1.                                                                                                |
| <b>Dly 2 Pan</b>             | L64–63R                  | Adjusts the panning of delay 2.                                                                                                |
| <b>Dly 3 Pan</b>             | L64–63R                  | Adjusts the panning of delay 3.                                                                                                |
| <b>Dly 1 Level</b>           | 0–127                    | Adjusts the volume of delay 1.                                                                                                 |
| <b>Dly 2 Level</b>           | 0–127                    | Adjusts the volume of delay 2.                                                                                                 |
| <b>Dly 3 Level</b>           | 0–127                    | Adjusts the volume of delay 3.                                                                                                 |

## REVERB

These are reverb settings for each scene.

| Parameter                      | Value                                                                                                                                                                                                             | Explanation                                                                                                  |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Source</b>                  | SCENE, SYS                                                                                                                                                                                                        | Specifies whether the reverb settings follow the settings of the scene (SCENE) or the system settings (SYS). |
| <b>Type</b><br>(Reverb Type)   | If Source is “ <b>SCENE</b> ,” you can edit the reverb type and parameters. In the reverb type page, press the <b>[Enter]</b> button to enter the reverb parameter page.<br>➔ “ <b>REVERB Parameter</b> ” (p. 11) |                                                                                                              |
| <b>Switch</b>                  | OFF, ON                                                                                                                                                                                                           | Turns the reverb on/off.                                                                                     |
| <b>Level</b><br>(Reverb Level) | 0–127                                                                                                                                                                                                             | Specifies the output level of the sound to which reverb is applied.                                          |

## REVERB Parameter

### INTEGRA7Rev

| Parameter        | Value                                                         | Explanation                                                                                                                                                             |
|------------------|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Char</b>      | 01: ROOM1<br>02: ROOM2<br>03: HALL1<br>04: HALL2<br>05: PLATE | Type of reverb<br>OFF: Reverb is not used<br>Room 1/2: Room<br>Hall 1/2: Hall<br>Plate: Plate                                                                           |
| <b>Pre Delay</b> | 0–100 [msec]                                                  | Adjusts the delay time from the original sound until the reverb sound is heard.                                                                                         |
| <b>Time</b>      | 0.1–10.0 [sec]                                                | Adjusts the length of time over which the reverb sound decays.                                                                                                          |
| <b>Density</b>   | 0–127                                                         | Adjusts the density of the reverb sound.                                                                                                                                |
| <b>Diffusion</b> | 0–127                                                         | With higher values of this parameter, the density of the reverb sound increases as time passes. (The effect of this setting is most pronounced with long reverb times.) |
| <b>LF Damp</b>   | 0–100                                                         | Adjusts the low-frequency portion of the reverb.                                                                                                                        |
| <b>HF Damp</b>   | 0–100                                                         | Adjusts the high-frequency portion of the reverb.                                                                                                                       |
| <b>Spread</b>    | 0–127                                                         | Adjusts the spread of the reverb sound.                                                                                                                                 |
| <b>Tone</b>      | 0–127                                                         | Adjusts the tonal character of the reverb sound.                                                                                                                        |

## Scene Parameter

### Warm Hall

| Parameter | Value                    | Explanation                                                                                                 |
|-----------|--------------------------|-------------------------------------------------------------------------------------------------------------|
| Pre Delay | 0–100 [msec]             | Adjusts the delay time from the original sound until the reverb sound is heard.                             |
| Time      | 0.3–30.0 [sec]           | Adjusts the length of time over which the reverb sound decays.                                              |
| Pre LPF   | 16–15000 [Hz],<br>BYPASS | Adjusts the frequency above which the high-frequency portion of the sound being input to the reverb is cut. |
| Pre HPF   | 16–15000 [Hz],<br>BYPASS | Adjusts the frequency below which the low-frequency portion of the sound being input to the reverb is cut.  |
| PreLpLPF  | 16–15000 [Hz],<br>BYPASS | Adjusts the frequency above which the high-frequency portion of the long reverb sound is cut.               |
| Diffusion | 0–127                    | Adjusts the time-varying change in the density of the reverb sound.                                         |
| HF Damp F | 1000–8000 [Hz]           | Adjusts the frequency above which the high-frequency portion of the reverb sound is cut.                    |
| HF Damp R | 0.1–1.0                  | Adjusts the amount of attenuation for the high-frequency portion of the reverb sound.                       |

### Hall

| Parameter | Value                     | Explanation                                                                                                                                                             |
|-----------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre Delay | 0.0–100.0 [msec]          | Adjusts the delay time from the original sound until the reverb sound is heard.                                                                                         |
| Time      | 0–127                     | Adjusts the length of time over which the reverb sound decays.                                                                                                          |
| Size      | 1–8                       | Adjusts the size of the room or hall.                                                                                                                                   |
| High Cut  | 160–12500 [Hz],<br>BYPASS | Adjusts the frequency above which the high-frequency portion of the final output sound is cut (BYPASS: no cut).                                                         |
| Density   | 0–127                     | Adjusts the density of the reverb sound.                                                                                                                                |
| Diffusion | 0–127                     | With higher values of this parameter, the density of the reverb sound increases as time passes. (The effect of this setting is most pronounced with long reverb times.) |
| LF Damp F | 50–4000 [Hz]              | Adjusts the frequency below which the low-frequency portion of the reverb sound is cut.                                                                                 |
| LF Damp G | -36–0 [dB]                | Adjusts the amount of attenuation for LF damp (0: no effect).                                                                                                           |
| HF Damp F | 4000–12500 [Hz]           | Adjusts the frequency above which the high-frequency portion of the reverb sound is cut.                                                                                |
| HF Damp G | -36–0 [dB]                | Adjusts the amount of attenuation for HF damp (0: no effect).                                                                                                           |

### GS Reverb

| Parameter | Value                                           | Explanation                                                                                              |
|-----------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Char      | ROOM1–3,<br>HALL1–2, PLATE,<br>DELAY, PAN-DELAY | Selects the type of reverb.                                                                              |
| Pre LPF   | 0–7                                             | Adjusts the amount of attenuation for the high-frequency portion of the sound being input to the reverb. |
| Time      | 0–127                                           | Adjusts the length of time over which the reverb sound decays.                                           |
| Feedback  | 0–127                                           | Adjusts the level at which the reverb sound is returned to the input.                                    |

### SRV-2000

| Parameter   | Value                                                                           | Explanation                                                                                                          |
|-------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| Selection   | Selects the type of reverb produced by the Roland SRV-2000 digital reverb unit. |                                                                                                                      |
|             | R0.3–R37                                                                        | Room reverb.<br>Higher values increase the size of the room.                                                         |
|             | H15–H37                                                                         | Hall reverb.<br>Higher values increase the size of the concert hall.                                                 |
|             | P-B                                                                             | Plate reverb.<br>This is a more flamboyant reverb sound than P-A.                                                    |
|             | P-A                                                                             | Plate reverb.                                                                                                        |
| Pre Delay   | 0–160                                                                           | Adjusts the delay time from the original sound until the reverb sound is heard.                                      |
| Time        | 0.1s–99.0s [msec]                                                               | Adjusts the length of time over which the reverb sound decays.                                                       |
| HF Damp     | 0.05–1.00                                                                       | Adjusts the high-frequency portion of the reverb.                                                                    |
| Density     | 0–9                                                                             | Adjusts the density of the late reverberation.                                                                       |
| Attack Gain | 0–9                                                                             | Adjusts the gain of the early reflections.                                                                           |
| Attack Time | 0–9                                                                             | Adjusts the time of the early reflections.                                                                           |
| ER Density  | 0–9                                                                             | Adjusts the density of the early reflections.                                                                        |
| ER Level    | 0–99                                                                            | Adjusts the volume of the early reflections.                                                                         |
| Low Freq    | 0.04–1.00 [kHz]                                                                 | Frequency of the low range.                                                                                          |
| Low Gain    | -24–+12 [dB]                                                                    | Gain of the low frequency range.                                                                                     |
| Mid Freq    | 0.25–9.99 [kHz]                                                                 | Specifies the center frequency of the mid-frequency region.                                                          |
| Mid Gain    | -24–+12 [dB]                                                                    | Adjusts the boost/cut of the mid-frequency range.                                                                    |
| Mid Q       | 0.2–9.0                                                                         | Specifies the bandwidth of the mid-frequency range.<br>Set a higher value for Q to narrow the range to be affected.  |
| High Freq   | 0.80–9.99 [kHz]                                                                 | Frequency of the high range.                                                                                         |
| High Gain   | -24–+12 [dB]                                                                    | Gain of the high frequency range.                                                                                    |
| HIGH Q      | 0.2–9.0                                                                         | Specifies the bandwidth of the high-frequency range.<br>Set a higher value for Q to narrow the range to be affected. |

## SRV-2000NL (NON-LINEAR)

| Parameter  | Value            | Explanation                                                                                                          |
|------------|------------------|----------------------------------------------------------------------------------------------------------------------|
| PreDelay   | 0–120            | Adjusts the delay time from the original sound until the reverb sound is heard.                                      |
| ReverbTime | -0.9–+99.0 [sec] | Adjusts the length of time over which the reverb sound decays.                                                       |
| GateTime   | 10–450           | Adjusts the length of time over which the reverb sound decays.                                                       |
| Low Freq   | 0.04–1.00 [kHz]  | Frequency of the low range.                                                                                          |
| Low Gain   | -24–+12 [dB]     | Gain of the low frequency range.                                                                                     |
| Mid Freq   | 0.25–9.99 [kHz]  | Specifies the center frequency of the mid-frequency region.                                                          |
| Mid Gain   | -24–+12 [dB]     | Adjusts the boost/cut of the mid-frequency range.                                                                    |
| Mid Q      | 0.2–9.0          | Specifies the bandwidth of the mid-frequency range.<br>Set a higher value for Q to narrow the range to be affected.  |
| HighFreq   | 0.80–9.99 [kHz]  | Frequency of the high range.                                                                                         |
| HighGain   | -24–+12 [dB]     | Gain of the high frequency range.                                                                                    |
| Hi Q       | 0.2–9.0          | Specifies the bandwidth of the high-frequency range.<br>Set a higher value for Q to narrow the range to be affected. |

## GM2 Reverb

| Parameter | Value                                                                         | Explanation                                                                                              |
|-----------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| Char      | SMALL ROOM<br>MEDIUM ROOM<br>LARGE ROOM<br>MEDIUM HALL<br>LARGE HALL<br>PLATE | Selects the type of reverb.                                                                              |
| Pre LPF   | 0–7                                                                           | Adjusts the amount of attenuation for the high-frequency portion of the sound being input to the reverb. |
| Time      | 0–127                                                                         | Adjusts the length of time over which the reverb sound decays.                                           |

# SYSTEM EFFECTS Parameter

Here's how to edit the settings of the currently selected system effects.

1. Press the [MENU] button.
2. Use the cursor [Λ] [V] buttons to select "SYSTEM EFFECT," and then press the [ENTER] button.
3. Use the cursor [<] [>] buttons to select the effect that you want to edit, use the cursor [Λ] [V] buttons to select a parameter, and use the [DEC] [INC] buttons to edit the value.

## SYS CHORUS

These are settings for the chorus effect that is applied to the entire system.

| Parameter        | Value                                                                                                                                                                      | Explanation                                                         |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Type             | Selects the type of chorus.<br>When you press the [Enter] button, the parameters for the selected type of chorus are shown.                                                |                                                                     |
| Switch           | OFF, ON                                                                                                                                                                    | Turns chorus on/off.                                                |
| Level            | 0–127                                                                                                                                                                      | Specifies the output level of the sound to which chorus is applied. |
| CHORUS Parameter | Specifies the parameters of the selected type of chorus. The available parameters differ depending on the type of chorus selected in Type.<br>➔ "CHORUS Parameter" (p. 10) |                                                                     |

## SYS REVERB

These are settings for the reverb that is applied to the entire system.

| Parameter        | Value                                                                                                                                                                      | Explanation                                                         |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Type             | Type of reverb<br>When you press the [Enter] button, the parameters for the selected type of reverb are shown.                                                             |                                                                     |
| Switch           | OFF, ON                                                                                                                                                                    | Turns the reverb on/off.                                            |
| Level            | 0–127                                                                                                                                                                      | Specifies the output level of the sound to which reverb is applied. |
| REVERB Parameter | Specifies the parameters of the selected type of reverb. The available parameters differ depending on the type of reverb selected in Type.<br>➔ "REVERB Parameter" (p. 11) |                                                                     |

## MASTER EQ

These are settings for the EQ that is applied to the entire system.

| Parameter | Value         | Explanation                                                                                                                    |
|-----------|---------------|--------------------------------------------------------------------------------------------------------------------------------|
| Switch    | OFF, ON       | Specifies whether the master EQ (an equalizer applied to the entire sound engine of the RD-88) is used (ON) or not used (OFF). |
| In Gain   | -24–+24 [dB]  | Adjusts the amount of boost/cut for the input to the EQ.                                                                       |
| Low Gain  | -24–+24 [dB]  | Gain of the low frequency range.                                                                                               |
| Low Freq  | 20–16000 [Hz] | Frequency of the low range.                                                                                                    |
| Mid1 Gain | -24–+24 [dB]  | Gain of the middle frequency range 1.                                                                                          |
| Mid1 Freq | 20–16000 [Hz] | Frequency of the middle range 1.                                                                                               |
| Mid1 Q    | 0.5–16.0      | Specifies the bandwidth of middle frequency range 1. Higher values make the bandwidth narrower.                                |
| Mid2 Gain | -24–+24 [dB]  | Gain of the middle frequency range 2.                                                                                          |
| Mid2 Freq | 20–16000 [Hz] | Frequency of the middle range 2.                                                                                               |
| Mid2 Q    | 0.5–16.0      | Specifies the bandwidth of middle frequency range 2. Higher values make the bandwidth narrower.                                |
| Mid3 Gain | -24–+24 [dB]  | Gain of the middle frequency range 3.                                                                                          |
| Mid3 Freq | 20–16000 [Hz] | Frequency of the middle range 3.                                                                                               |
| Mid3 Q    | 0.5–16.0      | Specifies the bandwidth of middle frequency range 3. Higher values make the bandwidth narrower.                                |
| High Gain | -24–+24 [dB]  | Gain of the high frequency range.                                                                                              |
| High Freq | 20–16000 [Hz] | Frequency of the high range.                                                                                                   |

## MASTER COMP

These are settings for the compressor that is applied to the entire system.

| Parameter   | Value                                              | Explanation                                                                                                                                                                                          |
|-------------|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switch      | OFF, ON                                            | Specifies whether the master compressor (a compressor that is applied to the entire sound engine of the RD-88) is used (ON) or not used (OFF).                                                       |
| Split Low   | 16–16000 [Hz]                                      | Specifies the frequency that separates the low-frequency (LOW) and mid-frequency (MID) regions.                                                                                                      |
| Split High  |                                                    | Specifies the frequency that separates the high-frequency (HIGH) and mid-frequency (MID) regions.                                                                                                    |
| Low Attack  | 0.1–100 [ms]                                       | Specifies the time from when input exceeds the Low Thres setting until the volume of the low-frequency region is compressed.                                                                         |
| Low Rels    | 10–1000 [ms]                                       | From a state in which compression is applied, this specifies the time after the input falls below the Low Thresh until the low-frequency region is no longer compressed.                             |
| Low Thres   | -60–0 [dB]                                         | Specifies the volume level at which compression of the low-frequency region begins.                                                                                                                  |
| Low Ratio   | 1: 1, 2: 1, 3: 1, 4: 1, 8: 1, 16: 1, 32: 1, INF: 1 | Specifies the compression ratio for the low-frequency region.                                                                                                                                        |
| Low Knee    | 0–30 [dB]                                          | This is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than Low Thres. Higher values produce a smoother transition. |
| Low Gain    | -24.0–+24.0 [dB]                                   | Specifies the output volume of the low-frequency region.                                                                                                                                             |
| Mid Attack  | 0.1–100 [ms]                                       | Specifies the time from when input exceeds the Mid Thres setting until the volume of the mid-frequency region is compressed.                                                                         |
| Mid Rels    | 10–1000 [ms]                                       | From a state in which compression is applied, this specifies the time after the input falls below the Mid Thresh setting until the mid-frequency region is no longer compressed.                     |
| Mid Thres   | -60–0 [dB]                                         | Specifies the volume level at which compression of the mid-frequency region begins.                                                                                                                  |
| Mid Ratio   | 1: 1, 2: 1, 3: 1, 4: 1, 8: 1, 16: 1, 32: 1, INF: 1 | Specifies the compression ratio for the mid-frequency region.                                                                                                                                        |
| Mid Knee    | 0–30 [dB]                                          | This is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than Mid Thres. Higher values produce a smoother transition. |
| Mid Gain    | -24.0–+24.0 [dB]                                   | Specifies the output volume of the mid-frequency region.                                                                                                                                             |
| High Attack | 0.1–100 [ms]                                       | Specifies the time from when input exceeds the High Thres setting until the volume of the high-frequency region is compressed.                                                                       |
| High Rels   | 10–1000 [ms]                                       | From a state in which compression is applied, this specifies the time after the input falls below the High Thresh setting until the high-frequency region is no longer compressed.                   |
| High Thres  | -60–0 [dB]                                         | Specifies the volume level at which compression of the high-frequency region begins.                                                                                                                 |

| Parameter  | Value                                              | Explanation                                                                                                                                                                                           |
|------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| High Ratio | 1: 1, 2: 1, 3: 1, 4: 1, 8: 1, 16: 1, 32: 1, INF: 1 | Specifies the compression ratio for the high-frequency region.                                                                                                                                        |
| High Knee  | 0–30 [dB]                                          | This is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than High Thres. Higher values produce a smoother transition. |
| High Gain  | -24.0–+24.0 [dB]                                   | Specifies the output volume of the high-frequency region.                                                                                                                                             |

# SYSTEM Parameter

Here you can edit the parameters that apply to the entire RD-88.

1. Press the [MENU] button.
2. Use the cursor [▲] [▼] buttons to select “SYSTEM,” and then press the [ENTER] button.
3. Use the cursor [▲] [▼] buttons to select the item that you want to edit, and press the [ENTER] button.
4. Use the cursor [▲] [▼] buttons to select the parameter that you want to edit, and use the [DEC] [INC] buttons to edit the value.

## GENERAL

| Parameter                                      | Value                    | Explanation                                                                                                                                            |
|------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MasterTune</b><br>(Master Tune)             | 415.3–466.2 [Hz]         | Tunes the entire unit. The displayed value is the frequency of the A4 key (middle A).                                                                  |
| <b>MasKeyShift</b><br>(Master Key Shift)       | -24–+24                  | Shifts the RD-88's overall pitch range in semitone steps.                                                                                              |
| <b>Tempo</b><br>(Tempo)                        | 20–250                   | Specifies the system tempo.                                                                                                                            |
| <b>Tempo Src</b><br>(Tempo Source)             | SCENE, SYS               | Specifies whether, when you switch scenes, the system tempo is used (SYS) or the tempo memorized in the scene is used (SCENE).                         |
| <b>Rhy Ptn Level</b><br>(Rhythm Pattern Level) | 0–127                    | Adjusts the volume of the rhythm pattern.                                                                                                              |
| <b>Song Level</b><br>(Song Player Level)       | 0–127                    | Adjusts the volume of the song on the USB flash drive.                                                                                                 |
| <b>Out Gain</b><br>(Output Gain)               | -12–+12 [dB]             | Adjusts the output gain.                                                                                                                               |
| <b>Auto Off</b><br>(Auto Off)                  | OFF, 30 [min], 240 [min] | Specifies a fixed time after which the power turns off automatically. If you don't want the power to turn off automatically, choose the “OFF” setting. |
| <b>LCD Contrast</b><br>(LCD Contrast)          | 1–10                     | Adjusts the contrast of the display.                                                                                                                   |
| <b>USB Driver</b><br>(USB Driver)              | GENERIC                  | Choose this if you want to use the standard USB driver that was included with your computer.                                                           |
|                                                | VENDOR                   | Choose this if you want to use a USB driver downloaded from the Roland website.                                                                        |
| <b>DamperPole</b><br>(Damper Pedal Polarity)   | STANDARD, REVERSE        | Specifies the polarity of the pedal connected to the Damper Pedal jack.                                                                                |

## KEY TOUCH

These are settings related to keyboard touch (for the entire system).

| Parameter             | Value     | Explanation                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Velo Crv</b>       | SPR LIGHT | An even lighter setting than LIGHT.                                                                                                                                                                                                                                                                                                                                       |
|                       | LIGHT     | Specifies a light keyboard touch response. Since you can produce fortissimo (ff) using an even lighter touch than with the MEDIUM setting, this feels as though the keyboard is lighter. This setting is easy to play even by those whose hands have less strength.                                                                                                       |
|                       | MEDIUM    | Specifies the standard keyboard touch response. This allows playing with the most natural touch. This is closest to the touch of an acoustic piano.                                                                                                                                                                                                                       |
|                       | HEAVY     | Specifies a heavy keyboard touch response. Since producing fortissimo (ff) requires you to play with a stronger touch than with the MEDIUM setting, this feels as though the keyboard is heavier. This setting allows even greater expressiveness when you play dynamically.                                                                                              |
|                       | SPR HEAVY | An even heavier setting than HEAVY.                                                                                                                                                                                                                                                                                                                                       |
| <b>Velo Offset</b>    | -10–+9    | Finely adjusts the keyboard touch response in greater detail than the Velocity Curve setting. This lets you specify detailed settings between the various Velocity Curve values. Higher values make the touch feel heavier.<br><br>If this value exceeds the upper or lower limit, the Velocity Curve also switches automatically between its five values as appropriate. |
| <b>Velocity</b>       | REAL,     | The volume and character of the sound responds to your keyboard playing dynamics.                                                                                                                                                                                                                                                                                         |
|                       | 1–127     | The volume and character of the sound remains fixed regardless of your keyboard playing dynamics.                                                                                                                                                                                                                                                                         |
| <b>Velo Dly Sens</b>  | -63–+63   | Specifies the delay from the moment you press the key until the sound is heard.<br><br>Negative values delay the timing at which the sound is heard when you press the key strongly. Positive values delay the timing at which the sound is heard when you press the key softly.                                                                                          |
| <b>Velo Keyfollow</b> | -63–+63   | Specifies how keyboard touch is affected by the keyboard range.<br><br>With higher values, the keyboard feels heavier as you play upward and lighter as you play downward.                                                                                                                                                                                                |
| <b>KeyOff Pos</b>     | STANDARD  | Note-off occurs at the same key depth as a conventional piano.                                                                                                                                                                                                                                                                                                            |
|                       | DEEP      | Note-off occurs at a deeper key depth. This is appropriate for sounds such as electric piano.                                                                                                                                                                                                                                                                             |

## ASSIGN

These settings specify the functions that are assigned to the various jacks (for the entire system).

