



GROOVEBOX

# MC-707

## Reference Manual

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# Panel Descriptions

## Top Panel



### 1 Common Section 1

#### [VOLUME] knob

Adjusts the volume of the MIX OUT jacks.

#### [PHONES] knob

Adjusts the volume of the PHONES jack.

#### [SHIFT] button

When you hold down the [SHIFT] button and press a button that's labeled with a function name (such as **EDIT**), that function is executed.

#### [CLEAR] button

Pressing the [CLEAR] button in conjunction with another button, you can clear the recorded content of the step sequencer or a phrase.

#### [PROJECT] button

Accesses the project menu screen. Here you can load a project and make settings for it.

#### [QUANTIZE] button

Switches on/off quantization during recording. Press this together with the [SHIFT] button to access the quantization settings screen.

➔ For details, refer to **"Quantize"** (p. 33).

#### [REC] button

Lets you record using the pads, or record into the looper.

#### MOTION [ON] [REC] button

Lets you record knob movements for each clip, and play them back as motions.

#### MOTION [ON] button

Plays back a recorded motion.

By holding down the [SHIFT] button and pressing the MOTION [ON] button, you can delete a motion.

#### MOTION [REC] button

Records a motion.

By holding down the [SHIFT] button and pressing the MOTION [REC] button, you can edit the LAST STEP. <sup>(\*)</sup>

\* 1 LAST STEP: The loop end setting that you can specify for each clip.

### SCENE [1]–[4] button

The combination of clips being played back by the tracks of the MC-707 is called a **"scene."**

You can recall a stored scene by pressing a SCENE [1]–[4] button. By holding down the [SHIFT] button and pressing a SCENE [1]–[4] button you can recall scenes 5–8.

To store the current settings as a scene, long-press the SCENE button in which you want to store the settings.

To store the settings in a scene 5–8, hold down the [SHIFT] button and long-press a SCENE button.

### MEASURE [<] [>] buttons

Move to the measure that you want to edit.

If you hold down the [SHIFT] button and press a MEASURE [<] [>] button, the measure length edit screen appears.

➔ For details, refer to **"Increasing the Measures"** (p. 30).

### Measure indicators

The four indicators show the measure that you're editing.

### [START/STOP] button

Starts or stops playback.

### 2 Mixer Section

#### Playback position indicators

These indicate the playback position of the clip as a percentage (%).

One indicator means 25%, and all indicators lit mean 100%.

#### [FILTER] knob, [MOD] knob, [FX] knob

These knobs adjust the assigned parameters.

#### Level faders

Adjusts the volume.

#### [SEL] button

Selects a track.

If you hold down the [SHIFT] button and press a [SEL] button, the track setting menu appears.

➔ For details, refer to **"Making Track Settings"** (p. 20).

### 3 Pad Section

#### Step [1]–[16] buttons

Use these buttons to select the step that you want to edit.

Their operation and indications change depending on the pad mode and the settings.

#### Pads (16 pads)

The operation of the pads depends on the pad mode that's selected.

#### PAD MODE [MUTE] button

Switches the pads to MUTE mode (p. 22). In MUTE mode, you can use the pads to mute tracks or stop clips.

If you hold down the [SHIFT] button and press the PAD MODE [MUTE] button, the pads switch to CUE mode. In CUE mode, only the selected track is output from the PHONES jack.

#### PAD MODE [CLIP] button

Switches the pads to CLIP mode (p. 22). In CLIP mode, the pads select the clip to play or edit.

By holding down the [SHIFT] button and pressing the PAD MODE [CLIP] button, you can make clip-related settings.

#### PAD MODE [NOTE] button

Switches the pads to NOTE mode (p. 22). In NOTE mode, you can use the illuminated pads to perform as on a keyboard.

By holding down the [SHIFT] button and pressing the PAD MODE [NOTE] button, you can make settings related to NOTE mode.

#### PAD MODE [CHORD] button

Switches the pads to CHORD mode (p. 23). In CHORD mode, you can use each pad to play a chord.

By holding down the [SHIFT] button and pressing the PAD MODE [CHORD] button, you can make settings related to CHORD mode.