### PEDAL

| Parameter                               | Value                   | Explanation                                                                  |
|-----------------------------------------|-------------------------|------------------------------------------------------------------------------|
| <b>FC1</b><br>(FC1 Function)            | OFF                     | No function is assigned.                                                     |
|                                         | CC01–31, 32(OFF), 33–95 | Controller number 1–31, 32, 33–95                                            |
|                                         | AFT                     | Aftertouch                                                                   |
|                                         | BEND DOWN               | Lower the pitch.                                                             |
|                                         | BEND UP                 | Raise the pitch.                                                             |
| <b>FC1 Pole</b><br>(FC1 Pedal Polarity) | STANDARD,<br>REVERSE    | Specifies the polarity of the pedal that is connected to the FC1 PEDAL jack. |
| <b>FC2</b><br>(FC2 Function)            | OFF                     | No function is assigned.                                                     |
|                                         | CC01–31, 32(OFF), 33–95 | Controller number 1–31, 32, 33–95                                            |
|                                         | AFT                     | Aftertouch                                                                   |
|                                         | BEND DOWN               | Lower the pitch.                                                             |
|                                         | BEND UP                 | Raise the pitch.                                                             |
| <b>FC2 Pole</b><br>(FC2 Pedal Polarity) | STANDARD,<br>REVERSE    | Specifies the polarity of the pedal that is connected to the FC2 PEDAL jack. |

### WHEEL

| Parameter                          | Value                   | Explanation                       |
|------------------------------------|-------------------------|-----------------------------------|
| <b>Wheel1</b><br>(Wheel1 Function) | OFF                     | No function is assigned.          |
|                                    | CC01–31, 32(OFF), 33–95 | Controller number 1–31, 32, 33–95 |
|                                    | AFT                     | Aftertouch                        |
|                                    | PITCH BEND              | Raise or lower the pitch.         |
| <b>Wheel2</b><br>(Wheel2 Function) | OFF                     | No function is assigned.          |
|                                    | CC01–31, 32(OFF), 33–95 | Controller number 1–31, 32, 33–95 |
|                                    | AFT                     | Aftertouch                        |
|                                    | BEND DOWN               | Lower the pitch.                  |
|                                    | BEND UP                 | Raise the pitch.                  |

### KNOB

| Parameter                                                   | Value                   | Explanation                       |
|-------------------------------------------------------------|-------------------------|-----------------------------------|
| <b>Knob1–Knob8</b><br><b>Knob1 Function–Knob 8 Function</b> | OFF                     | No function is assigned.          |
|                                                             | CC01–31, 32(OFF), 33–95 | Controller number 1–31, 32, 33–95 |
|                                                             | AFT                     | Aftertouch                        |
|                                                             | BEND DOWN               | Lower the pitch.                  |
|                                                             | BEND UP                 | Raise the pitch.                  |

## MIDI

## GENERAL

| Parameter     | Value                                | Explanation                                                                                                                                                                                                                                                        |
|---------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ctrl Ch       | 1–16, OFF                            | Specifies the MIDI receive channel that is used when an external MIDI device transmits MIDI messages (program change / bank select) to switch scenes.<br><br>If you don't want to switch RD-88 scenes from a connected MIDI device, turn this <b>"OFF."</b>        |
| Ctrl Src Sel  | SYS                                  | The system settings for CtrlSrc1–4 are used for tone control.                                                                                                                                                                                                      |
|               | SCENE                                | The scene settings for CtrlSrc1–4 are used for tone control.                                                                                                                                                                                                       |
| SysCtrlSrc1–4 | OFF, CC01–CC31, CC33–CC95, BEND, AFT | Specifies the MIDI messages that are used for system control.<br><br>System control settings specify the MIDI messages used by the entire RD-88 system to control the volume and tonal character.<br><br>You can specify up to four MIDI messages for control use. |
| USB-MIDIThru  | OFF, ON                              | Specifies whether MIDI messages received from the USB COMPUTER port are transmitted without change from the MIDI OUT connector and USB COMPUTER port (ON) or not transmitted (OFF).                                                                                |
| Remote Kbd    | OFF, ON                              | Turn this <b>"ON"</b> if you are using an external MIDI keyboard instead of the keyboard of the RD-88. In this case, the MIDI transmit channel of the external MIDI keyboard can be any channel. Normally you will leave this <b>"OFF."</b>                        |
| Device ID     | 17–32                                | When transmitting and receiving system exclusive messages, the device ID numbers of both devices must match.                                                                                                                                                       |

## MIDI TX

| Parameter | Value   | Explanation                                                                                                            |
|-----------|---------|------------------------------------------------------------------------------------------------------------------------|
| Tx PC     | OFF, ON | Specifies whether program change messages are transmitted (ON) or not transmitted (OFF).                               |
| Tx Bank   | OFF, ON | Specifies whether bank select messages are transmitted (ON) or not transmitted (OFF).                                  |
| Tx Edit   | OFF, ON | Specifies whether edits for scene settings are transmitted as system exclusive messages (ON) or not transmitted (OFF). |

## MIDI RX

| Parameter    | Value   | Explanation                                                                          |
|--------------|---------|--------------------------------------------------------------------------------------|
| Rx PC        | OFF, ON | Specifies whether program change messages are received (ON) or not received (OFF).   |
| Rx Bank      | OFF, ON | Specifies whether bank select messages are received (ON) or not received (OFF).      |
| Rx Exclusive | OFF, ON | Specifies whether system exclusive messages are received (ON) or not received (OFF). |

## LOCAL SW

| Parameter | Value   | Explanation                                                                                                                                                                            |
|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Local Sw  | OFF, ON | Specifies whether the keyboard of the RD-88 will play the internal sound engine (ON) or will not play it (OFF).<br><br>Turn this OFF if you want to play only an external MIDI device. |

## USB AUDIO

| Parameter       | Value      | Explanation                                                                                                                                                                                                                       |
|-----------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Audio In Level  | 0–127      | Adjusts the input level of USB audio.                                                                                                                                                                                             |
| Audio Out Level | 0–127      | Adjusts the output level of USB audio.                                                                                                                                                                                            |
| Audio Out Src   | MIX, INPUT | Specify <b>"INPUT"</b> if you want the USB audio output to output only the audio of the LINE/MIC input. If this is set to <b>"MIX,"</b> the audio from both the RD-88 itself and from the LINE/MIC input is output via USB audio. |
| Audio Thru      | OFF, ON    | Specifies whether the input from USB audio is sent through to USB audio output (ON) or not sent through (OFF).<br>* If this is set to <b>"ON,"</b> take care that an audio loop does not occur on your PC (DAW).                  |

## SCALE TUNE

| Parameter                 | Value     | Explanation                                                                                                                                                                                                    |
|---------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type<br>(Scale Tune Type) | CUSTOM    | Custom: Allows you to specify a custom temperament.                                                                                                                                                            |
|                           | EQUAL     | Equal temperament: This temperament divides the octave into 12 equal parts. Slight inharmonicity is equally present in all intervals.                                                                          |
|                           | JUST-MAJ  | Just intonation (major): This temperament produces pure fifths and thirds. It is not suitable for melodic playing and does not allow modulation to another key, but produces beautiful-sounding chords.        |
|                           | JUST-MIN  | Just intonation (minor): Just intonation differs between major and minor. This produces the same effect as <b>"Just intonation (major)"</b> but for a minor key.                                               |
|                           | PYTHAGORE | Pythagorean temperament: This is based on the theories of the philosopher Pythagoras, and eliminates inharmonicity in the fourth and fifth. Third interval chords are imperfect, but melodies will sound good. |
|                           | KIRNBERGE | Kirnberger: This temperament improves meantone temperament and just intonation to allow greater freedom of modulation. It allows performance in all keys (Type III).                                           |
|                           | MEANTONE  | Meantone temperament: This temperament is a partial compromise of just intonation that allows modulation.                                                                                                      |
|                           | WERCKMEIS | Werckmeister: This temperament combines meantone temperament and Pythagorean temperament. It allows performance in all keys (Werckmeister I (III)).                                                            |
| Key<br>(Scale Tune Key)   | ARABIC    | Arabic temperament: This temperament is suitable for Arabic music.                                                                                                                                             |
|                           | C–B       | Sets the keynote.                                                                                                                                                                                              |
| C–B                       | –64–+63   | Finely adjusts the pitch.                                                                                                                                                                                      |

# INPUT SETTING

These are settings for LINE/MIC Input.

## GENERAL

| Parameter   | Value   | Explanation                                                                                                                   |
|-------------|---------|-------------------------------------------------------------------------------------------------------------------------------|
| Input Level | 0–127   | Adjusts the level of the LINE/MIC input.                                                                                      |
| Mic Att Sw  | OFF, ON | Turn this ON if you want to lower the mic input gain. If the mic input is distorted, turn this ON and adjust the Input Level. |

## INPUT REVERB

These are settings for the input reverb.

| Parameter | Value                                                                                                                                                 | Explanation                                     |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Type      | Type of reverb<br>When you press the <b>[Enter]</b> button, the parameters for the selected type of reverb are shown.<br>➡ "REVERB Parameter" (p. 11) |                                                 |
| Switch    | OFF, ON                                                                                                                                               | Turns on/off the reverb for the LINE/MIC input. |
| Level     | 0–127                                                                                                                                                 | Adjusts the reverb level.                       |

## INPUT EQ

These are settings for the input EQ.

| Parameter | Value         | Explanation                                                                                                                    |
|-----------|---------------|--------------------------------------------------------------------------------------------------------------------------------|
| Switch    | OFF, ON       | Specifies whether the master EQ (an equalizer applied to the entire sound engine of the RD-88) is used (ON) or not used (OFF). |
| In Gain   | -24→+24 [dB]  | Adjusts the amount of boost/cut for the input to the EQ.                                                                       |
| Low Gain  | -24→+24 [dB]  | Gain of the low frequency range.                                                                                               |
| Low Freq  | 20–16000 [Hz] | Frequency of the low range.                                                                                                    |
| Mid1 Gain | -24→+24 [dB]  | Gain of the middle frequency range 1.                                                                                          |
| Mid1 Freq | 20–16000 [Hz] | Frequency of the middle range 1.                                                                                               |
| Mid1 Q    | 0.5–16.0      | Specifies the bandwidth of middle frequency range 1. Higher values make the bandwidth narrower.                                |
| Mid2 Gain | -24→+24 [dB]  | Gain of the middle frequency range 2.                                                                                          |
| Mid2 Freq | 20–16000 [Hz] | Frequency of the middle range 2.                                                                                               |
| Mid2 Q    | 0.5–16.0      | Specifies the bandwidth of middle frequency range 2. Higher values make the bandwidth narrower.                                |
| Mid3 Gain | -24→+24 [dB]  | Gain of the middle frequency range 3.                                                                                          |
| Mid3 Freq | 20–16000 [Hz] | Frequency of the middle range 3.                                                                                               |
| Mid3 Q    | 0.5–16.0      | Specifies the bandwidth of middle frequency range 3. Higher values make the bandwidth narrower.                                |
| High Gain | -24→+24 [dB]  | Gain of the high frequency range.                                                                                              |
| High Freq | 20–16000 [Hz] | Frequency of the high range.                                                                                                   |

# MFX/IFX Parameters

MFX/IFX provides 79 different effect types.

Some of the effect types connect two or more types of effect in series.

## Thru

L in → L out

R in → R out

## Equalizer

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

L in → 4-Band EQ → L out

R in → 4-Band EQ → R out

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

## Spectrum

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

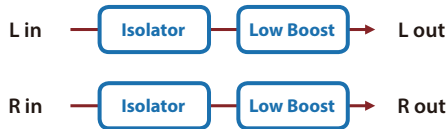
L in → Spectrum → L out

R in → Spectrum → R out

| Parameter                         | Value                   | Explanation                                                                          |
|-----------------------------------|-------------------------|--------------------------------------------------------------------------------------|
| <b>Band1</b><br>(Band1 (250 Hz))  | -15--+15 [dB]           | Gain of each frequency band                                                          |
| <b>Band2</b><br>(Band2 (500 Hz))  |                         |                                                                                      |
| <b>Band3</b><br>(Band3 (1000 Hz)) |                         |                                                                                      |
| <b>Band4</b><br>(Band4 (1250 Hz)) |                         |                                                                                      |
| <b>Band5</b><br>(Band5 (2000 Hz)) |                         |                                                                                      |
| <b>Band6</b><br>(Band6 (3150 Hz)) |                         |                                                                                      |
| <b>Band7</b><br>(Band7 (4000 Hz)) |                         |                                                                                      |
| <b>Band8</b><br>(Band8 (8000 Hz)) |                         |                                                                                      |
| <b>Q</b>                          | 0.5, 1.0, 2.0, 4.0, 8.0 | Simultaneously adjusts the width of the adjusted ranges for all the frequency bands. |
| <b>Level</b>                      | 0–127                   | Output Level                                                                         |

## Isolator

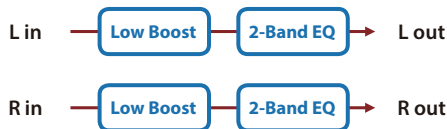
This is an equalizer which cuts the volume greatly, allowing you to add a special effect to the sound by cutting the volume in varying ranges.



| Parameter                                   | Value       | Explanation                                                                                                                                                                                         |
|---------------------------------------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Low Level</b><br>(Boost/Cut Low)         | -60~+4 [dB] | These boost and cut each of the High, Middle, and Low frequency ranges.<br>At -60 dB, the sound becomes inaudible. 0 dB is equivalent to the input level of the sound.                              |
| <b>Mid Level</b><br>(Boost/Cut Mid)         | -60~+4 [dB] |                                                                                                                                                                                                     |
| <b>High Level</b><br>(Boost/Cut High)       | -60~+4 [dB] |                                                                                                                                                                                                     |
| <b>Low AP Sw</b><br>(Anti Phase Low Switch) | OFF, ON     | Turns the Anti-Phase function on and off for the Low frequency ranges.<br>When turned on, the counter-channel of stereo sound is inverted and added to the signal.                                  |
| <b>Low AP Lv</b><br>(Anti Phase Low Level)  | 0~127       | Adjusts the level settings for the Low frequency ranges.<br>Adjusting this level for certain frequencies allows you to lend emphasis to specific parts (This is effective only for stereo source.). |
| <b>Mid AP Sw</b><br>(Anti Phase Mid Switch) | OFF, ON     | Settings of the Anti-Phase function for the Middle frequency ranges.                                                                                                                                |
| <b>Mid AP Lv</b><br>(Anti Phase Mid Level)  | 0~127       | The parameters are the same as for the Low frequency ranges.                                                                                                                                        |
| <b>Boost Sw</b><br>(Low Boost Switch)       | OFF, ON     | Turns Low Booster on/off.<br>This emphasizes the bottom to create a heavy bass sound.                                                                                                               |
| <b>Boost Lv</b><br>(Low Boost Level)        | 0~127       | Increasing this value gives you a heavier low end.<br>Depending on the Isolator and filter settings this effect may be hard to distinguish.                                                         |
| <b>Level</b>                                | 0~127       | Output Level                                                                                                                                                                                        |

## Low Boost

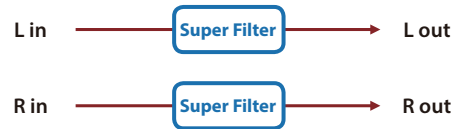
Boosts the volume of the lower range, creating powerful lows.



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

## SuperFilter

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



| Parameter                                | Value                                         | Explanation                                                                                                                                                                                                                                                                               |
|------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Type</b><br>(Filter Type)             | LPF, BPF, HPF, NOTCH                          | Type of filter<br>Frequency range that will pass through each filter<br>LPF: Frequencies below the cutoff<br>BPF: Frequencies in the region of the cutoff<br>HPF: Frequencies above the cutoff<br>NOTCH: Frequencies other than the region of the cutoff                                  |
| <b>Slope</b><br>(Filter Slope)           | -12, -24, -36 [dB]                            | Amount of attenuation per octave<br>-12 dB: Gentle, -24 dB: Steep, -36 dB: Extremely steep                                                                                                                                                                                                |
| <b>Cutoff</b><br>(Filter Cutoff)         | 0~127                                         | Cutoff frequency of the filter<br>Increasing this value will raise the cutoff frequency.                                                                                                                                                                                                  |
| <b>Resonance</b><br>(Filter Resonance)   | 0~100                                         | Filter resonance level<br>Increasing this value will emphasize the region near the cutoff frequency.                                                                                                                                                                                      |
| <b>Gain</b><br>(Filter Gain)             | 0~+12 [dB]                                    | Amount of boost for the filter output                                                                                                                                                                                                                                                     |
| <b>Mod Sw</b><br>(Modulation Switch)     | OFF, ON                                       | On/off switch for cyclic change                                                                                                                                                                                                                                                           |
| <b>Mod Wave</b><br>(Modulation Wave)     | TRI, SQR, SIN, SAW1, SAW2<br><br>SAW1<br>SAW2 | How the cutoff frequency will be modulated<br><b>TRI</b> : Triangle wave<br><b>SQR</b> : Square wave<br><b>SIN</b> : Sine wave<br>SAW1: Sawtooth wave (upward)<br>SAW2: Sawtooth wave (downward)<br> |
| <b>Rate Sync</b><br>(Rate (sync switch)) | OFF, ON                                       | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                                                                                                                                                   |
| <b>Rate</b><br>(Rate (Hz))               | 0.05~10.00 [Hz]                               | Frequency of modulation                                                                                                                                                                                                                                                                   |
| <b>Rate Note</b><br>(Rate (note))        | Note<br>➔ "Note" (p. 64)                      |                                                                                                                                                                                                                                                                                           |
| <b>Depth</b>                             | 0~127                                         | Depth of modulation                                                                                                                                                                                                                                                                       |
| <b>Attack</b>                            | 0~127                                         | Speed at which the cutoff frequency will change This is effective if Modulation Wave is SQR, SAW1, or SAW2.                                                                                                                                                                               |
| <b>Level</b>                             | 0~127                                         | Output Level                                                                                                                                                                                                                                                                              |

## Step Filter

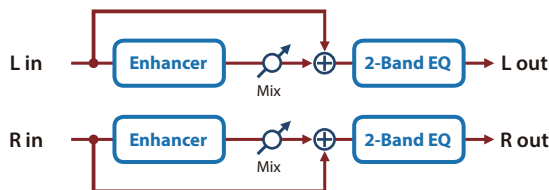
This is a filter whose cutoff frequency can be modulated in steps. You can specify the pattern by which the cutoff frequency will change.



| Parameter                                | Value                    | Explanation                                                                                                                                                                                                                                              |
|------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1–16</b>                         | 0–127                    | Cutoff frequency at each step                                                                                                                                                                                                                            |
| <b>Rate Sync</b><br>(Rate (sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                                                                                                                  |
| <b>Rate</b><br>(Rate (Hz))               | 0.05–10.00 [Hz]          | Frequency of modulation                                                                                                                                                                                                                                  |
| <b>Rate Note</b><br>(Rate (note))        | Note<br>➔ "Note" (p. 64) |                                                                                                                                                                                                                                                          |
| <b>Attack</b>                            | 0–127                    | Speed at which the cutoff frequency changes between steps                                                                                                                                                                                                |
| <b>Type</b><br>(Filter Type)             | LPF, BPF, HPF, NOTCH     | Type of filter<br>Frequency range that will pass through each filter<br>LPF: Frequencies below the cutoff<br>BPF: Frequencies in the region of the cutoff<br>HPF: Frequencies above the cutoff<br>NOTCH: Frequencies other than the region of the cutoff |
| <b>Slope</b><br>(Filter Slope)           | -12, -24, -36 [dB]       | Amount of attenuation per octave<br>-12 dB: Gentle, -24 dB: Steep, -36 dB: Extremely steep                                                                                                                                                               |
| <b>Reso</b><br>(Filter Resonance)        | 0–127                    | Filter resonance level<br>Increasing this value will emphasize the region near the cutoff frequency.                                                                                                                                                     |
| <b>Gain</b><br>(Filter Gain)             | 0–+12 [dB]               | Amount of boost for the filter output                                                                                                                                                                                                                    |
| <b>Level</b>                             | 0–127                    | Output Level                                                                                                                                                                                                                                             |

## Enhancer

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



| Parameter        | Value        | Explanation                                      |
|------------------|--------------|--------------------------------------------------|
| <b>Sens</b>      | 0–127        | Sensitivity of the enhancer                      |
| <b>Mix</b>       | 0–127        | Level of the overtones generated by the enhancer |
| <b>Low Gain</b>  | -15–+15 [dB] | Amount of boost/cut for the low-frequency range  |
| <b>High Gain</b> | -15–+15 [dB] | Amount of boost/cut for the high-frequency range |
| <b>Level</b>     | 0–127        | Output Level                                     |

## Auto Wah

Cyclically controls a filter to create cyclic change in timbre.

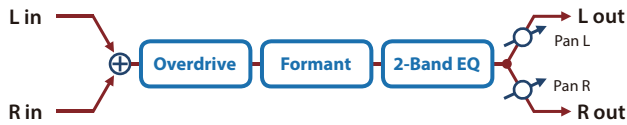


0

| Parameter                                | Value                    | Explanation                                                                                                                                                |
|------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mode</b><br>(Filter Type)             | LPF, BPF                 | Type of filter<br>LPF: The wah effect will be applied over a wide frequency range.<br>BPF: The wah effect will be applied over a narrow frequency range.   |
| <b>Manual</b>                            | 0–127                    | Center frequency at which the wah effect is applied                                                                                                        |
| <b>Peak</b>                              | 0–127                    | Width of the frequency region at which the wah effect is applied<br>Increasing this value will make the frequency region narrower.                         |
| <b>Sens</b>                              | 0–127                    | Sensitivity with which the filter is modified                                                                                                              |
| <b>Polarity</b>                          | UP, DOWN                 | Direction in which the filter will move<br>UP: The filter will change toward a higher frequency.<br>DOWN: The filter will change toward a lower frequency. |
| <b>Rate Sync</b><br>(Rate (sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                    |
| <b>Rate</b><br>(Rate (Hz))               | 0.05–10.00 [Hz]          | Frequency of modulation                                                                                                                                    |
| <b>Rate Note</b><br>(Rate (note))        | Note<br>➔ "Note" (p. 64) |                                                                                                                                                            |
| <b>Depth</b>                             | 0–127                    | Depth at which the wah effect is modulated                                                                                                                 |
| <b>Phase</b>                             | 0–180 [deg]              | Adjusts the degree of phase shift of the left and right sounds when the wah effect is applied.                                                             |
| <b>Low Gain</b>                          | -15–+15 [dB]             | Amount of boost/cut for the low-frequency range                                                                                                            |
| <b>High Gain</b>                         | -15–+15 [dB]             | Amount of boost/cut for the high-frequency range                                                                                                           |
| <b>Level</b>                             | 0–127                    | Output Level                                                                                                                                               |

## Humanizer

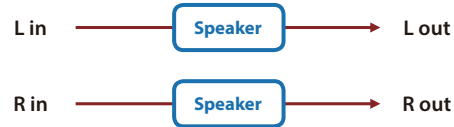
Adds a vowel character to the sound, making it similar to a human voice.



| Parameter                                    | Value                    | Explanation                                                                                                                                                                   |
|----------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Drive Sw</b><br>(Drive Switch)            | OFF, ON                  | Overdrive on/off                                                                                                                                                              |
| <b>Drive</b>                                 | 0–127                    | Degree of distortion<br>Also changes the volume.                                                                                                                              |
| <b>Vowel1</b>                                | a, e, i, o, u            | Selects the vowel.                                                                                                                                                            |
| <b>Vowel2</b>                                | a, e, i, o, u            |                                                                                                                                                                               |
| <b>Rate Sync</b><br>(Rate (sync switch))     | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ “Tempo” (p. 16)                                                                                       |
| <b>Rate</b><br>(Rate (Hz))                   | 0.05–10.00 [Hz]          | Frequency at which the two vowels switch                                                                                                                                      |
| <b>Rate Note</b><br>(Rate (note))            | Note<br>➔ “Note” (p. 64) |                                                                                                                                                                               |
| <b>Depth</b>                                 | 0–127                    | Effect depth                                                                                                                                                                  |
| <b>In Sync Sw</b><br>(Input Sync Switch)     | OFF, ON                  | LFO reset on/off<br>Determines whether the LFO for switching the vowels is reset by the input signal (ON) or not (OFF).                                                       |
| <b>InSyncThres</b><br>(Input Sync Threshold) | 0–127                    | Volume level at which reset is applied                                                                                                                                        |
| <b>Manual</b>                                | 0–100                    | Point at which Vowel 1/2 switch<br>0–49: Vowel 1 will have a longer duration.<br>50: Vowel 1 and 2 will be of equal duration.<br>51–100: Vowel 2 will have a longer duration. |
| <b>Low Gain</b>                              | -15–+15 [dB]             | Amount of boost/cut for the low-frequency range                                                                                                                               |
| <b>High Gain</b>                             | -15–+15 [dB]             | Amount of boost/cut for the high-frequency range                                                                                                                              |
| <b>Pan</b>                                   | L64–63R                  | Stereo location of the output sound                                                                                                                                           |
| <b>Level</b>                                 | 0–127                    | Output Level                                                                                                                                                                  |

## Speaker Sim (Speaker Simulator)

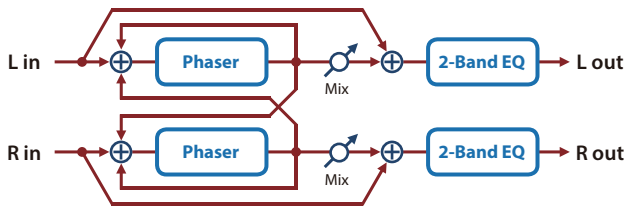
Simulates the speaker type and mic settings used to record the speaker sound.



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

## Phaser 1

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

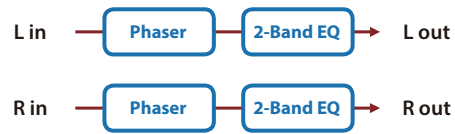


| Parameter                                | Value                      | Explanation                                                                                                                                                                                                                                                                                                    |
|------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mode</b>                              | 4-STAGE, 8-STAGE, 12-STAGE | Number of stages in the phaser                                                                                                                                                                                                                                                                                 |
| <b>Manual</b>                            | 0–127                      | Adjusts the basic frequency from which the sound will be modulated.                                                                                                                                                                                                                                            |
| <b>Rate Sync</b><br>(Rate (sync switch)) | OFF, ON                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                                                                                                                                                                        |
| <b>Rate</b><br>(Rate (Hz))               | 0.05–10.00 [Hz]            | Frequency of modulation                                                                                                                                                                                                                                                                                        |
| <b>Rate Note</b><br>(Rate (note))        | Note<br>➔ "Note" (p. 64)   |                                                                                                                                                                                                                                                                                                                |
| <b>Depth</b>                             | 0–127                      | Depth of modulation                                                                                                                                                                                                                                                                                            |
| <b>Polarity</b>                          | INVERSE, SYNCHRO           | Selects whether the left and right phase of the modulation will be the same or the opposite.<br>INVERSE: The left and right phase will be opposite.<br>When using a mono source, this spreads the sound.<br>SYNCHRO: The left and right phase will be the same.<br>Select this when inputting a stereo source. |
| <b>Resonance</b>                         | 0–127                      | Amount of feedback                                                                                                                                                                                                                                                                                             |
| <b>Feedback</b><br>(Cross Feedback)      | -98–+98 [%]                | Adjusts the proportion of the phaser sound that is fed back into the effect.<br>Negative (-) settings will invert the phase.                                                                                                                                                                                   |
| <b>Mix</b>                               | 0–127                      | Level of the phase-shifted sound                                                                                                                                                                                                                                                                               |
| <b>Low Gain</b>                          | -15–+15 [dB]               | Amount of boost/cut for the low-frequency range                                                                                                                                                                                                                                                                |
| <b>High Gain</b>                         | -15–+15 [dB]               | Amount of boost/cut for the high-frequency range                                                                                                                                                                                                                                                               |
| <b>Level</b>                             | 0–127                      | Output Level                                                                                                                                                                                                                                                                                                   |

## Phaser 2

This simulates an analog phaser of the past.

It is particularly suitable for electric piano.

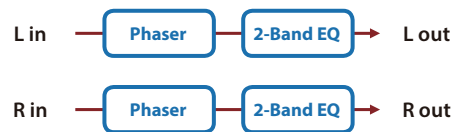


| Parameter        | Value        | Explanation                                      |
|------------------|--------------|--------------------------------------------------|
| <b>Rate</b>      | 0–100        | Frequency of modulation                          |
| <b>Color</b>     | 1, 2         | Modulation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

## Phaser 3

This simulates a different analog phaser than Phaser 2.

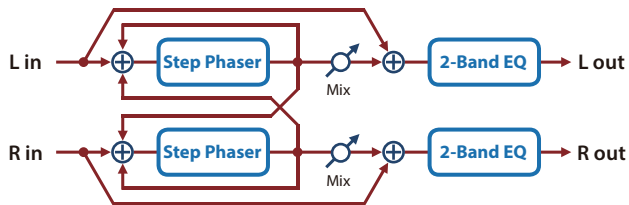
It is particularly suitable for electric piano.



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

## Step Phaser

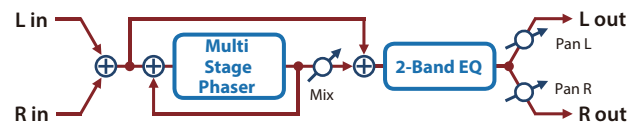
The phaser effect will be varied gradually.



| Parameter                                       | Value                      | Explanation                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mode</b>                                     | 4-STAGE, 8-STAGE, 12-STAGE | Number of stages in the phaser                                                                                                                                                                                                                                                                                 |
| <b>Manual</b>                                   | 0–127                      | Adjusts the basic frequency from which the sound will be modulated.                                                                                                                                                                                                                                            |
| <b>Rate Sync</b><br>(Rate (sync switch))        | OFF, ON                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                                                                                                                                                                        |
| <b>Rate Hz</b><br>(Rate (Hz))                   | 0.05–10.00 [Hz]            | Frequency of modulation                                                                                                                                                                                                                                                                                        |
| <b>Rate Note</b><br>(Rate (note))               | Note<br>➔ "Note" (p. 64)   |                                                                                                                                                                                                                                                                                                                |
| <b>Depth</b>                                    | 0–127                      | Depth of modulation                                                                                                                                                                                                                                                                                            |
| <b>Polarity</b>                                 | INVERSE, SYNCHRO           | Selects whether the left and right phase of the modulation will be the same or the opposite.<br>INVERSE: The left and right phase will be opposite.<br>When using a mono source, this spreads the sound.<br>SYNCHRO: The left and right phase will be the same.<br>Select this when inputting a stereo source. |
| <b>Resonance</b>                                | 0–127                      | Amount of feedback                                                                                                                                                                                                                                                                                             |
| <b>Feedback</b><br>(Cross Feedback)             | -98–+98 [%]                | Adjusts the proportion of the phaser sound that is fed back into the effect.<br>Negative (-) settings will invert the phase.                                                                                                                                                                                   |
| <b>S Rate Sync</b><br>(Step Rate (sync switch)) | OFF, ON                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                                                                                                                                                                        |
| <b>S. Rate</b><br>(Step Rate (Hz))              | 0.10–20.00 [Hz]            | Rate of the step-wise change in the phaser effect                                                                                                                                                                                                                                                              |
| <b>S. Rate Nt</b><br>(Step Rate (note))         | Note<br>➔ "Note" (p. 64)   |                                                                                                                                                                                                                                                                                                                |
| <b>Mix</b>                                      | 0–127                      | Level of the phase-shifted sound                                                                                                                                                                                                                                                                               |
| <b>Low Gain</b>                                 | -15–+15 [dB]               | Amount of boost/cut for the low-frequency range                                                                                                                                                                                                                                                                |
| <b>High Gain</b>                                | -15–+15 [dB]               | Amount of boost/cut for the high-frequency range                                                                                                                                                                                                                                                               |
| <b>Level</b>                                    | 0–127                      | Output Level                                                                                                                                                                                                                                                                                                   |

## M StagePhsr (Multi Stage Phaser)

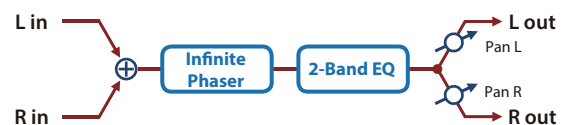
Extremely high settings of the phase difference produce a deep phaser effect.



| Parameter                                | Value                                                    | Explanation                                                                             |
|------------------------------------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>Mode</b>                              | 4-STAGE, 8-STAGE, 12-STAGE, 16-STAGE, 20-STAGE, 24-STAGE | Number of stages in the phaser                                                          |
| <b>Manual</b>                            | 0–127                                                    | Adjusts the basic frequency from which the sound will be modulated.                     |
| <b>Rate Sync</b><br>(Rate (sync switch)) | OFF, ON                                                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16) |
| <b>Rate</b><br>(Rate (Hz))               | 0.05–10.00 [Hz]                                          | Frequency of modulation                                                                 |
| <b>Rate Note</b><br>(Rate (note))        | Note<br>➔ "Note" (p. 64)                                 |                                                                                         |
| <b>Depth</b>                             | 0–127                                                    | Depth of modulation                                                                     |
| <b>Resonance</b>                         | 0–127                                                    | Amount of feedback                                                                      |
| <b>Mix</b>                               | 0–127                                                    | Level of the phase-shifted sound                                                        |
| <b>Pan</b>                               | L64–63R                                                  | Stereo location of the output sound                                                     |
| <b>Low Gain</b>                          | -15–+15 [dB]                                             | Amount of boost/cut for the low-frequency range                                         |
| <b>High Gain</b>                         | -15–+15 [dB]                                             | Amount of boost/cut for the high-frequency range                                        |
| <b>Level</b>                             | 0–127                                                    | Output Level                                                                            |

## Inf Phaser (Infinite Phaser)

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



| Parameter        | Value        | Explanation                                                                                              |
|------------------|--------------|----------------------------------------------------------------------------------------------------------|
| <b>Mode</b>      | 1, 2, 3, 4   | Higher values will produce a deeper phaser effect.                                                       |
| <b>Speed</b>     | -100–+100    | Speed at which to raise or lower the frequency at which the sound is modulated (+: upward / -: downward) |
| <b>Resonance</b> | 0–127        | Amount of feedback                                                                                       |
| <b>Mix</b>       | 0–127        | Level of the phase-shifted sound                                                                         |
| <b>Pan</b>       | L64–63R      | Stereo location of the output sound                                                                      |
| <b>Low Gain</b>  | -15–+15 [dB] | Amount of boost/cut for the low-frequency range                                                          |
| <b>High Gain</b> | -15–+15 [dB] | Amount of boost/cut for the high-frequency range                                                         |
| <b>Level</b>     | 0–127        | Output Level                                                                                             |

## Ring Mod (Ring Modulator)

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



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

## Tremolo

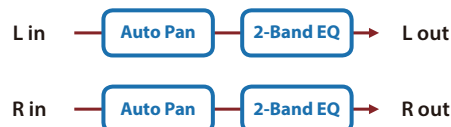
Cyclically changes the volume.



| Parameter                         | Value                              | Explanation                                                                                                                                   |
|-----------------------------------|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mod Wave<br>(Modulation Wave)     | TRI, SQR, SIN, SAW1, SAW2, TRP<br> | Modulation Wave<br><b>TRI</b> : Triangle wave<br><b>SQR</b> : Square wave<br>SIN: Sine wave<br>SAW1/2: Sawtooth wave<br>TRP: Trapezoidal wave |
| Rate Sync<br>(Rate (sync switch)) | OFF, ON                            | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>→ "Tempo" (p. 16)                                                       |
| Rate<br>(Rate (Hz))               | 0.05–10.00 [Hz]                    | Frequency of the change                                                                                                                       |
| Rate Note<br>(Rate (note))        | Note<br>→ "Note" (p. 64)           |                                                                                                                                               |
| Depth                             | 0–127                              | Depth to which the effect is applied                                                                                                          |
| Low Gain                          | -15–+15 [dB]                       | Amount of boost/cut for the low-frequency range                                                                                               |
| High Gain                         | -15–+15 [dB]                       | Amount of boost/cut for the high-frequency range                                                                                              |
| Level                             | 0–127                              | Output Level                                                                                                                                  |

## Auto Pan

Cyclically modulates the stereo location of the sound.



| Parameter                         | Value                              | Explanation                                                                                                                                   |
|-----------------------------------|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Mod Wave<br>(Modulation Wave)     | TRI, SQR, SIN, SAW1, SAW2, TRP<br> | Modulation Wave<br><b>TRI</b> : Triangle wave<br><b>SQR</b> : Square wave<br>SIN: Sine wave<br>SAW1/2: Sawtooth wave<br>TRP: Trapezoidal wave |
| Rate Sync<br>(Rate (sync switch)) | OFF, ON                            | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>→ "Tempo" (p. 16)                                                       |
| Rate<br>(Rate (Hz))               | 0.05–10.00 [Hz]                    | Frequency of the change                                                                                                                       |
| Rate Note<br>(Rate (note))        | Note<br>→ "Note" (p. 64)           |                                                                                                                                               |
| Depth                             | 0–127                              | Depth to which the effect is applied                                                                                                          |
| Low Gain                          | -15–+15 [dB]                       | Amount of boost/cut for the low-frequency range                                                                                               |
| High Gain                         | -15–+15 [dB]                       | Amount of boost/cut for the high-frequency range                                                                                              |
| Level                             | 0–127                              | Output Level                                                                                                                                  |

## Slicer

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

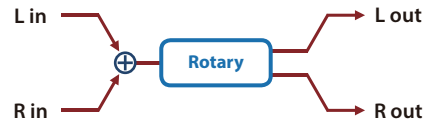


| Parameter                                     | Value                    | Explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Step 1–16</b>                              | 0–127                    | Level at each step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Rate Sync</b><br>(Rate (sync switch))      | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ “Tempo” (p. 16)                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Rate</b><br>(Rate (Hz))                    | 0.05–10.00 [Hz]          | Rate at which the 16-step sequence will cycle                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Rate Note</b><br>(Rate (note))             | Note<br>➔ “Note” (p. 64) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Attack</b>                                 | 0–127                    | Speed at which the level changes between steps                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>In Sync Sw</b><br>(Input Sync Sw)          | OFF, ON                  | Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF)                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>lInSyncThres</b><br>(Input Sync Threshold) | 0–127                    | Volume at which an input note will be detected                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Mode</b>                                   | LEGATO, SLASH            | <p>Sets the manner in which the volume changes as one step progresses to the next.</p> <p>LEGATO: The change in volume from one step's level to the next remains unaltered.</p> <p>If the level of a following step is the same as the one preceding it, there is no change in volume.</p> <p>SLASH: The level is momentarily set to 0 before progressing to the level of the next step.</p> <p>This change in volume occurs even if the level of the following step is the same as the preceding step.</p> |
| <b>Shuffle</b>                                | 0–127                    | <p>Timing of volume changes in levels for even numbered steps (step 2, step 4, step 6...).</p> <p>The higher the value, the later the beat progresses.</p>                                                                                                                                                                                                                                                                                                                                                  |
| <b>Level</b>                                  | 0–127                    | Output Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Rotary

This simulates a classic rotary speaker of the past.

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

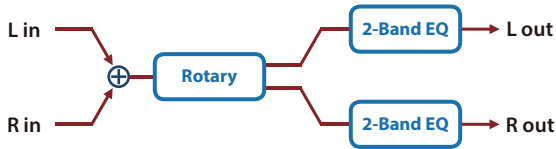


| Parameter                                 | Value           | Explanation                                                                                                                                                                                                         |
|-------------------------------------------|-----------------|-----------------------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

## VK Rotary

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

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

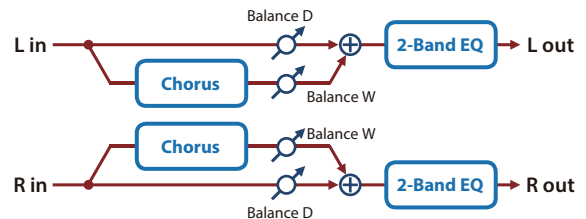


| Parameter                                | Value           | Explanation                                                                                                                                                          |
|------------------------------------------|-----------------|------------------------------------------------------------------------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

| Parameter                            | Value | Explanation             |
|--------------------------------------|-------|-------------------------|
| <b>OD Level</b><br>(Overdrive Level) | 0–127 | Volume of the overdrive |

## Chorus

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



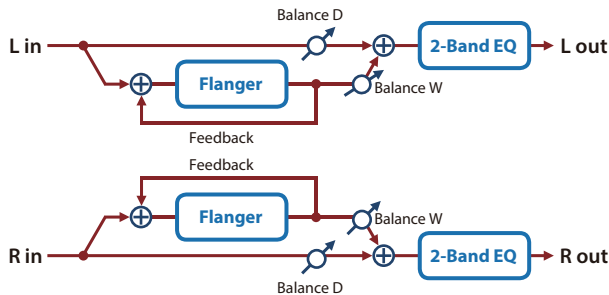
| Parameter                                | Value                                                                                              | Explanation                                                                                                                                            |
|------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Type</b>                              | OFF, LPF, HPF                                                                                      | Type of filter<br>OFF: No filter is used<br>LPF: Cuts the frequency range above the Cutoff Freq<br>HPF: Cuts the frequency range below the Cutoff Freq |
| <b>Cutoff</b><br>(Cutoff Freq)           | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz] | Basic frequency of the filter                                                                                                                          |
| <b>Pre Delay</b>                         | 0.0–100 [msec]                                                                                     | Adjusts the delay time from the direct sound until the chorus sound is heard.                                                                          |
| <b>Rate Sync</b><br>(Rate (sync switch)) | OFF, ON                                                                                            | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                |
| <b>Rate</b><br>(Rate (Hz))               | 0.05–10.00 [Hz]                                                                                    | Frequency of modulation                                                                                                                                |
| <b>Rate Note</b><br>(Rate (note))        | Note<br>➔ "Note" (p. 64)                                                                           |                                                                                                                                                        |
| <b>Depth</b>                             | 0–127                                                                                              | Depth of modulation                                                                                                                                    |
| <b>Phase</b>                             | 0–180 [deg]                                                                                        | Spatial spread of the sound                                                                                                                            |
| <b>Low Gain</b>                          | -15–+15 [dB]                                                                                       | Amount of boost/cut for the low-frequency range                                                                                                        |
| <b>High Gain</b>                         | -15–+15 [dB]                                                                                       | Amount of boost/cut for the high-frequency range                                                                                                       |
| <b>Balance</b>                           | D100: 0W–D0: 100W                                                                                  | Volume balance between the direct sound (D) and the chorus sound (W)                                                                                   |
| <b>Level</b>                             | 0–127                                                                                              | Output Level                                                                                                                                           |

## Flanger

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

Produces a metallic resonance reminiscent of a jet airplane taking off and landing.

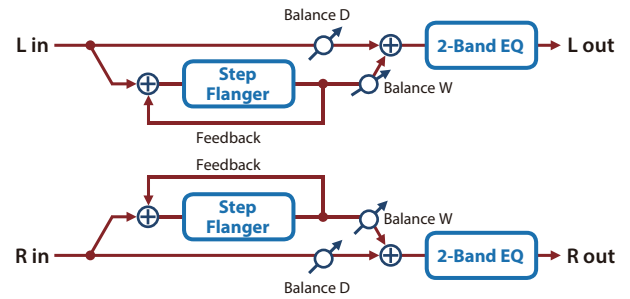
A filter is provided so that you can adjust the timbre of the flanged sound.



| Parameter                         | Value                                                                                              | Explanation                                                                                                                                            |
|-----------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                              | OFF, LPF, HPF                                                                                      | Type of filter<br>OFF: No filter is used<br>LPF: Cuts the frequency range above the Cutoff Freq<br>HPF: Cuts the frequency range below the Cutoff Freq |
| Cutoff<br>(Cutoff Freq)           | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz] | Basic frequency of the filter                                                                                                                          |
| Pre Delay                         | 0.0–100 [msec]                                                                                     | Adjusts the delay time from when the direct sound begins until the flanger sound is heard.                                                             |
| Rate Sync<br>(Rate (sync switch)) | OFF, ON                                                                                            | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ "Tempo" (p. 16)                                                                |
| Rate<br>(Rate (Hz))               | 0.05–10.00 [Hz]                                                                                    | Frequency of modulation                                                                                                                                |
| Rate Note<br>(Rate (note))        | Note<br>⇒ "Note" (p. 64)                                                                           |                                                                                                                                                        |
| Depth                             | 0–127                                                                                              | Depth of modulation                                                                                                                                    |
| Phase                             | 0–180 [deg]                                                                                        | Spatial spread of the sound                                                                                                                            |
| Feedback                          | -98–+98 [%]                                                                                        | Adjusts the proportion of the flanger sound that is fed back into the effect.<br>Negative (-) settings will invert the phase.                          |
| Low Gain                          | -15–+15 [dB]                                                                                       | Amount of boost/cut for the low-frequency range                                                                                                        |
| High Gain                         | -15–+15 [dB]                                                                                       | Amount of boost/cut for the high-frequency range                                                                                                       |
| Balance                           | D100: 0W–D0: 100W                                                                                  | Volume balance between the direct sound (D) and the flanger sound (W)                                                                                  |
| Level                             | 0–127                                                                                              | Output Level                                                                                                                                           |

## StepFlanger

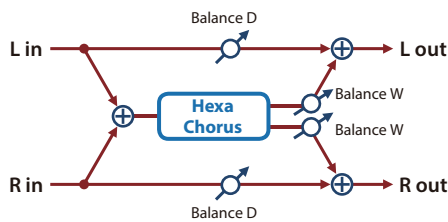
This is a flanger in which the flanger pitch changes in steps. The speed at which the pitch changes can also be specified in terms of a note-value of a specified tempo.



| Parameter                                 | Value                                                                                              | Explanation                                                                                                                                            |
|-------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                      | OFF, LPF, HPF                                                                                      | Type of filter<br>OFF: No filter is used<br>LPF: Cuts the frequency range above the Cutoff Freq<br>HPF: Cuts the frequency range below the Cutoff Freq |
| Cutoff<br>(Cutoff Freq)                   | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz] | Basic frequency of the filter                                                                                                                          |
| Pre Delay                                 | 0.0–100.0 [msec]                                                                                   | Adjusts the delay time from when the direct sound begins until the flanger sound is heard.                                                             |
| Rate Sync<br>(Rate (sync switch))         | OFF, ON                                                                                            | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ "Tempo" (p. 16)                                                                |
| Rate<br>(Rate (Hz))                       | 0.05–10.00 [Hz]                                                                                    | Frequency of modulation                                                                                                                                |
| Rate Note<br>(Rate (note))                | Note<br>⇒ "Note" (p. 64)                                                                           |                                                                                                                                                        |
| Depth                                     | 0–127                                                                                              | Depth of modulation                                                                                                                                    |
| Phase                                     | 0–180 [deg]                                                                                        | Spatial spread of the sound                                                                                                                            |
| Feedback                                  | -98–+98 [%]                                                                                        | Adjusts the proportion of the flanger sound that is fed back into the effect.<br>Negative (-) settings will invert the phase.                          |
| S. Rate Sync<br>(Step Rate (sync switch)) | OFF, ON                                                                                            | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ "Tempo" (p. 16)                                                                |
| S. Rate<br>(Step Rate (Hz))               | 0.10–20.00 [Hz]                                                                                    | Rate (period) of pitch change                                                                                                                          |
| S. Rate Nt<br>(Step Rate (note))          | Note<br>⇒ "Note" (p. 64)                                                                           |                                                                                                                                                        |
| Low Gain                                  | -15–+15 [dB]                                                                                       | Amount of boost/cut for the low-frequency range                                                                                                        |
| High Gain                                 | -15–+15 [dB]                                                                                       | Amount of boost/cut for the high-frequency range                                                                                                       |
| Balance                                   | D100: 0W–D0: 100W                                                                                  | Volume balance between the direct sound (D) and the flanger sound (W)                                                                                  |
| Level                                     | 0–127                                                                                              | Output Level                                                                                                                                           |

## Hexa-Chorus

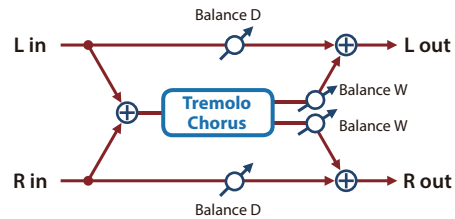
Uses a six-phase chorus (six layers of chorused sound) to give richness and spatial spread to the sound.



| Parameter                                  | Value                    | Explanation                                                                                                                                                                                                |
|--------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pre Delay</b>                           | 0.0–100 [msec]           | Adjusts the delay time from the direct sound until the chorus sound is heard.                                                                                                                              |
| <b>Rate Sync</b><br>(Rate (sync switch))   | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ "Tempo" (p. 16)                                                                                                                    |
| <b>Rate</b><br>(Rate (Hz))                 | 0.05–10.00 [Hz]          | Frequency of modulation                                                                                                                                                                                    |
| <b>Rate Note</b><br>(Rate (note))          | Note<br>⇒ "Note" (p. 64) |                                                                                                                                                                                                            |
| <b>Depth</b>                               | 0–127                    | Depth of modulation                                                                                                                                                                                        |
| <b>PreDly Dev</b><br>(Pre Delay Deviation) | 0–20                     | Adjusts the differences in Pre Delay between each chorus sound.                                                                                                                                            |
| <b>Depth Dev</b><br>(Depth Deviation)      | -20–+20                  | Adjusts the difference in modulation depth between each chorus sound.                                                                                                                                      |
| <b>Pan Dev</b><br>(Pan Deviation)          | 0–20                     | Adjusts the difference in stereo location between each chorus sound.<br>0: All chorus sounds will be in the center.<br>20: Each chorus sound will be spaced at 60 degree intervals relative to the center. |
| <b>Balance</b>                             | D100: 0W–D0: 100W        | Volume balance between the direct sound (D) and the chorus sound (W)                                                                                                                                       |
| <b>Level</b>                               | 0–127                    | Output Level                                                                                                                                                                                               |