#### PAD MODE [SCATTER] button

Switches the pads to SCATTER mode. Scatter is an effect that is synchronized to the beat. It can give a digital-feeling groove to the playback.

By holding down the [SHIFT] button and pressing the PAD MODE [SCATTER] button, you can make settings related to scatter.

➔ For details, refer to **"SCATTER"** (p. 38).

### 4 Total Effect Section

#### [REVERB] [DELAY] [MULTI] buttons

Switch the functions of the [FX PRM] [FX DEPTH] knobs.

By holding down the [SHIFT] button and pressing these buttons, you can edit the total effect.

#### [ON] button

Turns on/off the effects selected by the [REVERB], [DELAY], and [MULTI] buttons.

#### [FX PRM] [FX DEPTH] knob

Adjust the effect depth.

### 5 Common Section 2

#### Display

Shows necessary information for various operations.

#### [C1]–[C4] knob

Necessary functions are assigned to these knobs depending on the operation.

You can also press the [C1]–[C4] knobs.

#### [SOUND] button

Accesses the sound browser screen.

By holding down the [SHIFT] button and pressing the [SOUND] button, you can access the sound settings screen.

➔ For details, refer to **"Simple Sound Editing"** (p. 41).

#### [CLIP] button

Accesses the clip browser screen.

If you hold down the [SHIFT] button and press the [CLIP] button, the clip settings screen appears.

➔ For details, refer to **"Editing a Clip's Settings"** (p. 6).

#### [KNOB ASSIGN] button

The KNOB ASSIGN screen appears.

If you hold down the [SHIFT] button and press the [KNOB ASSIGN] button, the UTILITY screen appears.

➔ For details, refer to **"UTILITY"** (p. 54).

#### [FUNC] button

The function screen appears.

If you hold down the [SHIFT] button and press the [FUNC] button, the project save screen appears.

#### [TEMPO] button

By pressing the [TEMPO] button to make it light and then turning the [VALUE] dial, you can set the BPM.

If you hold down the [SHIFT] button and press the [TEMPO] button, the master clock setting screen appears (p. 52).

#### [INPUT] button

By pressing the [INPUT] button to make it light and then turning the [VALUE] dial, you can adjust the input volume from the EXT IN jacks.

If you hold down the [SHIFT] button and press the [INPUT] button, a setting screen for input/output and recording-related settings appears.

➔ For details, refer to **"Input and Output Settings"** (p. 53).

#### [EXIT] button

Returns to the previous screen.

In some screens, cancels the currently-executing function.

#### [ENTER] button

Confirms a selection or operation.

By holding down the [SHIFT] button and pressing the [ENTER] button, you can use this as tap tempo.

#### [VALUE] dial

If the [TEMPO] button is lit, the dial changes the BPM value. If the [INPUT] button is lit, the dial sets the EXT IN jack's input volume.

If the [TEMPO] button and [INPUT] button are unlit, use the dial to edit a value or scroll the screen. The operation changes depending on what's shown in the screen.