## Trem Chorus (Tremolo Chorus)

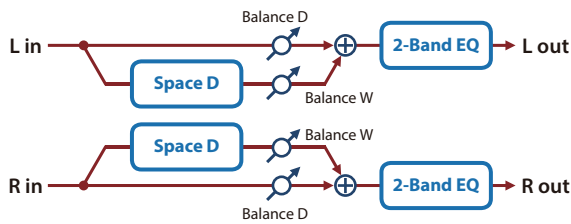
This is a chorus effect with added Tremolo (cyclic modulation of volume).



| Parameter                                       | Value                    | Explanation                                                                             |
|-------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------|
| <b>Pre Delay</b>                                | 0.0–100 [msec]           | Adjusts the delay time from the direct sound until the chorus sound is heard.           |
| <b>Cho Sync</b><br>(Chorus Rate (sync switch))  | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ "Tempo" (p. 16) |
| <b>C. Rate</b><br>(Chorus Rate (Hz))            | 0.05–10.00 [Hz]          | Modulation frequency of the chorus effect                                               |
| <b>C. Rate Nt</b><br>(Chorus Rate (note))       | Note<br>⇒ "Note" (p. 64) |                                                                                         |
| <b>Cho Depth</b><br>(Chorus Depth)              | 0–127                    | Modulation depth of the chorus effect                                                   |
| <b>Trm Sync</b><br>(Tremolo Rate (sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ "Tempo" (p. 16) |
| <b>T. Rate</b><br>(Tremolo Rate (Hz))           | 0.05–10.00 [Hz]          | Modulation frequency of the tremolo effect                                              |
| <b>T. Rate Nt</b><br>(Tremolo Rate (note))      | Note<br>⇒ "Note" (p. 64) |                                                                                         |
| <b>Trm Separate</b><br>(Tremolo Separation)     | 0–127                    | Spread of the tremolo effect                                                            |
| <b>Trm Phase</b><br>(Tremolo Phase)             | 0–180 [deg]              | Spread of the tremolo effect                                                            |
| <b>Balance</b>                                  | D100: 0W–D0: 100W        | Volume balance between the direct sound (D) and the chorus sound (W)                    |
| <b>Level</b>                                    | 0–127                    | Output Level                                                                            |

## Space-D

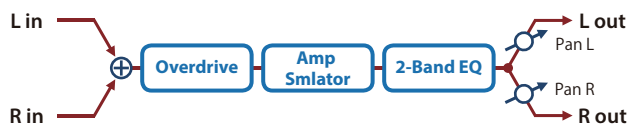
This is a multiple chorus that applies two-phase modulation in stereo. It gives no impression of modulation, but produces a transparent chorus effect.



| Parameter                         | Value                    | Explanation                                                                             |
|-----------------------------------|--------------------------|-----------------------------------------------------------------------------------------|
| Pre Delay                         | 0.0–100 [msec]           | Adjusts the delay time from the direct sound until the chorus sound is heard.           |
| Rate Sync<br>(Rate (sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ "Tempo" (p. 16) |
| Rate<br>(Rate (Hz))               | 0.05–10.00 [Hz]          | Frequency of modulation                                                                 |
| Rate Note<br>(Rate (note))        | Note<br>⇒ "Note" (p. 64) |                                                                                         |
| Depth                             | 0–127                    | Depth of modulation                                                                     |
| Phase                             | 0–180 [deg]              | Spatial spread of the sound                                                             |
| Low Gain                          | -15–+15 [dB]             | Amount of boost/cut for the low-frequency range                                         |
| High Gain                         | -15–+15 [dB]             | Amount of boost/cut for the high-frequency range                                        |
| Balance                           | D100: 0W–D0: 100W        | Volume balance between the direct sound (D) and the chorus sound (W)                    |
| Level                             | 0–127                    | Output Level                                                                            |

## Overdrive

This is an overdrive that provides heavy distortion.



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

## Distortion

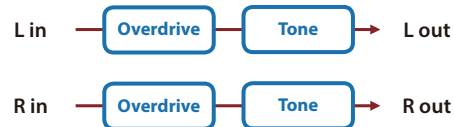
Produces a more intense distortion than Overdrive.



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

## T-Scream

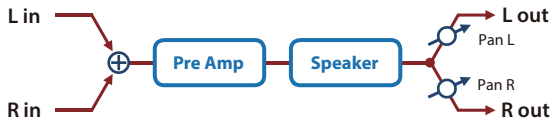
This models a classic analog overdrive. It is distinctive in adding an appropriate amount of overtones without muddying the sound.



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

## Gt Amp Sim (Guitar Amp Simulator)

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

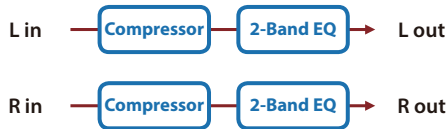


| Parameter                             | Value             | Explanation                                                                                                                                        |
|---------------------------------------|-------------------|--------------------------------------------------------------------------------------------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

| Parameter                             | Value      | Explanation                                                                                                                                                                             |                                                |            |
|---------------------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------|
| <b>Bright</b><br>(Pre Amp Bright)     | OFF, ON    | Turning this <b>"On"</b> produces a sharper and brighter sound.<br><br>* This parameter applies to the <b>"JC-120," "CLEAN TWIN,"</b> and <b>"BG LEAD"</b> Pre Amp Types.               |                                                |            |
| <b>Speaker Sw</b><br>(Speaker Switch) | OFF, ON    | Selects whether the sound will be sent through the speaker simulation (ON) or not (OFF)                                                                                                 |                                                |            |
| <b>SpType</b><br>(Speaker Type)       |            | Cabinet                                                                                                                                                                                 | Diameter (in inches) and number of the speaker | Microphone |
|                                       | SMALL 1    | small open-back enclosure                                                                                                                                                               | 10                                             | dynamic    |
|                                       | SMALL 2    | small open-back enclosure                                                                                                                                                               | 10                                             | dynamic    |
|                                       | MIDDLE     | open back enclosure                                                                                                                                                                     | 12 x 1                                         | dynamic    |
|                                       | JC-120     | open back enclosure                                                                                                                                                                     | 12 x 2                                         | dynamic    |
|                                       | BUILT-IN 1 | open back enclosure                                                                                                                                                                     | 12 x 2                                         | dynamic    |
|                                       | BUILT-IN 2 | open back enclosure                                                                                                                                                                     | 12 x 2                                         | condenser  |
|                                       | BUILT-IN 3 | open back enclosure                                                                                                                                                                     | 12 x 2                                         | condenser  |
|                                       | BUILT-IN 4 | open back enclosure                                                                                                                                                                     | 12 x 2                                         | condenser  |
|                                       | BUILT-IN 5 | open back enclosure                                                                                                                                                                     | 12 x 2                                         | condenser  |
|                                       | BG STACK1  | sealed enclosure                                                                                                                                                                        | 12 x 2                                         | condenser  |
|                                       | BG STACK2  | large sealed enclosure                                                                                                                                                                  | 12 x 2                                         | condenser  |
|                                       | MS STACK1  | large sealed enclosure                                                                                                                                                                  | 12 x 4                                         | condenser  |
|                                       | MS STACK2  | large sealed enclosure                                                                                                                                                                  | 12 x 4                                         | condenser  |
|                                       | MTL STACK  | large double stack                                                                                                                                                                      | 12 x 4                                         | condenser  |
|                                       | 2-STACK    | large double stack                                                                                                                                                                      | 12 x 4                                         | condenser  |
|                                       | 3-STACK    | large triple stack                                                                                                                                                                      | 12 x 4                                         | condenser  |
| <b>Mic Setting</b>                    | 1, 2, 3    | Adjusts the location of the mic that is recording the sound of the speaker.<br><br>This can be adjusted in three steps, with the mic becoming more distant in the order of 1, 2, and 3. |                                                |            |
| <b>Mic Level</b>                      | 0–127      | Volume of the microphone                                                                                                                                                                |                                                |            |
| <b>Direct Level</b>                   | 0–127      | Volume of the direct sound                                                                                                                                                              |                                                |            |
| <b>Pan</b>                            | L64–63R    | Stereo location of the output sound                                                                                                                                                     |                                                |            |
| <b>Level</b>                          | 0–127      | Output Level                                                                                                                                                                            |                                                |            |

## Compressor

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



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

## Limiter

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



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

## Sustainer

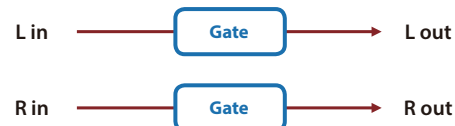
By compressing loud input and boosting low input, this effect keeps the volume consistent to produce a sustain effect without distortion.



| Parameter | Value        | Explanation                                                                                                            |
|-----------|--------------|------------------------------------------------------------------------------------------------------------------------|
| Sustain   | 0–127        | Adjusts the range in which a low input signal is boosted to a consistent volume. Higher values produce longer sustain. |
| Attack    | 0–127        | Time until the volume is compressed                                                                                    |
| Release   | 0–127        | Time until compression is removed                                                                                      |
| Post Gain | -15–+15 [dB] | Adjusts the output gain.                                                                                               |
| Low Gain  | -15–+15 [dB] | Amount of boost/cut for the low-frequency range                                                                        |
| High Gain | -15–+15 [dB] | Amount of boost/cut for the high-frequency range                                                                       |
| Level     | 0–127        | Output Level                                                                                                           |

## Gate

Cuts the reverb's delay according to the volume of the sound sent into the effect. Use this when you want to create an artificial-sounding decrease in the reverb's decay.

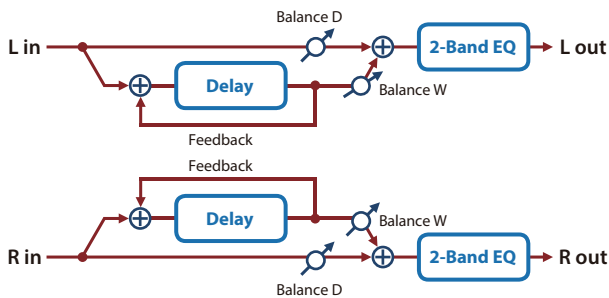


| Parameter | Value             | Explanation                                                                                                                                                                                                                                |
|-----------|-------------------|------------------------------------------------------------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

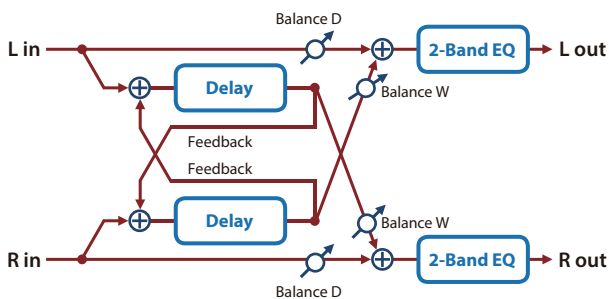
## Delay

This is a stereo delay.

**When Feedback Mode is NORMAL:**



**When Feedback Mode is CROSS:**



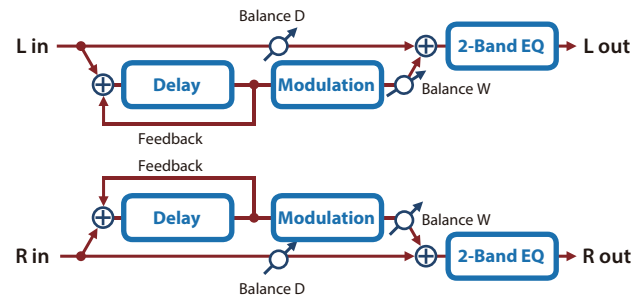
| Parameter                                          | Value                                                                                                      | Explanation                                                                                                                                                         |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dly L Sync</b><br>(Delay Left<br>sync switch))  | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>DL Time</b><br>(Delay Left (msec))              | 1–1300                                                                                                     | Adjusts the time until the left delay sound is heard.                                                                                                               |
| <b>DLTime Nt</b><br>(Delay Left (note))            | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Dly R Sync</b><br>(Delay Right<br>sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>DR Time</b><br>(Delay Right (msec))             | 1–1300                                                                                                     | Adjusts the time until the right delay sound is heard.                                                                                                              |
| <b>DRTime Nt</b><br>(Delay Right (note))           | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Phase L</b><br>(Phase Left)                     | NORMAL, INVERSE                                                                                            | Phase of left and right delay sound<br>NORMAL: Non-inverted<br>INVERT: Inverted                                                                                     |
| <b>Phase R</b><br>(Phase Right)                    |                                                                                                            |                                                                                                                                                                     |
| <b>Fbk Mode</b><br>(Feedback Mode)                 | NORMAL, CROSS                                                                                              | Selects the way in which delay sound is fed back into the effect. (See the figures above.)                                                                          |
| <b>Feedback</b>                                    | -98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.                                            |
| <b>HF Damp</b>                                     | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS. |
| <b>Low Gain</b>                                    | -15–+15 [dB]                                                                                               | Amount of boost/cut for the low-frequency range                                                                                                                     |
| <b>High Gain</b>                                   | -15–+15 [dB]                                                                                               | Amount of boost/cut for the high-frequency range                                                                                                                    |

| Parameter      | Value             | Explanation                                                         |
|----------------|-------------------|---------------------------------------------------------------------|
| <b>Balance</b> | D100: 0W–D0: 100W | Volume balance between the direct sound (D) and the delay sound (W) |
| <b>Level</b>   | 0–127             | Output Level                                                        |

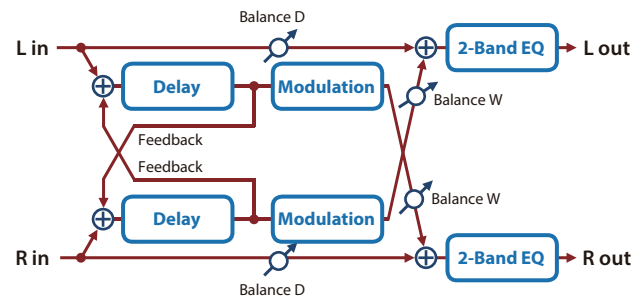
## Mod Delay (Modulation Delay)

Adds modulation to the delayed sound.

**When Feedback Mode is NORMAL:**



**When Feedback Mode is CROSS:**

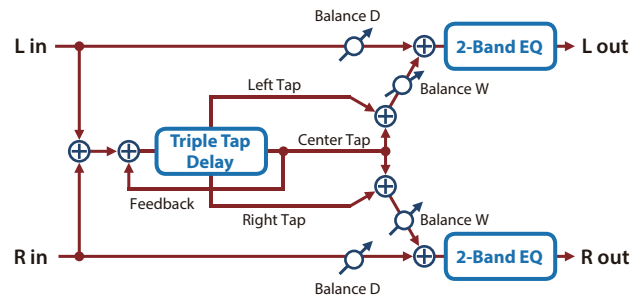


| Parameter                                          | Value                                                                                                      | Explanation                                                                                                                                                         |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dly L Sync</b><br>(Delay Left<br>sync switch))  | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>DL Time</b><br>(Delay Left (msec))              | 1–1300                                                                                                     | Adjusts the time until the left delay sound is heard.                                                                                                               |
| <b>DLTime Nt</b><br>(Delay Left (note))            | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Dly R Sync</b><br>(Delay Right<br>sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>DR Time</b><br>(Delay Right (msec))             | 1–1300                                                                                                     | Adjusts the time until the right delay sound is heard.                                                                                                              |
| <b>DRTime Nt</b><br>(Delay Right (note))           | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Fbk Mode</b><br>(Feedback Mode)                 | NORMAL, CROSS                                                                                              | Selects the way in which delay sound is fed back into the effect. (See the figures above.)                                                                          |
| <b>Feedback</b>                                    | -98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.                                            |
| <b>HF Damp</b>                                     | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS. |

| Parameter                                | Value                    | Explanation                                                                             |
|------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------|
| <b>Rate Sync</b><br>(Rate (sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16) |
| <b>Rate</b><br>(Rate (Hz))               | 0.05–10.00 [Hz]          | Frequency of modulation                                                                 |
| <b>Rate Note</b><br>(Rate (note))        | Note<br>➔ "Note" (p. 64) |                                                                                         |
| <b>Depth</b>                             | 0–127                    | Depth of modulation                                                                     |
| <b>Phase</b>                             | 0–180 [deg]              | Spatial spread of the sound                                                             |
| <b>Low Gain</b>                          | -15–+15 [dB]             | Amount of boost/cut for the low-frequency range                                         |
| <b>High Gain</b>                         | -15–+15 [dB]             | Amount of boost/cut for the high-frequency range                                        |
| <b>Balance</b>                           | D100: 0W–D0: 100W        | Volume balance between the direct sound (D) and the delay sound (W)                     |
| <b>Level</b>                             | 0–127                    | Output Level                                                                            |

## 3Tap PanDly

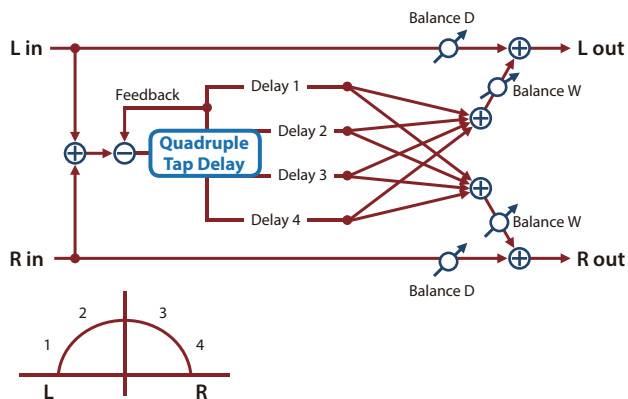
Produces three delay sounds; center, left and right.



| Parameter                                         | Value                                                                                                      | Explanation                                                                                                                                                         |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dly L Sync</b><br>(Delay Left (sync switch))   | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>DL Time</b><br>(Delay Left (msec))             | 1–2600                                                                                                     | Adjusts the time until the left delay sound is heard.                                                                                                               |
| <b>DLTime Nt</b><br>(Delay Left (note))           | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Dly R Sync</b><br>(Delay Right (sync switch))  | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>DR Time</b><br>(Delay Right (msec))            | 1–2600                                                                                                     | Adjusts the time until the right delay sound is heard.                                                                                                              |
| <b>DRTime Nt</b><br>(Delay Right (note))          | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Dly C Sync</b><br>(Delay Center (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>DC Time</b><br>(Delay Center (msec))           | 1–2600                                                                                                     | Adjusts the time until the center delay sound is heard.                                                                                                             |
| <b>DCTime Nt</b><br>(Delay Center (note))         | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>C Feedback</b><br>(Center Feedback)            | -98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect.<br>Negative (-) settings will invert the phase.                                         |
| <b>HF Damp</b>                                    | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS. |
| <b>Left Lv</b>                                    | 0–127                                                                                                      | Volume of each delay sound                                                                                                                                          |
| <b>Right Lv</b>                                   | 0–127                                                                                                      |                                                                                                                                                                     |
| <b>Center Lv</b>                                  | 0–127                                                                                                      |                                                                                                                                                                     |
| <b>Low Gain</b>                                   | -15–+15 [dB]                                                                                               | Amount of boost/cut for the low-frequency range                                                                                                                     |
| <b>High Gain</b>                                  | -15–+15 [dB]                                                                                               | Amount of boost/cut for the high-frequency range                                                                                                                    |
| <b>Balance</b>                                    | D100: 0W–D0: 100W                                                                                          | Volume balance between the direct sound (D) and the delay sound (W)                                                                                                 |
| <b>Level</b>                                      | 0–127                                                                                                      | Output Level                                                                                                                                                        |

## 4Tap PanDly

This effect has four delays.

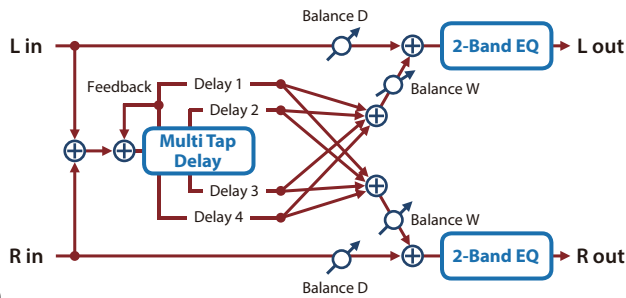


| Parameter | Value             | Explanation                                                         |
|-----------|-------------------|---------------------------------------------------------------------|
| Low Gain  | -15--+15 [dB]     | Amount of boost/cut for the low-frequency range           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

| Parameter                                        | Value                                                                                                      | Explanation                                                                                                                                                         |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dly1 Sync</b><br>(Delay 1 Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>D1. Time</b><br>(Delay 1 Time (msec))         | 1-2600                                                                                                     | Adjusts the time from the original sound until delay 1 sounds is heard.                                                                                             |
| <b>D1Time Nt</b><br>(Delay 1 Time (note))        | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Dly2 Sync</b><br>(Delay 2 Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>D2. Time</b><br>(Delay 2 Time (msec))         | 1-2600                                                                                                     | Adjusts the time from the original sound until delay 2 sounds is heard.                                                                                             |
| <b>D2Time Nt</b><br>(Delay 2 Time (note))        | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Dly3 Sync</b><br>(Delay 3 Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>D3. Time</b><br>(Delay 3 Time (msec))         | 1-2600                                                                                                     | Adjusts the time from the original sound until delay 3 sounds is heard.                                                                                             |
| <b>D3Time Nt</b><br>(Delay 3 Time (note))        | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Dly4 Sync</b><br>(Delay 4 Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>D4. Time</b><br>(Delay 4 Time (msec))         | 1-2600                                                                                                     | Adjusts the time from the original sound until delay 4 sounds is heard.                                                                                             |
| <b>D4Time Nt</b><br>(Delay 4 Time (note))        | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Dly1 Fbk</b><br>(Delay 1 Feedback)            | -98--+98 [%]                                                                                               | Adjusts the proportion of the delay sound that is fed back into the effect.<br>Negative (-) settings will invert the phase.                                         |
| <b>HF Damp</b>                                   | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS. |
| <b>Dly1 Lv</b><br>(Delay 1 Level)                | 0-127                                                                                                      | Volume of each delay                                                                                                                                                |
| <b>Dly2 Lv</b><br>(Delay 2 Level)                |                                                                                                            |                                                                                                                                                                     |
| <b>Dly3 Lv</b><br>(Delay 3 Level)                |                                                                                                            |                                                                                                                                                                     |
| <b>Dly4 Lv</b><br>(Delay 4 Level)                |                                                                                                            |                                                                                                                                                                     |

## MultiTapDly

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

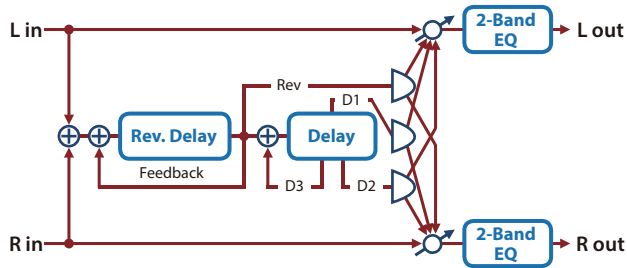


| Parameter                            | Value             | Explanation                                                          |
|--------------------------------------|-------------------|----------------------------------------------------------------------|
| <b>Dly1 Level</b><br>(Delay 1 Level) | 0–127             | Volume of each delay                                                 |
| <b>Dly2 Level</b><br>(Delay 2 Level) |                   |                                                                      |
| <b>Dly3 Level</b><br>(Delay 3 Level) |                   |                                                                      |
| <b>Dly4 Level</b><br>(Delay 4 Level) |                   |                                                                      |
| <b>Low Gain</b>                      | -15–+15 [dB]      | Amount of boost/cut for the low-frequency range                      |
| <b>High Gain</b>                     | -15–+15 [dB]      | Amount of boost/cut for the high-frequency range                     |
| <b>Balance</b>                       | D100: 0W–D0: 100W | Volume balance between the direct sound (D) and the effect sound (W) |
| <b>Level</b>                         | 0–127             | Output Level                                                         |

| Parameter                                        | Value                                                                                                      | Explanation                                                                                                                                                         |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dly1 Sync</b><br>(Delay 1 Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>D1. Time</b><br>(Delay 1 Time (msec))         | 1–2600                                                                                                     | Adjusts the time from the original sound until delay 1 sounds is heard.                                                                                             |
| <b>D1Time Nt</b><br>(Delay 1 Time (note))        | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Dly2 Sync</b><br>(Delay 2 Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>D2. Time</b><br>(Delay 2 Time (msec))         | 1–2600                                                                                                     | Adjusts the time from the original sound until delay 2 sounds is heard.                                                                                             |
| <b>D2Time Nt</b><br>(Delay 2 Time (note))        | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Dly3 Sync</b><br>(Delay 3 Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>D3. Time</b><br>(Delay 3 Time (msec))         | 1–2600                                                                                                     | Adjusts the time from the original sound until delay 3 sounds is heard.                                                                                             |
| <b>D3Time Nt</b><br>(Delay 3 Time (note))        | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Dly4 Sync</b><br>(Delay 4 Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                             |
| <b>D4. Time</b><br>(Delay 4 Time (msec))         | 1–2600                                                                                                     | Adjusts the time from the original sound until delay 4 sounds is heard.                                                                                             |
| <b>D4Time Nt</b><br>(Delay 4 Time (note))        | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| <b>Dly1 Fbk</b><br>(Delay 1 Feedback)            | -98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect.<br>Negative (-) settings will invert the phase.                                         |
| <b>HF Damp</b>                                   | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS. |
| <b>Dly1 Pan</b><br>(Delay 1 Pan)                 | L64–63R                                                                                                    | Stereo location of Delays 1–4                                                                                                                                       |
| <b>Dly2 Pan</b><br>(Delay 2 Pan)                 |                                                                                                            |                                                                                                                                                                     |
| <b>Dly3 Pan</b><br>(Delay 3 Pan)                 |                                                                                                            |                                                                                                                                                                     |
| <b>Dly4 Pan</b><br>(Delay 4 Pan)                 |                                                                                                            |                                                                                                                                                                     |

## Reverse Dly

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

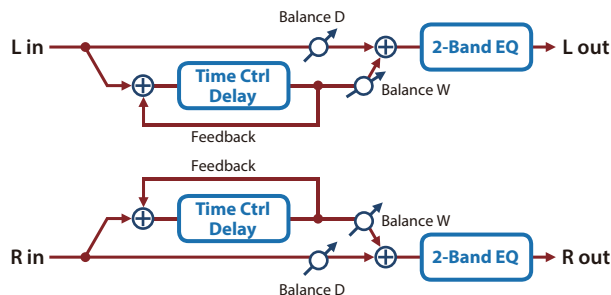


| Parameter                                              | Value                                                                                                      | Explanation                                                                                                                 |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>Threshold</b>                                       | 0–127                                                                                                      | Volume at which the reverse delay will begin to be applied                                                                  |
| <b>RDly Sync</b><br>(Reverse Delay Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ “Tempo” (p. 16)                                     |
| <b>RD Time</b><br>(Reverse Delay Time (msec))          | 1–1300                                                                                                     | Delay time from when sound is input into the reverse delay until the delay sound is heard                                   |
| <b>RD. Time Nt</b><br>(Reverse Delay Time (note))      | Note<br>➔ “Note” (p. 64)                                                                                   |                                                                                                                             |
| <b>RDly Fbk</b><br>(Reverse Delay Feedback)            | -98–+98 [%]                                                                                                | Proportion of the delay sound that is to be returned to the input of the reverse delay negative (-) values invert the phase |
| <b>RDly HF</b><br>(Reverse Delay HF Damp)              | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Frequency at which the high-frequency content of the reverse-delayed sound will be cut (BYPASS: no cut)                     |
| <b>RDly Pan</b><br>(Reverse Delay Pan)                 | L64–63R                                                                                                    | Panning of the reverse delay sound                                                                                          |
| <b>RDly Level</b><br>(Reverse Delay Level)             | 0–127                                                                                                      | Volume of the reverse delay sound                                                                                           |
| <b>Dly1 Sync</b><br>(Delay 1 Time (sync switch))       | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ “Tempo” (p. 16)                                     |
| <b>D1. Time</b><br>(Delay 1 Time (msec))               | 1–1300                                                                                                     | Delay time from when sound is input into the tap delay until the delay sound is heard                                       |
| <b>D1Time Nt</b><br>(Delay 1 Time (note))              | Note<br>➔ “Note” (p. 64)                                                                                   |                                                                                                                             |
| <b>Dly2 Sync</b><br>(Delay 2 Time (sync switch))       | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ “Tempo” (p. 16)                                     |
| <b>D2. Time</b><br>(Delay 2 Time (msec))               | 1–1300                                                                                                     | Delay time from when sound is input into the tap delay until the delay sound is heard                                       |
| <b>D2Time Nt</b><br>(Delay 2 Time (note))              | Note<br>➔ “Note” (p. 64)                                                                                   |                                                                                                                             |
| <b>Dly3 Sync</b><br>(Delay 3 Time (sync switch))       | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ “Tempo” (p. 16)                                     |
| <b>D3. Time</b><br>(Delay 3 Time (msec))               | 1–1300                                                                                                     | Delay time from when sound is input into the tap delay until the delay sound is heard                                       |
| <b>D3Time Nt</b><br>(Delay 3 Time (note))              | Note<br>➔ “Note” (p. 64)                                                                                   |                                                                                                                             |
| <b>Dly3 Fbk</b><br>(Delay 3 Feedback)                  | -98–+98 [%]                                                                                                | Proportion of the delay sound that is to be returned to the input of the tap delay (negative (-) values invert the phase)   |

| Parameter                         | Value                                                                                                      | Explanation                                                                                       |
|-----------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <b>Dly HF</b><br>(Delay HF Damp)  | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Frequency at which the high-frequency content of the tap delay sound will be cut (BYPASS: no cut) |
| <b>Dly1 Pan</b><br>(Delay 1 Pan)  | L64–63R                                                                                                    | Panning of the tap delay sounds                                                                   |
| <b>Dly2 Pan</b><br>(Delay 2 Pan)  | L64–63R                                                                                                    |                                                                                                   |
| <b>Dly1 Lv</b><br>(Delay 1 Level) | 0–127                                                                                                      | Volume of the tap delay sounds                                                                    |
| <b>Dly2 Lv</b><br>(Delay 2 Level) | 0–127                                                                                                      |                                                                                                   |
| <b>Low Gain</b>                   | -15–+15 [dB]                                                                                               | Amount of boost/cut for the low-frequency range                                                   |
| <b>High Gain</b>                  | -15–+15 [dB]                                                                                               | Amount of boost/cut for the high-frequency range                                                  |
| <b>Balance</b>                    | D100: 0W–D0: 100W                                                                                          | Volume balance between the direct sound (D) and the delay sound (W)                               |
| <b>Level</b>                      | 0–127                                                                                                      | Output Level                                                                                      |

## TimeCtrlDly (Time Control Delay)

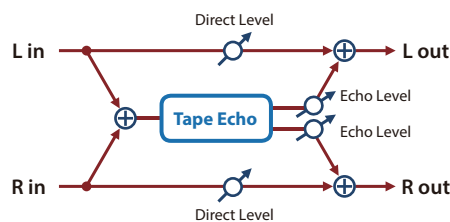
A stereo delay in which the delay time can be varied smoothly.



| Parameter                                       | Value                                                                                                      | Explanation                                                                                                                                                                          |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Delay Sync</b><br>(Delay Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                                              |
| <b>D. Time</b><br>(Delay Time (msec))           | 1–1300                                                                                                     | Adjusts the delay time from the direct sound until the delay sound is heard.                                                                                                         |
| <b>D. Time Nt</b><br>(Delay Time (note))        | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                                      |
| <b>Acceleration</b>                             | 0–15                                                                                                       | Adjusts the speed which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change. |
| <b>Feedback</b>                                 | -98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.                                                             |
| <b>HF Damp</b>                                  | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.                  |
| <b>Low Gain</b>                                 | -15–+15 [dB]                                                                                               | Amount of boost/cut for the low-frequency range                                                                                                                                      |
| <b>High Gain</b>                                | -15–+15 [dB]                                                                                               | Amount of boost/cut for the high-frequency range                                                                                                                                     |
| <b>Balance</b>                                  | D100: 0W–D0: 100W                                                                                          | Volume balance between the direct sound (D) and the delay sound (W)                                                                                                                  |
| <b>Level</b>                                    | 0–127                                                                                                      | Output Level                                                                                                                                                                         |

## Tape Echo

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



| Parameter                              | Value                         | Explanation                                                                                                                                                                                       |
|----------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mode</b>                            | S, M, L, S+M, S+L, M+L, S+M+L | Combination of playback heads to use<br>Select from three different heads with different delay times.<br>S: short<br>M: middle<br>L: long                                                         |
| <b>Repeat Rate</b>                     | 0–127                         | Tape speed<br>Increasing this value will shorten the spacing of the delayed sounds.                                                                                                               |
| <b>Intensity</b>                       | 0–127                         | Amount of delay repeats                                                                                                                                                                           |
| <b>Bass</b>                            | -15–+15 [dB]                  | Boost/cut for the lower range of the echo sound                                                                                                                                                   |
| <b>Treble</b>                          | -15–+15 [dB]                  | Boost/cut for the upper range of the echo sound                                                                                                                                                   |
| <b>Head S Pan</b>                      | L64–63R                       | Independent panning for the short, middle, and long playback heads                                                                                                                                |
| <b>Head M Pan</b>                      | L64–63R                       |                                                                                                                                                                                                   |
| <b>Head L Pan</b>                      | L64–63R                       |                                                                                                                                                                                                   |
| <b>Distortion</b><br>(Tape Distortion) | 0–5                           | Amount of tape-dependent distortion to be added<br>This simulates the slight tonal changes that can be detected by signal-analysis equipment. Increasing this value will increase the distortion. |
| <b>Wf Rate</b><br>(W/F Rate)           | 0–127                         | Speed of wow/flutter (complex variation in pitch caused by tape wear and rotational irregularity)                                                                                                 |
| <b>Wf Depth</b><br>(W/F Depth)         | 0–127                         | Depth of wow/flutter                                                                                                                                                                              |
| <b>Echo Level</b>                      | 0–127                         | Volume of the echo sound                                                                                                                                                                          |
| <b>Direct Lv</b>                       | 0–127                         | Volume of the original sound                                                                                                                                                                      |
| <b>Level</b>                           | 0–127                         | Output Level                                                                                                                                                                                      |

## LOFI Comp (Lo-Fi Compressor)

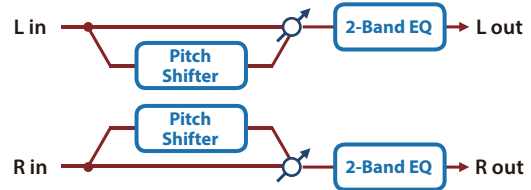
This is an effect that intentionally degrades the sound quality for creative purposes.



| Parameter                                | Value                                                                                              | Explanation                                                                                                                                            |
|------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pre Filter</b><br>(Pre Filter Type)   | 1, 2, 3, 4, 5, 6                                                                                   | Selects the type of filter applied to the sound before it passes through the Lo-Fi effect.<br>1: Compressor off<br>2-6: Compressor on                  |
| <b>LoFi Type</b>                         | 1, 2, 3, 4, 5, 6, 7, 8, 9                                                                          | Degrades the sound quality. The sound quality grows poorer as this value is increased.                                                                 |
| <b>Post Filter</b><br>(Post Filter Type) | OFF, LPF, HPF                                                                                      | Type of filter<br>OFF: No filter is used<br>LPF: Cuts the frequency range above the Cutoff Freq<br>HPF: Cuts the frequency range below the Cutoff Freq |
| <b>Cutoff</b><br>(Post Filter Cutoff)    | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz] | Basic frequency of the Post Filter                                                                                                                     |
| <b>Low Gain</b>                          | -15--+15 [dB]                                                                                      | Amount of boost/cut for the low-frequency range                                                                                                        |
| <b>High Gain</b>                         | -15--+15 [dB]                                                                                      | Amount of boost/cut for the high-frequency range                                                                                                       |
| <b>Balance</b>                           | D100: 0W-D0: 100W                                                                                  | Volume balance between the direct sound (D) and the effect sound (W)                                                                                   |
| <b>Level</b>                             | 0-127                                                                                              | Output Level                                                                                                                                           |

## PitchShifr (Pitch Shifter)

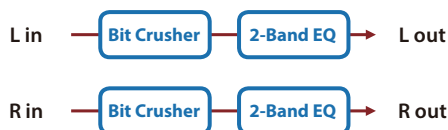
A stereo pitch shifter.



| Parameter                                       | Value                    | Explanation                                                                                                                         |
|-------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>Coarse</b>                                   | -24--+12 [semi]          | Adjusts the pitch of the pitch shifted sound in semitone steps.                                                                     |
| <b>Fine</b>                                     | -100--+100 [cent]        | Adjusts the pitch of the pitch shifted sound in 2-cent steps.                                                                       |
| <b>Delay Sync</b><br>(Delay Time (sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>→ "Tempo" (p. 16)                                             |
| <b>D. Time</b><br>(Delay Time (msec))           | 1-1300                   | Adjusts the delay time from the direct sound until the pitch shifted sound is heard.                                                |
| <b>D. Time Nt</b><br>(Delay Time (note))        | Note<br>→ "Note" (p. 64) |                                                                                                                                     |
| <b>Feedback</b>                                 | -98--+98 [%]             | Adjusts the proportion of the pitch shifted sound that is fed back into the effect.<br>Negative (-) settings will invert the phase. |
| <b>Low Gain</b>                                 | -15--+15 [dB]            | Amount of boost/cut for the low-frequency range                                                                                     |
| <b>High Gain</b>                                | -15--+15 [dB]            | Amount of boost/cut for the high-frequency range                                                                                    |
| <b>Balance</b>                                  | D100: 0W-D0: 100W        | Volume balance between the direct sound (D) and the pitch shifted sound (W)                                                         |
| <b>Level</b>                                    | 0-127                    | Output Level                                                                                                                        |

## Bit Crasher

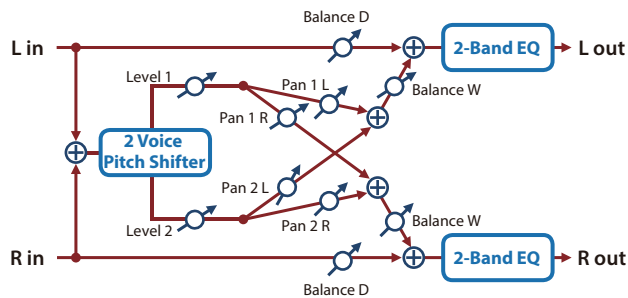
This creates a lo-fi sound.



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

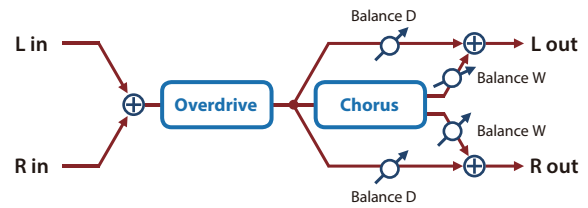
## 2V PShifter (2 Voice Pitch Shifter)

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



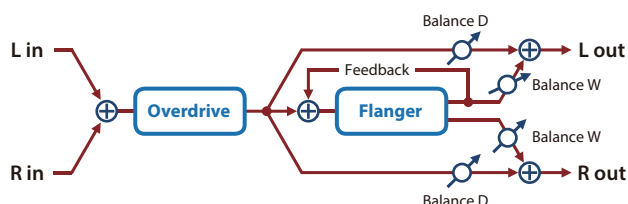
| Parameter                                          | Value                    | Explanation                                                                                                                         |
|----------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>P1 Coarse</b><br>(Pitch1 Coarse)                | -24—+12 [semi]           | Adjusts the pitch of Pitch Shift 1 in semitone steps.                                                                               |
| <b>P1 Fine</b><br>(Pitch1 Fine)                    | -100—+100 [cent]         | Adjusts the pitch of Pitch Shift 1 in 2-cent steps.                                                                                 |
| <b>P1 Dly Sync</b><br>(Pitch1 Delay (sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ "Tempo" (p. 16)                                             |
| <b>P1 D. Rate</b><br>(Pitch1 Delay (msec))         | 1–1300                   | Adjusts the delay time from the direct sound until the Pitch Shift 1 sound is heard.                                                |
| <b>P1 DRate Nt</b><br>(Pitch1 Delay (note))        | Note<br>⇒ "Note" (p. 64) |                                                                                                                                     |
| <b>P1 Feedback</b><br>(Pitch1 Feedback)            | -98—+98 [%]              | Adjusts the proportion of the pitch shifted sound that is fed back into the effect.<br>Negative (-) settings will invert the phase. |
| <b>P1 Pan</b><br>(Pitch1 Pan)                      | L64–63R                  | Stereo location of the Pitch Shift 1 sound                                                                                          |
| <b>P1 Level</b><br>(Pitch1 Level)                  | 0–127                    | Volume of the Pitch Shift 1 sound                                                                                                   |
| <b>P2 Coarse</b><br>(Pitch2 Coarse)                | -24—+12 [semi]           | Settings of the Pitch Shift 2 sound.<br>The parameters are the same as for the Pitch Shift 1 sound.                                 |
| <b>P2 Fine</b><br>(Pitch2 Fine)                    | -100—+100 [cent]         |                                                                                                                                     |
| <b>P2 Dly Sync</b><br>(Pitch2 Delay (sync switch)) | OFF, ON                  |                                                                                                                                     |
| <b>P2 D. Rate</b><br>(Pitch2 Delay (msec))         | 1–1300                   |                                                                                                                                     |
| <b>P2 DRate Nt</b><br>(Pitch2 Delay (note))        | Note<br>⇒ "Note" (p. 64) |                                                                                                                                     |
| <b>P2 Feedback</b><br>(Pitch2 Feedback)            | -98—+98 [%]              |                                                                                                                                     |
| <b>P2 Pan</b><br>(Pitch2 Pan)                      | L64–63R                  |                                                                                                                                     |
| <b>P2 Level</b><br>(Pitch2 Level)                  | 0–127                    |                                                                                                                                     |
| <b>Low Gain</b>                                    | -15—+15 [dB]             | Amount of boost/cut for the low-frequency range                                                                                     |
| <b>High Gain</b>                                   | -15—+15 [dB]             | Amount of boost/cut for the high-frequency range                                                                                    |
| <b>Balance</b>                                     | D100: 0W–D0: 100W        | Volume balance between the direct sound (D) and the pitch shifted sound (W)                                                         |
| <b>Level</b>                                       | 0–127                    | Output Level                                                                                                                        |

## OD → Chorus (Overdrive → Chorus)



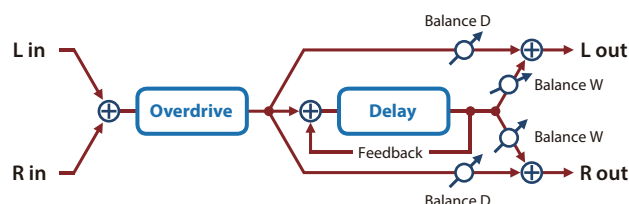
| Parameter                                      | Value                    | Explanation                                                                                                                             |
|------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>OD Drive</b><br>(Overdrive Drive)           | 0–127                    | Degree of distortion<br>Also changes the volume.                                                                                        |
| <b>OD Pan</b><br>(Overdrive Pan)               | L64–63R                  | Stereo location of the overdrive sound                                                                                                  |
| <b>Cho PreDly</b><br>(Chorus Pre Delay)        | 0.0–100 [msec]           | Adjusts the delay time from the direct sound until the chorus sound is heard.                                                           |
| <b>Cho Sync</b><br>(Chorus Rate (sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ "Tempo" (p. 16)                                                 |
| <b>C. Rate</b><br>(Chorus Rate (Hz))           | 0.05–10.00 [Hz]          | Frequency of modulation                                                                                                                 |
| <b>C. Rate Nt</b><br>(Chorus Rate (note))      | Note<br>⇒ "Note" (p. 64) |                                                                                                                                         |
| <b>Cho Depth</b><br>(Chorus Depth)             | 0–127                    | Depth of modulation                                                                                                                     |
| <b>Cho Bal</b><br>(Chorus Balance)             | D100: 0W–D0: 100W        | Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D). |
| <b>Level</b>                                   | 0–127                    | Output Level                                                                                                                            |

## OD → Flanger (Overdrive → Flanger)



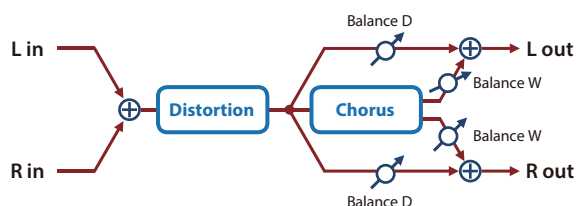
| Parameter                                      | Value                    | Explanation                                                                                                                               |
|------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OD Drive</b><br>(Overdrive Drive)           | 0–127                    | Degree of distortion<br>Also changes the volume.                                                                                          |
| <b>OD Pan</b><br>(Overdrive Pan)               | L64–63R                  | Stereo location of the overdrive sound                                                                                                    |
| <b>Flg PreDly</b><br>(Flanger Pre Delay)       | 0.0–100 [msec]           | Adjusts the delay time from when the direct sound begins until the flanger sound is heard.                                                |
| <b>Flg Sync</b><br>(Flanger Rate sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                   |
| <b>F. Delay</b><br>(Flanger Rate (Hz))         | 0.05–10.00 [Hz]          | Frequency of modulation                                                                                                                   |
| <b>F. Rate Nt</b><br>(Flanger Rate (note))     | Note<br>➔ "Note" (p. 64) |                                                                                                                                           |
| <b>Flg Depth</b><br>(Flanger Depth)            | 0–127                    | Depth of modulation                                                                                                                       |
| <b>Flg Fbk</b><br>(Flanger Feedback)           | -98–+98 [%]              | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.                |
| <b>Flg Bal</b><br>(Flanger Balance)            | D100: 0W–D0: 100W        | Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D). |
| <b>Level</b>                                   | 0–127                    | Output Level                                                                                                                              |

## OD → Delay (Overdrive → Delay)



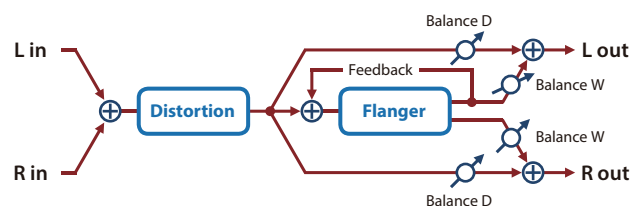
| Parameter                                      | Value                                                                                                      | Explanation                                                                                                                                               |
|------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OD Drive</b><br>(Overdrive Drive)           | 0–127                                                                                                      | Degree of distortion<br>Also changes the volume.                                                                                                          |
| <b>OD Pan</b><br>(Overdrive Pan)               | L64–63R                                                                                                    | Stereo location of the overdrive sound                                                                                                                    |
| <b>Delay Sync</b><br>(Delay Time sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                   |
| <b>D. Time</b><br>(Delay Time (msec))          | 1–2600                                                                                                     | Adjusts the delay time from the direct sound until the delay sound is heard.                                                                              |
| <b>D. Time Nt</b><br>(Delay Time (note))       | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                           |
| <b>Delay Fbk</b><br>(Delay Feedback)           | -98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.                                  |
| <b>Dly HF</b><br>(Delay HF Damp)               | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS. |
| <b>Dly Bal</b><br>(Delay Balance)              | D100: 0W–D0: 100W                                                                                          | Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).                     |
| <b>Level</b>                                   | 0–127                                                                                                      | Output Level                                                                                                                                              |