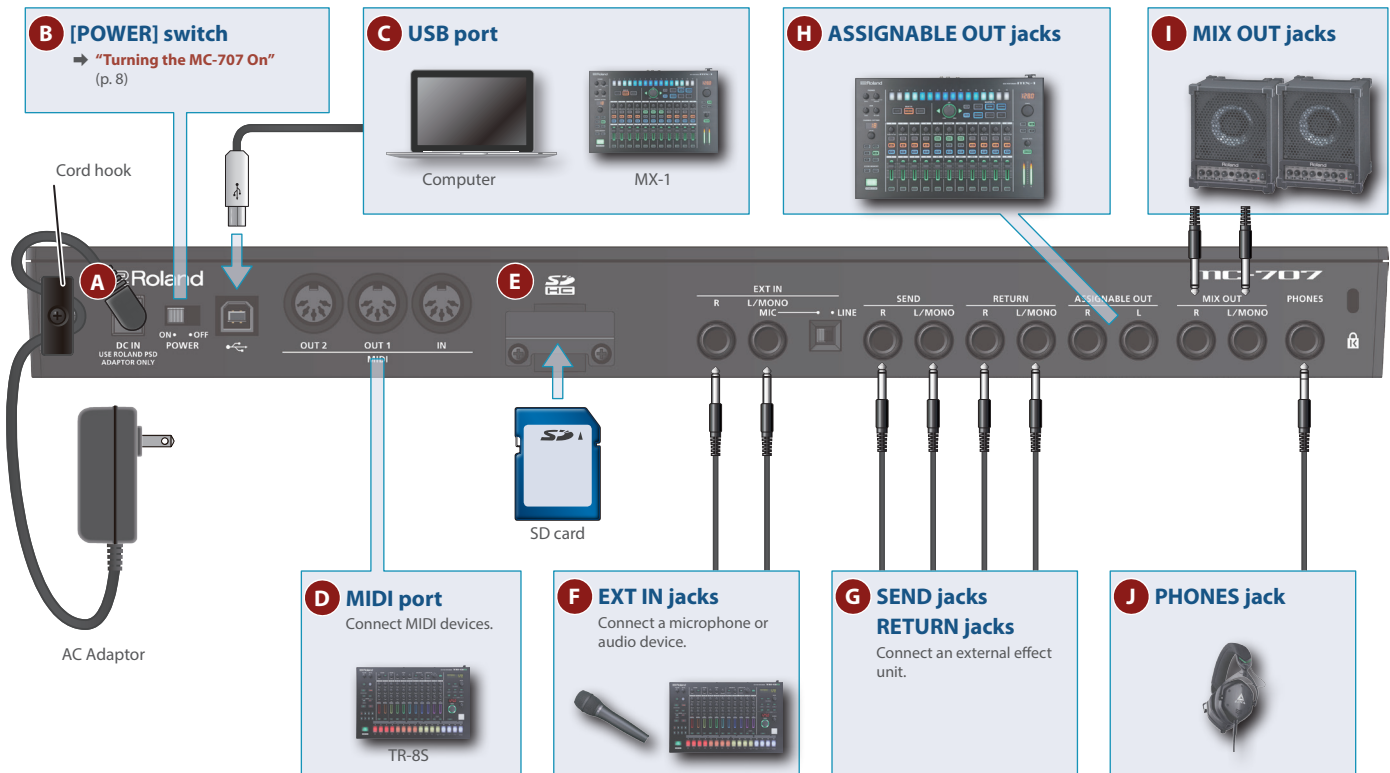
#### Cursor [▲] [▼] [◀] [▶] buttons

Move the cursor position up, down, left, or right.

Alternatively, these buttons switch between screens.

## Rear Panel (Connecting Your Equipment)

\* To prevent malfunction and equipment failure, always turn down the volume, and turn off all the units before making any connections.



### A DC IN jack

Connect the included AC adaptor here.

\* Use the cord hook to secure the cord of the AC adaptor as shown in the illustration.

### B [POWER] switch

Turns the power on/off.

### C USB port

Use a commercially available USB 2.0 cable (type B) to connect this port to your computer. It can be used to transfer USB MIDI and USB audio data. You must install the USB driver when connecting the MC-707 to your computer. For details, refer to Readme.htm in the downloaded file.

→ <https://www.roland.com/support/>

### D MIDI port

Connect these to external MIDI equipment to transmit and receive MIDI messages.

### E SD card slot

With the factory settings, the SD card protector is fastened with the included SD card inserted. If you want to take out the SD card, remove the screws.

The SD card contains various data (settings, sounds, samples, etc.) for this unit.

\* Never turn off the power or remove the SD card while the screen indicates "Processing..."

\* Some memory card types or memory cards from some manufacturers may not record or play back properly on the unit.

### F EXT IN

These are audio input jacks.

#### EXT IN L/MONO, R jacks

You can connect a dynamic microphone or an instrument here. Connect a microphone to the L/MONO jack.

#### [MIC/LINE] switch

Set this switch appropriately for the device that's connected. This switches the gain of the L/MONO jack.

### G SEND (L, R) jacks/RETURN (L, R) jacks

These jacks let you connect an external effect unit and use it as a track effect or total effect.