## DS → Chorus (Distortion → Chorus)



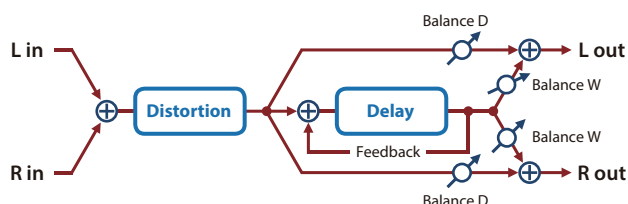
| Parameter                                      | Value                    | Explanation                                                                                                                             |
|------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dist Drive</b><br>(Distortion Drive)        | 0–127                    | Degree of distortion<br>Also changes the volume.                                                                                        |
| <b>Dist Pan</b><br>(Distortion Pan)            | L64–63R                  | Stereo location of the overdrive sound                                                                                                  |
| <b>Cho PreDly</b><br>(Chorus Pre Delay)        | 0.0–100 [msec]           | Adjusts the delay time from the direct sound until the chorus sound is heard.                                                           |
| <b>Cho Sync</b><br>(Chorus Rate (sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ “Tempo” (p. 16)                                                 |
| <b>C. Rate</b><br>(Chorus Rate (Hz))           | 0.05–10.00 [Hz]          | Frequency of modulation                                                                                                                 |
| <b>C. Rate Nt</b><br>(Chorus Rate (note))      | Note<br>⇒ “Note” (p. 64) |                                                                                                                                         |
| <b>Cho Depth</b><br>(Chorus Depth)             | 0–127                    | Depth of modulation                                                                                                                     |
| <b>Cho Bal</b><br>(Chorus Balance)             | D100: 0W–D0: 100W        | Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D). |
| <b>Level</b>                                   | 0–127                    | Output Level                                                                                                                            |

## DS → Flanger (Distortion → Flanger)



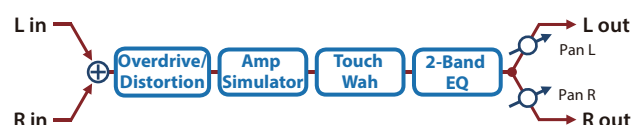
| Parameter                                       | Value                    | Explanation                                                                                                                               |
|-------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dist Drive</b><br>(Distortion Drive)         | 0–127                    | Degree of distortion<br>Also changes the volume.                                                                                          |
| <b>Dist Pan</b><br>(Distortion Pan)             | L64–63R                  | Stereo location of the overdrive sound                                                                                                    |
| <b>Flg PreDly</b><br>(Flanger Pre Delay)        | 0.0–100 [msec]           | Adjusts the delay time from when the direct sound begins until the flanger sound is heard.                                                |
| <b>Flg Sync</b><br>(Flanger Rate (sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ “Tempo” (p. 16)                                                   |
| <b>F. Delay</b><br>(Flanger Rate (Hz))          | 0.05–10.00 [Hz]          | Frequency of modulation                                                                                                                   |
| <b>F. Rate Nt</b><br>(Flanger Rate (note))      | Note<br>⇒ “Note” (p. 64) |                                                                                                                                           |
| <b>Flg Depth</b><br>(Flanger Depth)             | 0–127                    | Depth of modulation                                                                                                                       |
| <b>Flg Fbk</b><br>(Flanger Feedback)            | –98–+98 [%]              | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.                |
| <b>Flg Bal</b><br>(Flanger Balance)             | D100: 0W–D0: 100W        | Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D). |
| <b>Level</b>                                    | 0–127                    | Output Level                                                                                                                              |

## DS → Delay (Distortion → Delay)



| Parameter                                       | Value                                                                                                      | Explanation                                                                                                                                               |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Dist Drive</b><br>(Distortion Drive)         | 0–127                                                                                                      | Degree of distortion<br>Also changes the volume.                                                                                                          |
| <b>Dist Pan</b><br>(Distortion Pan)             | L64–63R                                                                                                    | Stereo location of the overdrive sound                                                                                                                    |
| <b>Delay Sync</b><br>(Delay Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>→ “Tempo” (p. 16)                                                                   |
| <b>D. Time</b><br>(Delay Time (msec))           | 1–2600                                                                                                     | Adjusts the delay time from the direct sound until the delay sound is heard.                                                                              |
| <b>D. Time Nt</b><br>(Delay Time (note))        | Note<br>→ “Note” (p. 64)                                                                                   |                                                                                                                                                           |
| <b>Delay Fbk</b><br>(Delay Feedback)            | -98→+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect.<br>Negative (-) settings will invert the phase.                               |
| <b>Dly HF</b><br>(Delay HF Damp)                | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS. |
| <b>Dly Bal</b><br>(Delay Balance)               | D100: 0W–D0: 100W                                                                                          | Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).                     |
| <b>Level</b>                                    | 0–127                                                                                                      | Output Level                                                                                                                                              |

## OD/DS → T. Wah (Overdrive/Distortion → Touch Wah)



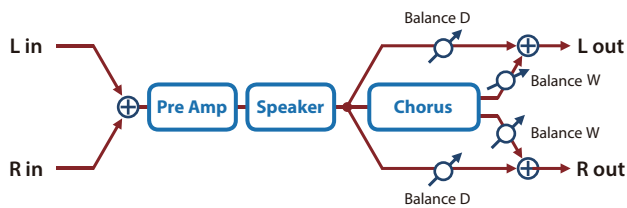
| Parameter                                | Value                             | Explanation                                                                                                                                                |
|------------------------------------------|-----------------------------------|----------------------------------------------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

## OD/DS → A. Wah (Overdrive/Distortion → Auto Wah)



| Parameter                                        | Value                                | Explanation                                                                                                                                              |
|--------------------------------------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Drive Switch</b>                              | OFF, ON                              | Turns overdrive/distortion on/off                                                                                                                        |
| <b>D. Type</b><br>(Drive Type)                   | OVERDRIVE,<br>DISTORTION             | Type of distortion                                                                                                                                       |
| <b>Drive</b>                                     | 0–127                                | Degree of distortion. Also changes the volume.                                                                                                           |
| <b>Tone</b>                                      | 0–127                                | Sound quality of the Overdrive effect                                                                                                                    |
| <b>Amp Switch</b>                                | OFF, ON                              | Turns the Amp Simulator on/off.                                                                                                                          |
| <b>AmpType</b><br>(Amp Type)                     | SMALL, BUILT-IN,<br>2-STACK, 3-STACK | Type of guitar amp<br>SMALL: Small amp<br>BUILT-IN: Single-unit type amp<br>2-STACK: Large double stack amp<br>3-STACK: Large triple stack amp           |
| <b>AWah Switch</b><br>(AutoWah Switch)           | OFF, ON                              | Wah on/off                                                                                                                                               |
| <b>AWah Mode</b><br>(AutoWah Mode)               | LPF, BPF                             | Type of filter<br>LPF: The wah effect will be applied over a wide frequency range.<br>BPF: The wah effect will be applied over a narrow frequency range. |
| <b>AWah Manual</b><br>(AutoWah Manual)           | 0–127                                | Center frequency at which the wah effect is applied                                                                                                      |
| <b>AWah Peak</b><br>(AutoWah Peak)               | 0–127                                | Width of the frequency region at which the wah effect is applied<br>Increasing this value will make the frequency region narrower.                       |
| <b>AWah Sync</b><br>(AutoWah Rate (sync switch)) | OFF, ON                              | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                  |
| <b>AWRate</b><br>(AutoWah Rate (Hz))             | 0.05–10.00 [Hz]                      | Frequency of modulation                                                                                                                                  |
| <b>AWRate Nt</b><br>(AutoWah Rate (note))        | Note<br>➔ "Note" (p. 64)             |                                                                                                                                                          |
| <b>AWah Depth</b><br>(AutoWah Depth)             | 0–127                                | Depth at which the wah effect is modulated                                                                                                               |
| <b>AWah Bal</b><br>(AutoWah Balance)             | D100: 0W–D0:<br>100W                 | Adjusts the volume balance between the sound that is sent through the wah (W) and the sound that is not sent through the wah (D).                        |
| <b>Low Gain</b>                                  | -15–+15 [dB]                         | Amount of boost/cut for the low-frequency range                                                                                                          |
| <b>High Gain</b>                                 | -15–+15 [dB]                         | Amount of boost/cut for the high-frequency range                                                                                                         |
| <b>Level</b>                                     | 0–127                                | Output Level                                                                                                                                             |

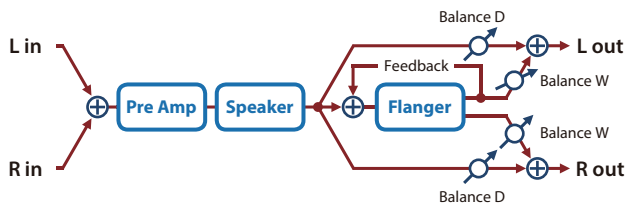
# Gt → Chorus (Guitar Amp Simulator → Chorus)



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

| Parameter                               | Value             | Explanation                                                                                                                             |                                                |            |
|-----------------------------------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------|
| <b>SpType</b><br>(Speaker Type)         |                   | Cabinet                                                                                                                                 | Diameter (in inches) and number of the speaker | Microphone |
|                                         | SMALL 1           | small open-back enclosure                                                                                                               | 10                                             | dynamic    |
|                                         | SMALL 2           | small open-back enclosure                                                                                                               | 10                                             | dynamic    |
|                                         | MIDDLE            | open back enclosure                                                                                                                     | 12 x 1                                         | dynamic    |
|                                         | JC-120            | open back enclosure                                                                                                                     | 12 x 2                                         | dynamic    |
|                                         | BUILT-IN1         | open back enclosure                                                                                                                     | 12 x 2                                         | dynamic    |
|                                         | BUILT-IN2         | open back enclosure                                                                                                                     | 12 x 2                                         | condenser  |
|                                         | BUILT-IN3         | open back enclosure                                                                                                                     | 12 x 2                                         | condenser  |
|                                         | BUILT-IN4         | open back enclosure                                                                                                                     | 12 x 2                                         | condenser  |
|                                         | BUILT-IN5         | open back enclosure                                                                                                                     | 12 x 2                                         | condenser  |
|                                         | BG STACK1         | sealed enclosure                                                                                                                        | 12 x 2                                         | condenser  |
|                                         | BG STACK2         | large sealed enclosure                                                                                                                  | 12 x 2                                         | condenser  |
|                                         | MS STACK1         | large sealed enclosure                                                                                                                  | 12 x 4                                         | condenser  |
|                                         | MS STACK2         | large sealed enclosure                                                                                                                  | 12 x 4                                         | condenser  |
|                                         | METAL STACK       | large double stack                                                                                                                      | 12 x 4                                         | condenser  |
|                                         | 2-STACK           | large double stack                                                                                                                      | 12 x 4                                         | condenser  |
|                                         | 3-STACK           | large triple stack                                                                                                                      | 12 x 4                                         | condenser  |
| <b>Chorus Sw</b><br>(Chorus Switch)     | OFF, ON           | Chorus on/off                                                                                                                           |                                                |            |
| <b>Cho PreDly</b><br>(Chorus Pre Delay) | 0.0–100 [msec]    | Adjusts the delay time from the direct sound until the chorus sound is heard.                                                           |                                                |            |
| <b>C. Rate</b><br>(Chorus Rate (Hz))    | 0.05–10.00 [Hz]   | Frequency of modulation                                                                                                                 |                                                |            |
| <b>Cho Depth</b><br>(Chorus Depth)      | 0–127             | Depth of modulation                                                                                                                     |                                                |            |
| <b>Cho Bal</b><br>(Chorus Balance)      | D100: 0W–D0: 100W | Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D). |                                                |            |
| <b>Level</b>                            | 0–127             | Output Level                                                                                                                            |                                                |            |

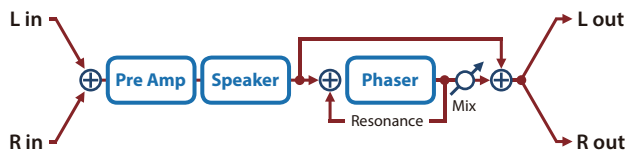
# GT → Flanger (Guitar Amp Simulator → Flanger)



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

| Parameter                                | Value             | Explanation                                                                                                                               |                                                |            |
|------------------------------------------|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------|
|                                          |                   | Cabinet                                                                                                                                   | Diameter (in inches) and number of the speaker | Microphone |
| <b>SpType</b><br>(Speaker Type)          | SMALL 1           | small open-back enclosure                                                                                                                 | 10                                             | dynamic    |
|                                          | SMALL 2           | small open-back enclosure                                                                                                                 | 10                                             | dynamic    |
|                                          | MIDDLE            | open back enclosure                                                                                                                       | 12 x 1                                         | dynamic    |
|                                          | JC-120            | open back enclosure                                                                                                                       | 12 x 2                                         | dynamic    |
|                                          | BUILT-IN1         | open back enclosure                                                                                                                       | 12 x 2                                         | dynamic    |
|                                          | BUILT-IN2         | open back enclosure                                                                                                                       | 12 x 2                                         | condenser  |
|                                          | BUILT-IN3         | open back enclosure                                                                                                                       | 12 x 2                                         | condenser  |
|                                          | BUILT-IN4         | open back enclosure                                                                                                                       | 12 x 2                                         | condenser  |
|                                          | BUILT-IN5         | open back enclosure                                                                                                                       | 12 x 2                                         | condenser  |
|                                          | BG STACK1         | sealed enclosure                                                                                                                          | 12 x 2                                         | condenser  |
|                                          | BG STACK2         | large sealed enclosure                                                                                                                    | 12 x 2                                         | condenser  |
|                                          | MS STACK1         | large sealed enclosure                                                                                                                    | 12 x 4                                         | condenser  |
|                                          | MS STACK2         | large sealed enclosure                                                                                                                    | 12 x 4                                         | condenser  |
|                                          | METAL STACK       | large double stack                                                                                                                        | 12 x 4                                         | condenser  |
|                                          | 2-STACK           | large double stack                                                                                                                        | 12 x 4                                         | condenser  |
|                                          | 3-STACK           | large triple stack                                                                                                                        | 12 x 4                                         | condenser  |
| <b>Flg Switch</b><br>(Flanger Switch)    | OFF, ON           | Flanger on/off                                                                                                                            |                                                |            |
| <b>Flg PreDly</b><br>(Flanger Pre Delay) | 0.0–100 [msec]    | Adjusts the delay time from when the direct sound begins until the flanger sound is heard.                                                |                                                |            |
| <b>F. Rate</b><br>(Flanger Rate (Hz))    | 0.05–10.00 [Hz]   | Frequency of modulation                                                                                                                   |                                                |            |
| <b>Flg Depth</b><br>(Flanger Depth)      | 0–127             | Depth of modulation                                                                                                                       |                                                |            |
| <b>Flg Fbk</b><br>(Flanger Feedback)     | –98–+98 [%]       | Adjusts the proportion of the flanger sound that is fed back into the effect.<br>Negative (–) settings will invert the phase.             |                                                |            |
| <b>Flg Bal</b><br>(Flanger Balance)      | D100: 0W–D0: 100W | Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D). |                                                |            |
| <b>Level</b>                             | 0–127             | Output Level                                                                                                                              |                                                |            |

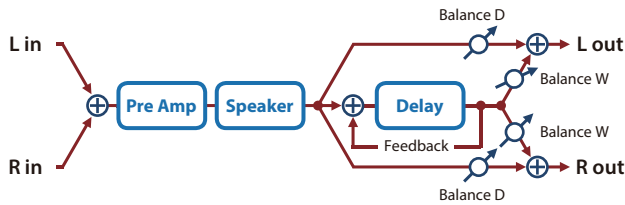
## Gt → Phaser (Guitar Amp Simulator → Phaser)



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

| Parameter                             | Value           | Explanation                                                         |                                                |            |
|---------------------------------------|-----------------|---------------------------------------------------------------------|------------------------------------------------|------------|
| <b>SpType</b><br>(Speaker Type)       |                 | Cabinet                                                             | Diameter (in inches) and number of the speaker | Microphone |
|                                       | SMALL 1         | small open-back enclosure                                           | 10                                             | dynamic    |
|                                       | SMALL 2         | small open-back enclosure                                           | 10                                             | dynamic    |
|                                       | MIDDLE          | open back enclosure                                                 | 12 x 1                                         | dynamic    |
|                                       | JC-120          | open back enclosure                                                 | 12 x 2                                         | dynamic    |
|                                       | BUILT-IN1       | open back enclosure                                                 | 12 x 2                                         | dynamic    |
|                                       | BUILT-IN2       | open back enclosure                                                 | 12 x 2                                         | condenser  |
|                                       | BUILT-IN3       | open back enclosure                                                 | 12 x 2                                         | condenser  |
|                                       | BUILT-IN4       | open back enclosure                                                 | 12 x 2                                         | condenser  |
|                                       | BUILT-IN5       | open back enclosure                                                 | 12 x 2                                         | condenser  |
|                                       | BG STACK1       | sealed enclosure                                                    | 12 x 2                                         | condenser  |
|                                       | BG STACK2       | large sealed enclosure                                              | 12 x 2                                         | condenser  |
|                                       | MS STACK1       | large sealed enclosure                                              | 12 x 4                                         | condenser  |
|                                       | MS STACK2       | large sealed enclosure                                              | 12 x 4                                         | condenser  |
|                                       | METAL STACK     | large double stack                                                  | 12 x 4                                         | condenser  |
|                                       | 2-STACK         | large double stack                                                  | 12 x 4                                         | condenser  |
|                                       | 3-STACK         | large triple stack                                                  | 12 x 4                                         | condenser  |
| <b>Phaser SW</b><br>(Phaser Switch)   | OFF, ON         | Phaser on/off                                                       |                                                |            |
| <b>P. Rate</b><br>(Phaser Rate (Hz))  | 0.05–10.00 [Hz] | Frequency of modulation                                             |                                                |            |
| <b>Phs Manual</b><br>(Phaser Manual)  | 0–127           | Adjusts the basic frequency from which the sound will be modulated. |                                                |            |
| <b>Phs Depth</b><br>(Phaser Depth)    | 0–127           | Depth of modulation                                                 |                                                |            |
| <b>Phs Reso</b><br>(Phaser Resonance) | 0–127           | Amount of feedback                                                  |                                                |            |
| <b>Phs Mix</b><br>(Phaser Mix)        | 0–127           | Level of the phase-shifted sound                                    |                                                |            |
| <b>Level</b>                          | 0–127           | Output Level                                                        |                                                |            |

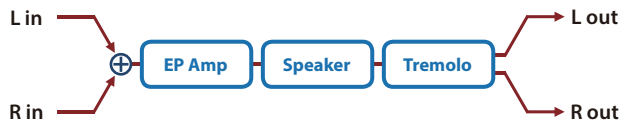
## Gt → Delay (Guitar Amp Simulator → Delay)



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

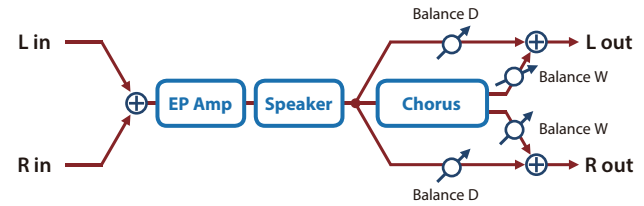
| Parameter                            | Value                                                                                                      | Explanation                                                                                                                           |                                                |            |
|--------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------|
| <b>SpType</b><br>(Speaker Type)      |                                                                                                            | Cabinet                                                                                                                               | Diameter (in inches) and number of the speaker | Microphone |
|                                      | SMALL 1                                                                                                    | small open-back enclosure                                                                                                             | 10                                             | dynamic    |
|                                      | SMALL 2                                                                                                    | small open-back enclosure                                                                                                             | 10                                             | dynamic    |
|                                      | MIDDLE                                                                                                     | open back enclosure                                                                                                                   | 12 x 1                                         | dynamic    |
|                                      | JC-120                                                                                                     | open back enclosure                                                                                                                   | 12 x 2                                         | dynamic    |
|                                      | BUILT-IN1                                                                                                  | open back enclosure                                                                                                                   | 12 x 2                                         | dynamic    |
|                                      | BUILT-IN2                                                                                                  | open back enclosure                                                                                                                   | 12 x 2                                         | condenser  |
|                                      | BUILT-IN3                                                                                                  | open back enclosure                                                                                                                   | 12 x 2                                         | condenser  |
|                                      | BUILT-IN4                                                                                                  | open back enclosure                                                                                                                   | 12 x 2                                         | condenser  |
|                                      | BUILT-IN5                                                                                                  | open back enclosure                                                                                                                   | 12 x 2                                         | condenser  |
|                                      | BG STACK1                                                                                                  | sealed enclosure                                                                                                                      | 12 x 2                                         | condenser  |
|                                      | BG STACK2                                                                                                  | large sealed enclosure                                                                                                                | 12 x 2                                         | condenser  |
|                                      | MS STACK1                                                                                                  | large sealed enclosure                                                                                                                | 12 x 4                                         | condenser  |
|                                      | MS STACK2                                                                                                  | large sealed enclosure                                                                                                                | 12 x 4                                         | condenser  |
|                                      | MTL STACK                                                                                                  | large double stack                                                                                                                    | 12 x 4                                         | condenser  |
|                                      | 2-STACK                                                                                                    | large double stack                                                                                                                    | 12 x 4                                         | condenser  |
|                                      | 3-STACK                                                                                                    | large triple stack                                                                                                                    | 12 x 4                                         | condenser  |
| <b>Delay Sw</b><br>(Delay Switch)    | OFF, ON                                                                                                    | Delay on/off                                                                                                                          |                                                |            |
| <b>Dly Time</b><br>(Delay Time)      | 1–1300                                                                                                     | Adjusts the delay time from the direct sound until the delay sound is heard.                                                          |                                                |            |
| <b>Delay Fbk</b><br>(Delay Feedback) | –98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect.<br>Negative (-) settings will invert the phase.           |                                                |            |
| <b>Dly HF</b><br>(Delay HF Damp)     | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Frequency at which the high-frequency portion of the delay sound will be cut (BYPASS: no cut)                                         |                                                |            |
| <b>Dly Bal</b><br>(Delay Balance)    | D100: 0W–D0: 100W                                                                                          | Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D). |                                                |            |
| <b>Level</b>                         | 0–127                                                                                                      | Output Level                                                                                                                          |                                                |            |

## EP → Tremolo (EP Amp Simulator → Tremolo)



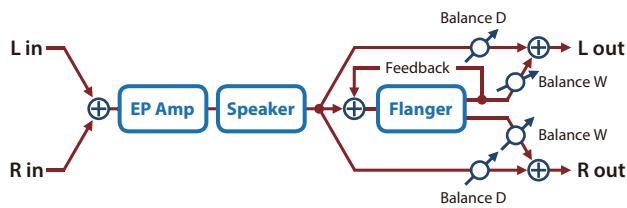
| Parameter                                     | Value                       | Explanation                                                                                        |
|-----------------------------------------------|-----------------------------|----------------------------------------------------------------------------------------------------|
| Type                                          |                             | Type of amp                                                                                        |
|                                               | OLD CASE                    | A standard electric piano sound of the early 70s                                                   |
|                                               | NEW CASE                    | A standard electric piano sound of the late 70s and early 80s                                      |
|                                               | WURLY                       | A standard electric piano sound of the 60s                                                         |
| Bass                                          | -50~+50                     | Amount of low-frequency boost/cut                                                                  |
| Treble                                        | -50~+50                     | Amount of high-frequency boost/cut                                                                 |
| Tremolo Sw<br>(Tremolo Switch)                | OFF, ON                     | Tremolo on/off                                                                                     |
| Tremolo Sync<br>(Tremolo Speed (sync switch)) | OFF, ON                     | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>→ "Tempo" (p. 16)            |
| T. Speed<br>(Tremolo Speed (Hz))              | 0.05~10.00 [Hz]             | Rate of the tremolo effect                                                                         |
| T. Spd Nt<br>(Tremolo Speed (note))           | Note<br>→ "Note" (p. 64)    |                                                                                                    |
| Trm Depth<br>(Tremolo Depth)                  | 0~127                       | Depth of the tremolo effect                                                                        |
| Trm Duty<br>(Tremolo Duty)                    | -10~+10                     | Adjusts the duty cycle of the LFO waveform used to apply tremolo.                                  |
| Sp Type<br>(Speaker Type)                     | LINE, OLD, NEW, WURLY, TWIN | Type of speaker<br>If LINE is selected, the sound will not be sent through the speaker simulation. |
| OD Switch<br>(Overdrive Switch)               | OFF, ON                     | Overdrive on/off                                                                                   |
| OD Gain<br>(Overdrive Gain)                   | 0~127                       | Overdrive input level                                                                              |
| OD Drive<br>(Overdrive Drive)                 | 0~127                       | Degree of distortion                                                                               |
| Level                                         | 0~127                       | Output Level                                                                                       |

## EP → Chorus (EP Amp Simulator → Chorus)



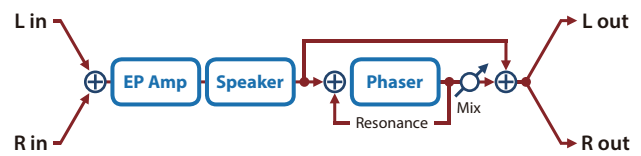
| Parameter                               | Value                       | Explanation                                                                                                                             |
|-----------------------------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Type                                    |                             | Type of amp                                                                                                                             |
|                                         | OLD CASE                    | A standard electric piano sound of the early 70s                                                                                        |
|                                         | NEW CASE                    | A standard electric piano sound of the late 70s and early 80s                                                                           |
|                                         | WURLY                       | A standard electric piano sound of the 60s                                                                                              |
| Bass                                    | -50~+50                     | Amount of low-frequency boost/cut                                                                                                       |
| Treble                                  | -50~+50                     | Amount of high-frequency boost/cut                                                                                                      |
| Cho Switch<br>(Chorus Switch)           | OFF, ON                     | Chorus on/off                                                                                                                           |
| Cho PreDly<br>(Chorus Pre Delay)        | 0.0~100 [msec]              | Adjusts the delay time from the direct sound until the chorus sound is heard.                                                           |
| Cho Sync<br>(Chorus Rate (sync switch)) | OFF, ON                     | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>→ "Tempo" (p. 16)                                                 |
| C. Rate<br>(Chorus Rate (Hz))           | 0.05~10.00 [Hz]             | Frequency of modulation                                                                                                                 |
| C. Rate Nt<br>(Chorus Rate (note))      | Note<br>→ "Note" (p. 64)    |                                                                                                                                         |
| Cho Depth<br>(Chorus Depth)             | 0~127                       | Depth of modulation                                                                                                                     |
| Cho Bal<br>(Chorus Balance)             | D100: 0W~D0: 100W           | Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D). |
| Sp Type<br>(Speaker Type)               | LINE, OLD, NEW, WURLY, TWIN | Type of speaker<br>If LINE is selected, the sound will not be sent through the speaker simulation.                                      |
| OD Switch<br>(Overdrive Switch)         | OFF, ON                     | Overdrive on/off                                                                                                                        |
| OD Gain<br>(Overdrive Gain)             | 0~127                       | Overdrive input level                                                                                                                   |
| OD Drive<br>(Overdrive Drive)           | 0~127                       | Degree of distortion                                                                                                                    |
| Level                                   | 0~127                       | Output Level                                                                                                                            |

## EP → Flanger (EP Amp Simulator → Flanger)



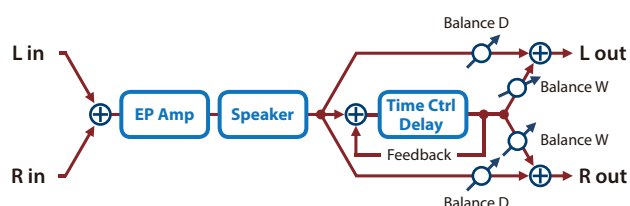
| Parameter                                | Value                       | Explanation                                                                                                                               |
|------------------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                     |                             | Type of amp                                                                                                                               |
|                                          | OLDCASE                     | A standard electric piano sound of the early 70s                                                                                          |
|                                          | NEWCASE                     | A standard electric piano sound of the late 70s and early 80s                                                                             |
| Bass                                     | -50—+50                     | Amount of low-frequency boost/cut                                                                                                         |
| Treble                                   | -50—+50                     | Amount of high-frequency boost/cut                                                                                                        |
| Flg Switch<br>(Flanger Switch)           | OFF, ON                     | Flanger on/off                                                                                                                            |
| Flg PreDly<br>(Flanger Pre Delay)        | 0.0–100 [msec]              | Adjusts the delay time from when the direct sound begins until the flanger sound is heard.                                                |
| Flg Sync<br>(Flanger Rate (sync switch)) | OFF, ON                     | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ “Tempo” (p. 16)                                                   |
| F. Rate<br>(Flanger Rate (Hz))           | 0.05–10.00 [Hz]             | Frequency of modulation                                                                                                                   |
| F. Rate Nt<br>(Flanger Rate (note))      | Note<br>⇒ “Note” (p. 64)    |                                                                                                                                           |
| Flg Depth<br>(Flanger Depth)             | 0–127                       | Depth of modulation                                                                                                                       |
| Flg Fbk<br>(Flanger Feedback)            | -98—+98 [%]                 | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.                |
| Flg Bal<br>(Flanger Balance)             | D100: 0W–D0: 100W           | Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D). |
| Sp Type<br>(Speaker Type)                | LINE, OLD, NEW, WURLY, TWIN | Type of speaker<br>If LINE is selected, the sound will not be sent through the speaker simulation.                                        |
| OD Switch<br>(Overdrive Switch)          | OFF, ON                     | Overdrive on/off                                                                                                                          |
| OD Gain<br>(Overdrive Gain)              | 0–127                       | Overdrive input level                                                                                                                     |
| OD Drive<br>(Overdrive Drive)            | 0–127                       | Degree of distortion                                                                                                                      |
| Level                                    | 0–127                       | Output Level                                                                                                                              |

## EP → Phaser (EP Amp Simulator → Phaser)



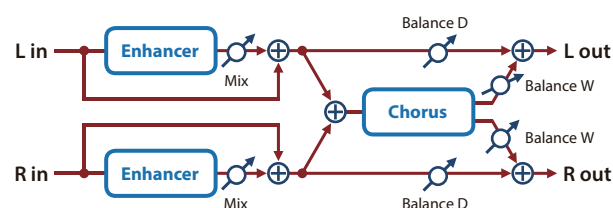
| Parameter                               | Value                       | Explanation                                                                                        |
|-----------------------------------------|-----------------------------|----------------------------------------------------------------------------------------------------|
| Type                                    |                             | Type of amp                                                                                        |
|                                         | OLDCASE                     | A standard electric piano sound of the early 70s                                                   |
|                                         | NEWCASE                     | A standard electric piano sound of the late 70s and early 80s                                      |
| Bass                                    | -50—+50                     | Amount of low-frequency boost/cut                                                                  |
| Treble                                  | -50—+50                     | Amount of high-frequency boost/cut                                                                 |
| Phs Switch<br>(Phaser Switch)           | OFF, ON                     | Phaser on/off                                                                                      |
| Phs Sync<br>(Phaser Rate (sync switch)) | OFF, ON                     | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>⇒ “Tempo” (p. 16)            |
| P. Rate<br>(Phaser Rate (Hz))           | 0.05–10.00 [Hz]             | Frequency of modulation                                                                            |
| P. Rate Nt<br>(Phaser Rate (note))      | Note<br>⇒ “Note” (p. 64)    |                                                                                                    |
| Phs Manual<br>(Phaser Manual)           | 0–127                       | Adjusts the basic frequency from which the sound will be modulated.                                |
| Phs Depth<br>(Phaser Depth)             | 0–127                       | Depth of modulation                                                                                |
| Phs Reso<br>(Phaser Resonance)          | 0–127                       | Amount of feedback                                                                                 |
| Phs Mix (Phaser Mix)                    | 0–127                       | Level of the phase-shifted sound                                                                   |
| Sp Type<br>(Speaker Type)               | LINE, OLD, NEW, WURLY, TWIN | Type of speaker<br>If LINE is selected, the sound will not be sent through the speaker simulation. |
| OD Switch<br>(Overdrive Switch)         | OFF, ON                     | Overdrive on/off                                                                                   |
| OD Gain<br>(Overdrive Gain)             | 0–127                       | Overdrive input level                                                                              |
| OD Drive<br>(Overdrive Drive)           | 0–127                       | Degree of distortion                                                                               |
| Level                                   | 0–127                       | Output Level                                                                                       |

## EP → Delay (EP Amp Simulator → Delay)



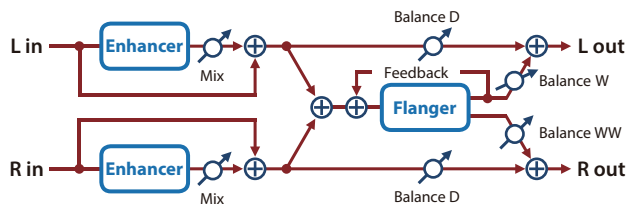
| Parameter                                  | Value                                                                                                      | Explanation                                                                                                                                                                                |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                                       |                                                                                                            | Type of amp                                                                                                                                                                                |
|                                            | OLDCASE                                                                                                    | A standard electric piano sound of the early 70s                                                                                                                                           |
|                                            | NEWCASE                                                                                                    | A standard electric piano sound of the late 70s and early 80s                                                                                                                              |
| Bass                                       | -50–+50                                                                                                    | Amount of low-frequency boost/cut                                                                                                                                                          |
| Treble                                     | -50–+50                                                                                                    | Amount of high-frequency boost/cut                                                                                                                                                         |
| Dly Switch<br>(Delay Switch)               | OFF, ON                                                                                                    | Delay on/off                                                                                                                                                                               |
| Delay Sync<br>(Delay Time<br>sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                                                    |
| D. Time<br>(Delay Time (msec))             | 1–1300                                                                                                     | Adjusts the delay time from the direct sound until the delay sound is heard.                                                                                                               |
| D. Time Nt<br>(Delay Time (note))          | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                                            |
| Dly Accel<br>(Delay Accel)                 | 0–15                                                                                                       | Speed at which the current delay time changes to the specified delay time when you change the delay time.<br>The speed of the pitch change will change simultaneously with the delay time. |
| Delay Fbk<br>(Delay Feedback)              | -98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect.<br>Negative (-) settings will invert the phase.                                                                |
| Dly HF<br>(Delay HF Damp)                  | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Frequency at which the high-frequency portion of the delay sound will be cut (BYPASS: no cut)                                                                                              |
| Dly Bal<br>(Delay Balance)                 | D100: 0W–D0: 100W                                                                                          | Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).                                                      |
| Sp Type<br>(Speaker Type)                  | LINE, OLD, NEW, WURLY, TWIN                                                                                | Type of speaker<br>If LINE is selected, the sound will not be sent through the speaker simulation.                                                                                         |
| OD Switch<br>(Overdrive Switch)            | OFF, ON                                                                                                    | Overdrive on/off                                                                                                                                                                           |
| OD Gain<br>(Overdrive Gain)                | 0–127                                                                                                      | Overdrive input level                                                                                                                                                                      |
| OD Drive<br>(Overdrive Drive)              | 0–127                                                                                                      | Degree of distortion                                                                                                                                                                       |
| Level                                      | 0–127                                                                                                      | Output Level                                                                                                                                                                               |

## Enhncr → Cho (Enhancer → Chorus)



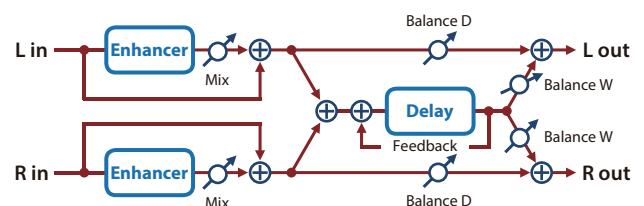
| Parameter                                 | Value                    | Explanation                                                                                                                             |
|-------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Enh Sens<br>(Enhancer Sens)               | 0–127                    | Sensitivity of the enhancer                                                                                                             |
| Enh Mix<br>(Enhancer Mix)                 | 0–127                    | Level of the overtones generated by the enhancer                                                                                        |
| Cho PreDly<br>(Chorus Pre Delay)          | 0.0–100 [msec]           | Adjusts the delay time from the direct sound until the chorus sound is heard.                                                           |
| Cho Sync<br>(Chorus Rate<br>sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                 |
| C. Rate<br>(Chorus Rate (Hz))             | 0.05–10.00 [Hz]          | Frequency of modulation                                                                                                                 |
| C. Rate Nt<br>(Chorus Rate (note))        | Note<br>➔ "Note" (p. 64) |                                                                                                                                         |
| Cho Depth<br>(Chorus Depth)               | 0–127                    | Depth of modulation                                                                                                                     |
| Cho Bal<br>(Chorus Balance)               | D100: 0W–D0: 100W        | Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D). |
| Level                                     | 0–127                    | Output Level                                                                                                                            |

## Enhncr → Fl (Enhancer → Flanger)



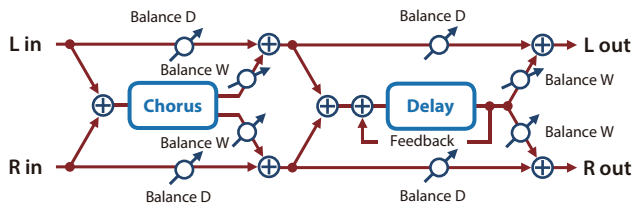
| Parameter                                     | Value                    | Explanation                                                                                                                               |
|-----------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Enh Sens</b><br>(Enhancer Sens)            | 0–127                    | Sensitivity of the enhancer                                                                                                               |
| <b>Enh Mix</b><br>(Enhancer Mix)              | 0–127                    | Level of the overtones generated by the enhancer                                                                                          |
| <b>Flg PreDly</b><br>(Flanger Pre Delay)      | 0.0–100 [msec]           | Adjusts the delay time from when the direct sound begins until the flanger sound is heard.                                                |
| <b>Flg Sync</b><br>(Flanger Rate sync switch) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                   |
| <b>F. Rate</b><br>(Flanger Rate (Hz))         | 0.05–10.00 [Hz]          | Frequency of modulation                                                                                                                   |
| <b>F. Rate Nt</b><br>(Flanger Rate (note))    | Note<br>➔ "Note" (p. 64) |                                                                                                                                           |
| <b>Flg Depth</b><br>(Flanger Depth)           | 0–127                    | Depth of modulation                                                                                                                       |
| <b>Flg Fbk</b><br>(Flanger Feedback)          | -98–+98 [%]              | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.                |
| <b>Flg Bal</b><br>(Flanger Balance)           | D100: 0W–D0: 100W        | Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D). |
| <b>Level</b>                                  | 0–127                    | Output Level                                                                                                                              |

## Enhncr → Dly (Enhancer0 Delay)



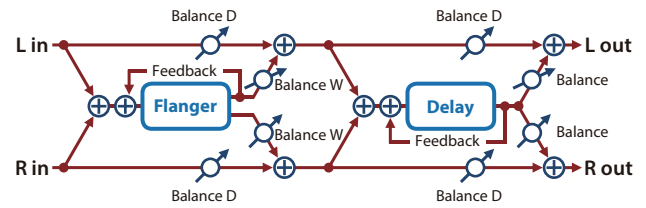
| Parameter                                   | Value                                                                                                      | Explanation                                                                                                                                               |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Enh Sens</b><br>(Enhancer Sens)          | 0–127                                                                                                      | Sensitivity of the enhancer                                                                                                                               |
| <b>Enh Mix</b><br>(Enhancer Mix)            | 0–127                                                                                                      | Level of the overtones generated by the enhancer                                                                                                          |
| <b>Dly Sync</b><br>(Delay Time sync switch) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                   |
| <b>D. Time</b><br>(Delay Time (msec))       | 1–2600                                                                                                     | Adjusts the delay time from the direct sound until the delay sound is heard.                                                                              |
| <b>D. Time Nt</b><br>(Delay Time (note))    | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                           |
| <b>Delay Fbk</b><br>(Delay Feedback)        | -98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.                                  |
| <b>Dly HF</b><br>(Delay HF Damp)            | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS. |
| <b>Dly Bal</b><br>(Delay Balance)           | D100: 0W–D0: 100W                                                                                          | Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).                     |
| <b>Level</b>                                | 0–127                                                                                                      | Output Level                                                                                                                                              |

## Chorus → Dly (Chorus → Delay)



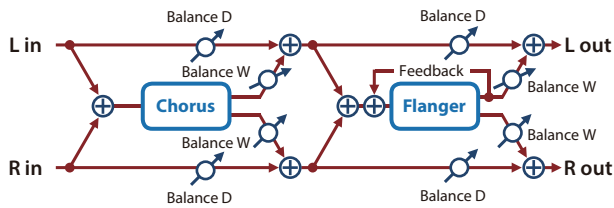
| Parameter                                       | Value                                                                                                      | Explanation                                                                                                                                               |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cho PreDly</b><br>(Chorus Pre Delay)         | 0.0–100 [msec]                                                                                             | Adjusts the delay time from the direct sound until the chorus sound is heard.                                                                             |
| <b>Cho Sync</b><br>(Chorus Rate (sync switch))  | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                   |
| <b>C. Rate</b><br>(Chorus Rate (Hz))            | 0.05–10.00 [Hz]                                                                                            | Frequency of modulation                                                                                                                                   |
| <b>C. Rate Nt</b><br>(Chorus Rate (note))       | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                           |
| <b>Cho Depth</b><br>(Chorus Depth)              | 0–127                                                                                                      | Depth of modulation                                                                                                                                       |
| <b>Cho Bal</b><br>(Chorus Balance)              | D100: 0W–D0: 100W                                                                                          | Volume balance between the direct sound (D) and the chorus sound (W)                                                                                      |
| <b>Delay Sync</b><br>(Delay Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                   |
| <b>D. Time</b><br>(Delay Time (msec))           | 1–2600                                                                                                     | Adjusts the delay time from the direct sound until the delay sound is heard.                                                                              |
| <b>D. Time Nt</b><br>(Delay Time (note))        | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                           |
| <b>Delay Fbk</b><br>(Delay Feedback)            | –98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.                                  |
| <b>Dly HF</b><br>(Delay HF Damp)                | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS. |
| <b>Dly Bal</b><br>(Delay Balance)               | D100: 0W–D0: 100W                                                                                          | Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).                     |
| <b>Level</b>                                    | 0–127                                                                                                      | Output Level                                                                                                                                              |

## Flanger → Dly (Flanger → Delay)



| Parameter                                       | Value                                                                                                      | Explanation                                                                                                                                               |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Flg PreDly</b><br>(Flanger Pre Delay)        | 0.0–100 [msec]                                                                                             | Adjusts the delay time from when the direct sound begins until the flanger sound is heard.                                                                |
| <b>Flg Sync</b><br>(Flanger Rate (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                   |
| <b>F. Rate</b><br>(Flanger Rate (Hz))           | 0.05–10.00 [Hz]                                                                                            | Frequency of modulation                                                                                                                                   |
| <b>F. Rate Nt</b><br>(Flanger Rate (note))      | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                           |
| <b>Flg Depth</b><br>(Flanger Depth)             | 0–127                                                                                                      | Depth of modulation                                                                                                                                       |
| <b>Flg Fbk</b><br>(Flanger Feedback)            | –98–+98 [%]                                                                                                | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.                                |
| <b>Flg Bal</b><br>(Flanger Balance)             | D100: 0W–D0: 100W                                                                                          | Volume balance between the direct sound (D) and the flanger sound (W)                                                                                     |
| <b>Delay Sync</b><br>(Delay Time (sync switch)) | OFF, ON                                                                                                    | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                   |
| <b>D. Time</b><br>(Delay Time (msec))           | 1–2600                                                                                                     | Adjusts the delay time from the direct sound until the delay sound is heard.                                                                              |
| <b>D. Time Nt</b><br>(Delay Time (note))        | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                           |
| <b>Delay Fbk</b><br>(Delay Feedback)            | –98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.                                  |
| <b>Dly HF</b><br>(Delay HF Damp)                | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS. |
| <b>Dly Bal</b><br>(Delay Balance)               | D100: 0W–D0: 100W                                                                                          | Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).                     |
| <b>Level</b>                                    | 0–127                                                                                                      | Output Level                                                                                                                                              |

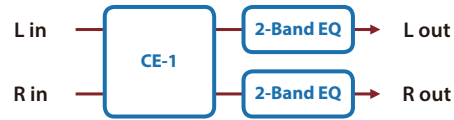
## Chorus → Fl (Chorus → Flanger)



| Parameter                                      | Value                    | Explanation                                                                                                                               |
|------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cho PreDly</b><br>(Chorus Pre Delay)        | 0.0–100 [msec]           | Adjusts the delay time from the direct sound until the chorus sound is heard.                                                             |
| <b>Cho Sync</b><br>(Chorus Rate (sync switch)) | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ “Tempo” (p. 16)                                                   |
| <b>C. Rate</b><br>(Chorus Rate (Hz))           | 0.05–10.00 [Hz]          | Modulation frequency of the chorus effect                                                                                                 |
| <b>C. Rate Nt</b><br>(Chorus Rate (note))      | Note<br>➔ “Note” (p. 64) |                                                                                                                                           |
| <b>Cho Depth</b><br>(Chorus Depth)             | 0–127                    | Modulation depth of the chorus effect                                                                                                     |
| <b>Cho Bal</b><br>(Chorus Balance)             | D100: 0W–D0: 100W        | Volume balance between the direct sound (D) and the chorus sound (W)                                                                      |
| <b>Flg PreDly</b><br>(Flanger Pre Delay)       | 0.0–100 [msec]           | Adjusts the delay time from when the direct sound begins until the flanger sound is heard.                                                |
| <b>Flg Sync</b> (Flanger Rate (sync switch))   | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ “Tempo” (p. 16)                                                   |
| <b>F. Rate</b><br>(Flanger Rate (Hz))          | 0.05–10.00 [Hz]          | Modulation frequency of the flanger effect                                                                                                |
| <b>F. Rate Nt</b><br>(Flanger Rate (note))     | Note<br>➔ “Note” (p. 64) |                                                                                                                                           |
| <b>Flg Depth</b><br>(Flanger Depth)            | 0–127                    | Modulation depth of the flanger effect                                                                                                    |
| <b>Flg Fbk</b><br>(Flanger Feedback)           | –98–+98 [%]              | Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.                |
| <b>Flg Bal</b><br>(Flanger Balance)            | D100: 0W–D0: 100W        | Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D). |
| <b>Level</b>                                   | 0–127                    | Output Level                                                                                                                              |

## CE-1 (Chorus)

This models the classic BOSS CE-1 chorus effect unit. It provides a chorus sound with a distinctively analog warmth.