### H ASSIGNABLE OUT jack

You can output a specific track from the ASSIGNABLE OUT jacks.

### I MIX OUT (L/MONO, R) jacks

These are audio output jacks. Connect them to your amp or monitor speakers.

If you're outputting in mono, connect the L/MONO jack.

### J PHONES jack

You can connect a set of headphones here.

# Introduction

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## Turning the MC-707 On

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

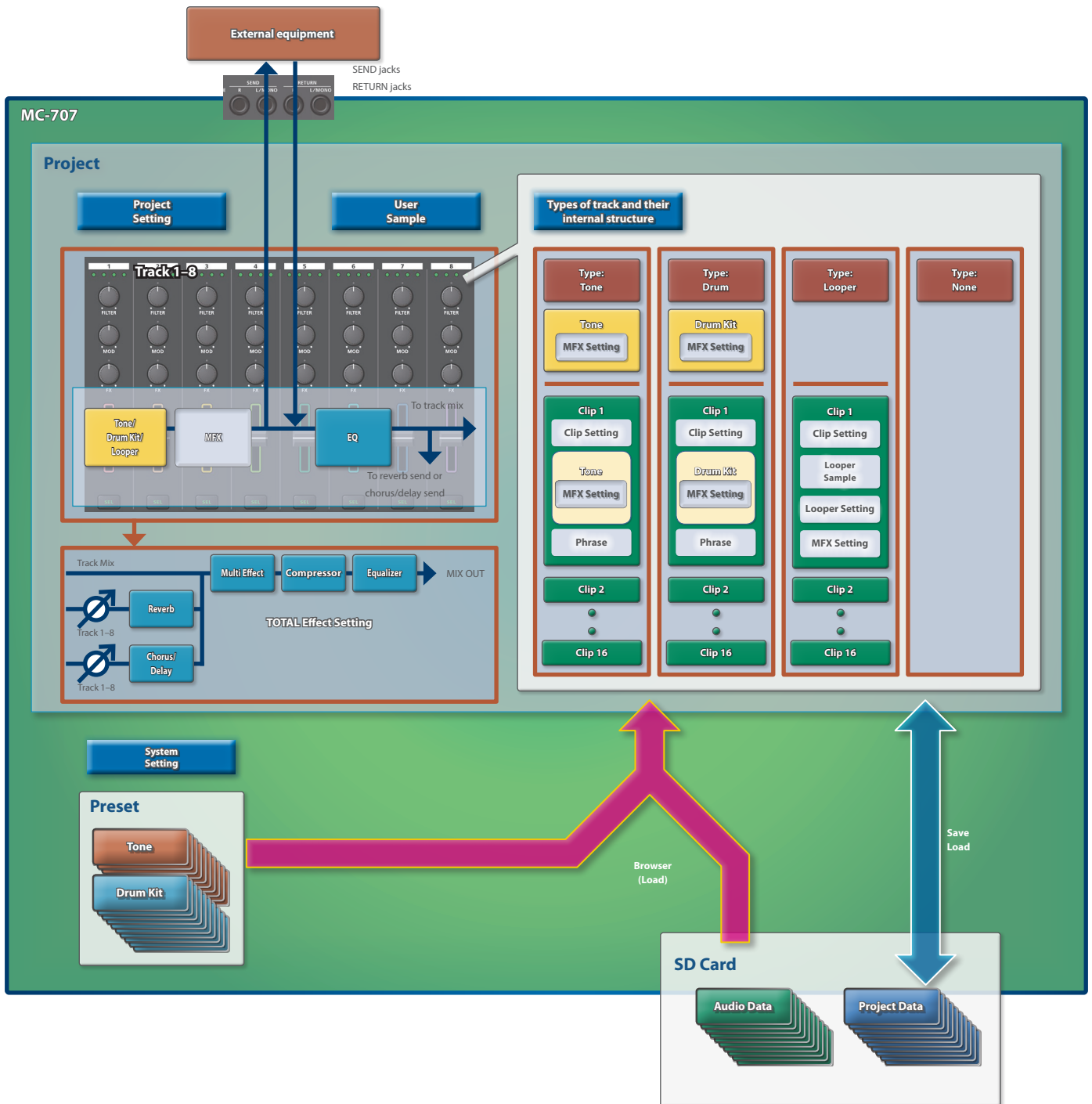
- 1. Power-on your equipment in the order of MC-707 → connected equipment.**
- 2. Power-on the connected equipment, and raise the volume to an appropriate level.**