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

## SBF-325 (Flanger)

This effect reproduces Roland’s SBF-325 analog flanger. It provides three types of flanging effect (which adds a metallic resonance to the original sound) and a chorus-type effect.



| Parameter                                    | Value                    | Explanation                                                                                                                                                                                             |
|----------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mode</b>                                  |                          | Types of flanging effect                                                                                                                                                                                |
|                                              | FL1                      | A typical mono flanger                                                                                                                                                                                  |
|                                              | FL2                      | A stereo flanger that preserves the stereo positioning of the original sound                                                                                                                            |
|                                              | FL3                      | A cross-mix flanger that produces a more intense effect                                                                                                                                                 |
|                                              | CHO                      | A chorus effect                                                                                                                                                                                         |
| <b>Rate Sync</b><br>(Rate (sync switch))     | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ “Tempo” (p. 16)                                                                                                                 |
| <b>Rate</b><br>(Rate (Hz))                   | 0.02–5.00 [Hz]           | Modulation frequency of the flanger effect                                                                                                                                                              |
| <b>Rate Note</b><br>(Rate (note))            | Note<br>➔ “Note” (p. 64) |                                                                                                                                                                                                         |
| <b>Depth</b>                                 | 0–127                    | Modulation depth of the flanger effect                                                                                                                                                                  |
| <b>Manual</b>                                | 0–127                    | Center frequency at which the flanger effect is applied                                                                                                                                                 |
| <b>Feedback</b>                              | 0–127                    | Amount by which the flanging effect is boosted<br>If Mode is CHO, this setting is ignored.                                                                                                              |
| <b>RMod Phase</b><br>(CH-R Modulation Phase) | NORM, INV                | Phase of the right channel modulation:<br>Normally, you will leave this at Normal (NORM).<br>If you specify Inverted (INV), the modulation (upward/downward movement) of the right channel is inverted. |
| <b>L Phase</b><br>(CH-L Phase)               |                          | Phase when mixing the flanging sound with the original sound                                                                                                                                            |
| <b>R Phase</b><br>(CH-R Phase)               |                          | NORM: normal phase<br>INV: inverse phase                                                                                                                                                                |
| <b>Level</b>                                 | 0–127                    | Output Level                                                                                                                                                                                            |

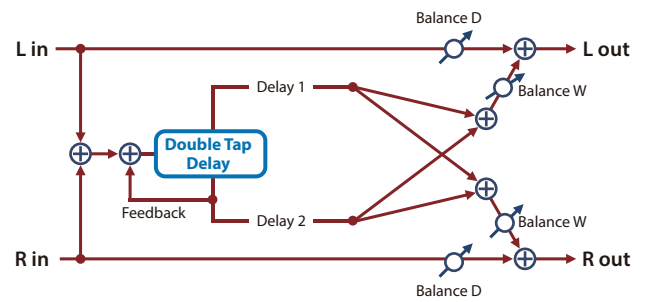
## SDD-320 (Dimension D)

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



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

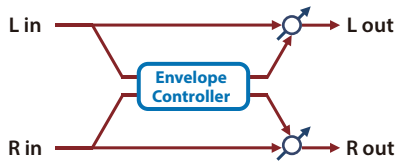
## 2Tap PanDly (2 Tap Pan Delay)



| Parameter                                   | Value                                                                                                      | Explanation                                                                                                                                                         |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Delay Sync<br>(Delay Time<br>(sync switch)) | OFF, ON                                                                                                    | If this is ON, the delay synchronizes with the tempo.                                                                                                               |
| D. Time(ms)<br>(Delay Time (msec))          | 1-2600                                                                                                     | Adjusts the time until the second delay sound is heard.                                                                                                             |
| D. Time(Nt)<br>(Delay Time (note))          | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| Dly Fbk<br>(Delay Feedback)                 | -98--+98 [%]                                                                                               | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.                                            |
| Dly HF<br>(Delay HF Damp)                   | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS. |
| Dly1 Pan<br>(Delay 1 Pan)                   | L64-63R                                                                                                    | Stereo location of Delay 1                                                                                                                                          |
| Dly2 Pan<br>(Delay 2 Pan)                   | L64-63R                                                                                                    | Stereo location of Delay 2                                                                                                                                          |
| Dly1 Lv<br>(Delay 1 Level)                  | 0-127                                                                                                      | Volume of delay 1                                                                                                                                                   |
| Dly2 Lv<br>(Delay 2 Level)                  | 0-127                                                                                                      | Volume of delay 2                                                                                                                                                   |
| Low Gain                                    | -15--+15 [dB]                                                                                              | Amount of boost/cut for the low-frequency range                                                                                                                     |
| High Gain                                   | -15--+15 [dB]                                                                                              | Amount of boost/cut for the high-frequency range                                                                                                                    |
| Balance                                     | D100: 0W-D0: 100W                                                                                          | Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).                               |
| Level                                       | 0-127                                                                                                      | Output Level                                                                                                                                                        |

## Transient

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



| Parameter                        | Value          | Explanation                                                                                                     |
|----------------------------------|----------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Attack</b>                    | -50—+50        | Character of the attack.<br>Higher values make the attack more aggressive; lower values make the attack milder. |
| <b>Release</b>                   | -50—+50        | Character of the decay.<br>Higher values make the sound linger; lower values make the sound cut off quickly.    |
| <b>Out Gain</b><br>(Output Gain) | -24—+12 [dB]   | Output gain                                                                                                     |
| <b>Sens</b><br>(Sense)           | LOW, MID, HIGH | Quickness with which the attack is detected                                                                     |
| <b>Level</b>                     | 0–127          | Output Level                                                                                                    |

## Mid-Side EQ (Mid-Side Equalizer)

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

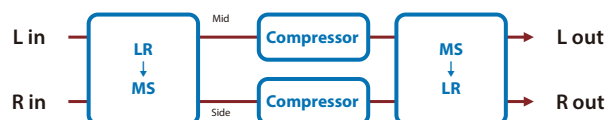


| Parameter                             | Value                                                                                              | Explanation                                                                                                     |
|---------------------------------------|------------------------------------------------------------------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

| Parameter                             | Value                                                                                              | Explanation                                                                                 |
|---------------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>S Low F</b><br>(S Low Frequency)   | 20, 25, 31, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400 [Hz]                                 | Frequency of the low range                                                                  |
| <b>S Low G</b><br>(S Low Gain)        | -12.00–+12.00 [dB]                                                                                 | Amount of boost/cut for the low-frequency range                                             |
| <b>S Mid1 F</b><br>(S Mid1 Frequency) | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz] | Frequency of the middle range 1                                                             |
| <b>S Mid1 G</b><br>(S Mid1 Gain)      | -12.00–+12.00 [dB]                                                                                 | Gain of the middle range 1                                                                  |
| <b>S Mid1 Q</b>                       | 0.5, 1.0, 2.0, 4.0, 8.0                                                                            | Width of the middle range 1<br>Set a higher value for Q to narrow the range to be affected. |
| <b>S Mid2 F</b><br>(S Mid2 Frequency) | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz] | Frequency of the middle range 2                                                             |
| <b>S Mid2 G</b><br>(S Mid2 Gain)      | -12.00–+12.00 [dB]                                                                                 | Gain of the middle range 2                                                                  |
| <b>S Mid2 Q</b>                       | 0.5, 1.0, 2.0, 4.0, 8.0                                                                            | Width of the middle range 2<br>Set a higher value for Q to narrow the range to be affected. |
| <b>S Mid3 F</b><br>(S Mid3 Frequency) | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz] | Frequency of the middle range 3                                                             |
| <b>S Mid3 G</b><br>(S Mid3 Gain)      | -12.00–+12.00 [dB]                                                                                 | Gain of the middle range 3                                                                  |
| <b>S Mid3 Q</b>                       | 0.5, 1.0, 2.0, 4.0, 8.0                                                                            | Width of the middle range 3<br>Set a higher value for Q to narrow the range to be affected. |
| <b>S High F</b><br>(S High Frequency) | 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10000, 12500, 16000 [Hz]                                 | Frequency of the high range                                                                 |
| <b>S HighG</b><br>(S High Gain)       | -12.00–+12.00 [dB]                                                                                 | Amount of boost/cut for the high-frequency range                                            |
| <b>Level</b>                          | 0–127                                                                                              | Output Level                                                                                |

## M/S Comp (Mid-Side Compressor)

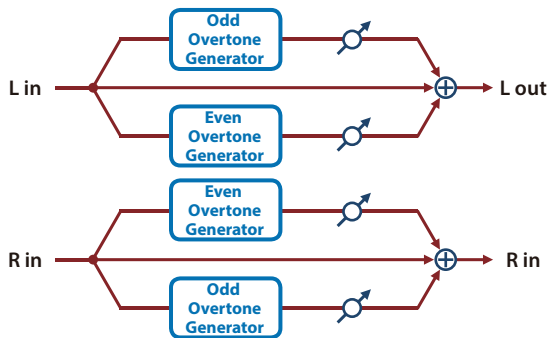
This effect allows the left/right signals that have similar phase to be adjusted to a different sense of volume than the left/right signals that have different phase.



| Parameter                              | Value                                   | Explanation                                                                                                                                                                                          |
|----------------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>M Comp Sw</b><br>(M Comp Switch)    | OFF, ON                                 | Switches whether to adjust the sense of volume for left/right input signals whose phase is similar (in phase).                                                                                       |
| <b>M Attack</b>                        | 0–124                                   | Sets the speed at which compression starts                                                                                                                                                           |
| <b>M Release</b>                       | 0–124                                   | Adjusts the time after the signal volume falls below the Threshold Level until compression is no longer applied.                                                                                     |
| <b>M Thres</b><br>(M Threshold)        | -60–0 [dB]                              | Adjusts the volume at which compression begins                                                                                                                                                       |
| <b>M Knee</b>                          | 0–30 [dB]                               | This is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than Threshold. Higher values produce a smoother transition. |
| <b>M Ratio</b>                         | 1: 1, 1.5: 1, 2: 1, 4: 1, 16: 1, INF: 1 | Compression ratio                                                                                                                                                                                    |
| <b>M Gain</b><br>(M Post Gain)         | 0–+18 [dB]                              | Adjusts the output gain.                                                                                                                                                                             |
| <b>S Comp Sw</b> (s Compressor Switch) | OFF, ON                                 | Switches whether to adjust the sense of volume for left/right input signals whose phase is distant (opposite phase).                                                                                 |
| <b>S Attack</b>                        | 0–124                                   | Sets the speed at which compression starts                                                                                                                                                           |
| <b>S Release</b>                       | 0–124                                   | Adjusts the time after the signal volume falls below the Threshold Level until compression is no longer applied.                                                                                     |
| <b>S Thres</b><br>(S Threshold)        | -60–0 [dB]                              | Adjusts the volume at which compression begins                                                                                                                                                       |
| <b>S Knee</b>                          | 0–30 [dB]                               | This is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than Threshold. Higher values produce a smoother transition. |
| <b>S Ratio</b>                         | 1: 1, 1.5: 1, 2: 1, 4: 1, 16: 1, INF: 1 | Compression ratio                                                                                                                                                                                    |
| <b>S Gain</b> (S Post Gain)            | 0–+18 [dB]                              | Adjusts the output gain.                                                                                                                                                                             |
| <b>Level</b>                           | 0–127                                   | Output Level                                                                                                                                                                                         |

## Fattener (Tone Fattener)

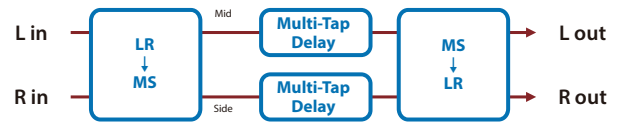
This effect applies distinctive distortion, adding overtones to give more depth to the sound.



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

## M/S Delay (Mid Side Delay)

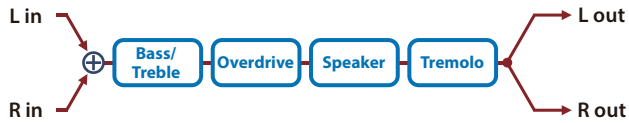
This effect applies different amounts of delay to left/right signals of similar phase and differing phase.



| Parameter   | Value                                                                                                      | Explanation                                                                                                                                                         |
|-------------|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MD Level    | 0–127                                                                                                      | Delay volume of left/right input signals whose phase is similar (in phase)                                                                                          |
| MD Mode     | 2TAP, 3TAP, 4TAP                                                                                           | Delay divisions for the input signals whose left/right phase is similar (identical phase)                                                                           |
| MD Tm Sync  | OFF, ON                                                                                                    | If this is ON, the delay synchronizes with the tempo.                                                                                                               |
| MD Time     | 1–1300                                                                                                     | Adjusts the delay time from the direct sound until the delay sound is heard.                                                                                        |
| MDTime Nt   | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| MD Feedback | -98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.                                            |
| MD HFDamp   | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS. |
| MD1 Pan     | L64–63R                                                                                                    | Panning of the first delay sound                                                                                                                                    |
| MD2 Pan     | L64–63R                                                                                                    | Panning of the second delay sound                                                                                                                                   |
| MD3 Pan     | L64–63R                                                                                                    | Panning of the third delay sound                                                                                                                                    |
| MD4 Pan     | L64–63R                                                                                                    | Panning of the fourth delay sound                                                                                                                                   |
| SD Level    | 0–127                                                                                                      | Delay volume of left/right input signals whose phase is distant (opposite phase)                                                                                    |
| SD Mode     | 2TAP, 3TAP, 4TAP                                                                                           | Delay divisions for the input signals whose left/right phase is distant (reverse phase)                                                                             |
| SD Tm Sync  | OFF, ON                                                                                                    | If this is ON, the delay synchronizes with the tempo.                                                                                                               |
| SD Time     | 1–1300                                                                                                     | Adjusts the delay time from the direct sound until the delay sound is heard.                                                                                        |
| SDTime Nt   | Note<br>➔ "Note" (p. 64)                                                                                   |                                                                                                                                                                     |
| SD Feedback | -98–+98 [%]                                                                                                | Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.                                            |
| SD HFDamp   | 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz] | Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS. |
| SD1 Pan     | L64–63R                                                                                                    | Panning of the first delay sound                                                                                                                                    |
| SD2 Pan     | L64–63R                                                                                                    | Panning of the second delay sound                                                                                                                                   |
| SD3 Pan     | L64–63R                                                                                                    | Panning of the third delay sound                                                                                                                                    |
| SD4 Pan     | L64–63R                                                                                                    | Panning of the fourth delay sound                                                                                                                                   |
| Level       | 0–127                                                                                                      | Output Level                                                                                                                                                        |

## EP Amp Sim (RD EP Amp Simulator)

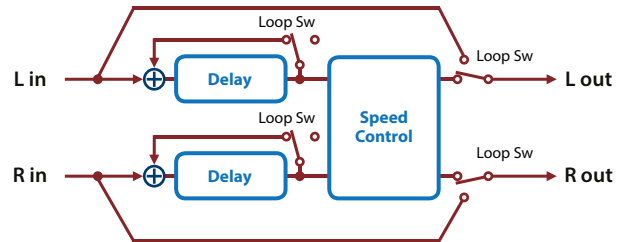
This is an effect that was developed for the RD series SuperNatural E.Piano.



| Parameter  | Value                       | Explanation                                                                                     |
|------------|-----------------------------|-------------------------------------------------------------------------------------------------|
| Bass       | -50–+50                     | Amount of low-frequency boost/cut                                                               |
| Treble     | -50–+50                     | Amount of high-frequency boost/cut                                                              |
| Tremolo Sw | OFF, ON                     | Tremolo on/off                                                                                  |
| Type       |                             | Type of tremolo effect                                                                          |
|            | OLDCASE MO                  | A standard electric piano sound of the early 70s (mono)                                         |
|            | OLDCASE ST                  | A standard electric piano sound of the early 70s (stereo)                                       |
|            | NEWCASE                     | A standard electric piano sound of the late 70s and early 80s                                   |
|            | DYNO                        | A classic modified electric piano                                                               |
|            | WURLY                       | A classic electric piano of the '60s                                                            |
| Speed Sync | OFF, ON                     | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)         |
| Speed      | 0.05–10.00 [Hz]             | Rate of the tremolo effect                                                                      |
| Speed Nt   | Note<br>➔ "Note" (p. 64)    |                                                                                                 |
| Depth      | 0–127                       | Depth of the tremolo effect                                                                     |
| Shape      | 0–20                        | Adjusts the waveform of the tremolo.                                                            |
| AMP        | OFF, ON                     | Turns the speaker and distortion on/off                                                         |
| Speaker    | LINE, OLD, NEW, WURLY, TWIN | Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation. |
| Drive      | 0–127                       | Degree of distortion<br>Also changes the volume.                                                |
| Level      | 0–127                       | Output Level                                                                                    |

## DJFX Looper

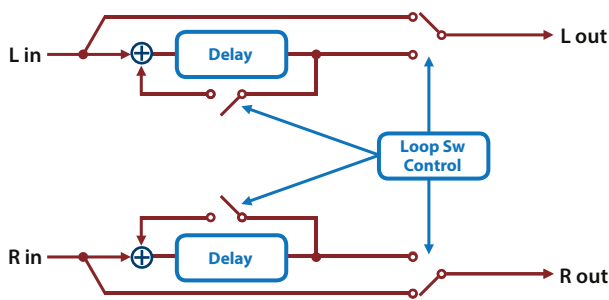
Loops a short portion of the input sound. You can vary the playback direction and playback speed of the input sound to add turntable-type effects.



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

## BPM Looper

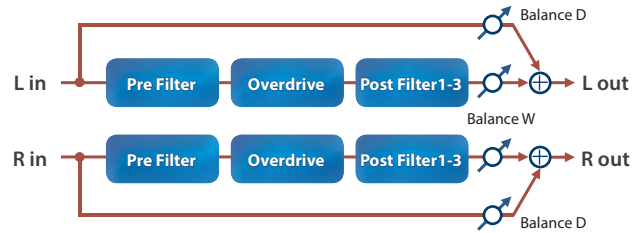
Loops a short portion of the input sound. This can automatically turn the loop on/off in synchronization with the rhythm.



| Parameter        | Value                    | Explanation                                                                                                                                                                                                                          |
|------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Length</b>    | 230–23 (not straight)    | Specifies the length of the loop.                                                                                                                                                                                                    |
| <b>Rate Sync</b> | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                                                                                                                                              |
| <b>Rate</b>      | 0.05–10.00 [Hz]          |                                                                                                                                                                                                                                      |
| <b>Rate Note</b> | Note<br>➔ "Note" (p. 64) | Cycle at which the loop automatically turns on/off                                                                                                                                                                                   |
| <b>Timing</b>    | 1–8                      | Specifies the timing within the cycle at which the loop automatically starts (which step of the eight timing divisions at which the sound is heard)                                                                                  |
| <b>Lenth</b>     | 1–8                      | Specifies the length at which the loop automatically ends within the cycle (the number of times that the 1/8-length of sound is heard)                                                                                               |
| <b>Loop Mode</b> | OFF, AUTO, ON            | If this is AUTO, the loop automatically turns on/off in synchronization with the rhythm.<br>* If the effect is recalled with this ON, this parameter must first be set to something other than ON in order to make the loop operate. |
| <b>Level</b>     | 0–127                    | Output Level                                                                                                                                                                                                                         |

## Saturator

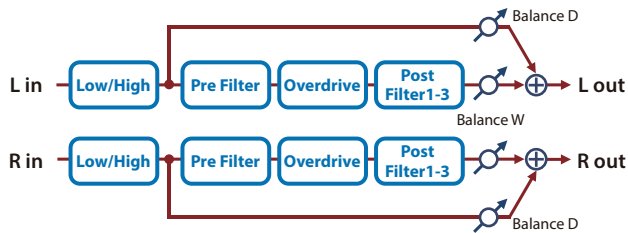
This effect combines overdrive and filter.



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

## W Saturator (Worm Saturator)

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

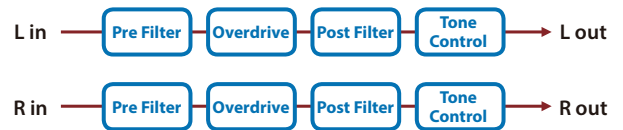


| Parameter  | Value                    | Explanation                                                                                                                                                                                                                                                                                                                                                                        |
|------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LowFreq    | 20–16000 [Hz]            | Input filter (low range)<br>Boosts/cuts the sound below the specified frequency.                                                                                                                                                                                                                                                                                                   |
| LowGain    | -24.0–+24.0 [dB]         | Amount of boost/cut                                                                                                                                                                                                                                                                                                                                                                |
| Hi Slope   | THRU, -12dB, -24dB       | Input filter (high range)<br>Boosts/cuts the sound above the specified frequency.                                                                                                                                                                                                                                                                                                  |
| Hi Freq    | 20–16000 [Hz]            | Amount of boost/cut                                                                                                                                                                                                                                                                                                                                                                |
| Pre1 Type  | THRU, LPF, HPF, LSV, HSV | Type of filter that precedes the distortion processing<br>THRU: No filter is applied<br>LPF: A filter that passes the sound below the specified frequency<br>HPF: A filter that passes the sound above the specified frequency<br>LSV: A filter that boosts/cuts the sound below the specified frequency<br>HSV: A filter that boosts/cuts the sound above the specified frequency |
| Pre1Freq   | 20–16000 [Hz]            | Frequency at which the pre-distortion filter operates                                                                                                                                                                                                                                                                                                                              |
| Pre1Gain   | -24.0–+24.0 [dB]         | For the LSV/HSV types, the amount of boost/cut                                                                                                                                                                                                                                                                                                                                     |
| Drive      | 0.0–48.0 [dB]            | Strength of distortion                                                                                                                                                                                                                                                                                                                                                             |
| Post1 Type | THRU, LPF, HPF, LSV, HSV | Type of filter 1 which follows the distortion processing                                                                                                                                                                                                                                                                                                                           |
| Post1Frq   | 20–16000 [Hz]            | Frequency at which post-distortion filter 1 operates                                                                                                                                                                                                                                                                                                                               |
| Post1Gain  | -24.0–+24.0 [dB]         | For the LSV/HSV types, the amount of boost/cut                                                                                                                                                                                                                                                                                                                                     |
| Post2 Type | THRU, LPF, HPF, LSV, HSV | Type of filter 2 which follows the distortion processing                                                                                                                                                                                                                                                                                                                           |
| Post2Frq   | 20–16000 [Hz]            | Frequency at which post-distortion filter 2 operates                                                                                                                                                                                                                                                                                                                               |
| Post2Gain  | -24.0–+24.0 [dB]         | For the LSV/HSV types, the amount of boost/cut                                                                                                                                                                                                                                                                                                                                     |
| Post3 Type | THRU, LPF, HPF, BPF, PKG | Type of filter 3 which follows the distortion processing<br>THRU: No filter is applied<br>LPF: A filter that passes the sound below the specified frequency<br>HPF: A filter that passes the sound above the specified frequency<br>BPF: A filter that passes only the specified frequency<br>PKG: A filter that boosts/cuts the specified frequency                               |
| Post3Frq   | 20–16000 [Hz]            | Frequency at which post-distortion filter 3 operates                                                                                                                                                                                                                                                                                                                               |
| Post3Gain  | -24.0–+24.0 [dB]         | For the PKG type, the amount of boost/cut                                                                                                                                                                                                                                                                                                                                          |
| Post3 Q    | 0.5–16.0                 | Width of the frequency range affected by the filter                                                                                                                                                                                                                                                                                                                                |

| Parameter | Value             | Explanation                                                                        |
|-----------|-------------------|------------------------------------------------------------------------------------|
| Sense     | -60.0–0.0 [dB]    | Adjust this value so that the sound is not made louder when distortion is applied. |
| PostGain  | -48.0–+12.0 [dB]  | Gain following distortion processing                                               |
| Balance   | D100: 0W–D0: 100W | Volume balance between the dry sound (D) and effect sound (W)                      |
| Level     | 0–127             | Output Level                                                                       |

## Fuzz

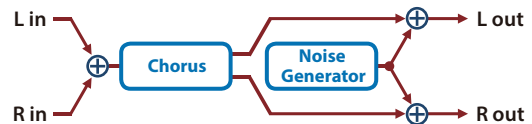
Adds overtones and intensely distorts the sound.



| Parameter | Value | Explanation                                                       |
|-----------|-------|-------------------------------------------------------------------|
| Drive     | 0–127 | Adjusts the depth of distortion.<br>This also changes the volume. |
| Tone      | 0–100 | Sound quality of the Overdrive effect                             |
| Level     | 0–127 | Output Level                                                      |

## JUNO Chorus (JUNO-106Chorus)

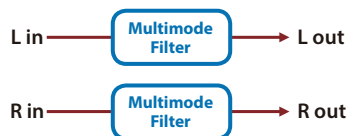
This models the chorus effects of the Roland JUNO-106.



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

## MM Filter (Multimode Filter)

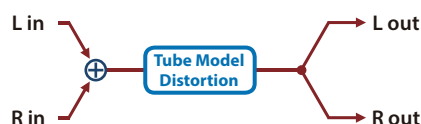
This is a filter that is adjusted for effective use in a DJ performance.



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

## HMS Distort

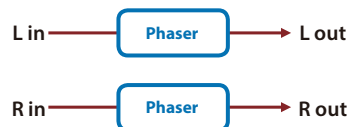
This is a distortion-type effect that models the vacuum tube amp section of a rotary speaker of the past.



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

## Phaser 100

This simulates an analog phaser of the past.



| Parameter | Value                    | Explanation                                                                                              |
|-----------|--------------------------|----------------------------------------------------------------------------------------------------------|
| Rate Sync | OFF, ON                  | If this is ON, the rate synchronizes with the tempo of the rhythm.<br>➔ "Tempo" (p. 16)                  |
| Rate      | 0.05–10.00 [Hz]          | Frequency of modulation                                                                                  |
| Rate Note | Note<br>➔ "Note" (p. 64) |                                                                                                          |
| Duty      | -50–50                   | Adjusts the ratio of speeds at which the modulation rises or falls.                                      |
| Min       | 0–100                    | Lower limit reached by modulation                                                                        |
| Max       | 0–100                    | Upper limit reached by modulation                                                                        |
| Manual Sw | OFF, ON                  | Applies modulation according to the value of the Manual parameter, rather than modulating automatically. |
| Manual    | 0–100                    | Adjusts the basic frequency from which the sound will be modulated.                                      |
| Resonance | 0–66                     | Amount of feedback                                                                                       |
| Mix       | 0–127                    | Level of the phase-shifted sound                                                                         |
| Level     | 0–127                    | Output Level                                                                                             |

## Note

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