## Turning Off the Power

- 1. Power-off your equipment in the order of connected equipment → MC-707.**

# An Overview of the MC-707

The MC-707 can simultaneously play back up to eight independent tracks.  
You can assign up to 16 clips to each track, and switch between these clips during playback.



## What Is a Project?

On the MC-707, data for one song is handled as a unit called a **“project.”** Projects are saved on an SD card.

A project contains data for tracks, clips, tones, and the samples that are used.

If you want to keep the content that you edited, save the project.

## What Is a Track?

There are three types of track.

- Tone:** A track that mainly handles clips that have pitch.
- Drum:** A track that handles drum and percussion clips.
- Looper:** A track that handles audio loops. You can import audio data from an SD card, or record sound that’s input from the EXT IN jacks or from a track. Time stretch is also supported.

## What Is a Clip?

A **“clip”** is a collection of data to be played back by a track. The data included in a clip differs depending on the type of track.

### Track type: Tone

- Clip setting:** This contains the name of the clip, and information and settings for the clip.
- Tone:** This contains settings for the sound. It also includes effect (MFX) settings. (\*1)
- Phrase:** This is performance data and data that creates changes in the sound (MOTION).

### Track type: Drum

- Clip setting:** This contains the name of the clip, and information and settings for the clip.
- Drum kit:** This contains settings for the sound. It also includes effect (MFX) settings. (\*1)
- Phrase:** This is performance data and data that creates changes in the sound (MOTION).

### Track type: Looper

- Clip setting:** This contains the name of the clip, and information and settings for the clip.
- Looper sample:** This is the audio data played by the looper.
- Looper setting:** This contains settings that specify how the looper sample is played.
- MFX:** This contains effect (MFX) settings.
- Phrase:** This contains data that creates changes in the sound (MOTION).

\* 1 Alternatively, you can use the track’s settings instead of the clip’s settings.

## What Is the Browser?

This lets you select the material that you need for the project that you’re working on.

### Selecting preset tones and drum kits

You can browse the preset tones and drum kits, and use them.

### Selecting from a project on the SD card

You can browse clips, tones, and drum kits, and use them.

### Selecting from audio files on the SD card

You can use these as looper samples to be played by a looper track. You can also use them as user samples for a tone or drum kit.

## Total Effect Settings

The MC-707 is equipped with five total effects.

Settings for these effects are saved in the project.

- **Reverb**  
Adds reverberation to the sound.
- **Chorus/Delay**  
Gives the sound depth and spaciousness (Chorus), or delays the sound in an echo-like manner (Delay).
- **Compressor**  
Compresses loud peaks of the master output, making the volume more consistent.
- **Multi FX**  
Lets you select and use one of various effects such as filter or overdrive.
- **Equalizer**  
An equalizer with three frequency bands (low, mid, high).

## USER SAMPLE

**“User samples”** are waveform data that can be used by a tone or drum kit.

Audio files saved on an SD card can be imported into a project.

➔ For details, refer to **“Importing Clips (Clip Browser)”** (p. 25).



# Basic Operation

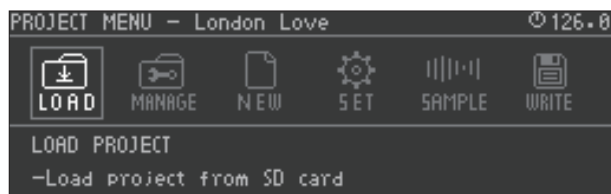
## Loading and Playing a Project

On the MC-707, data for one song is managed as a unit called a **“project.”**

Projects are saved on an SD card. A project contains tracks, clips, tone data, and data for the samples that are used.

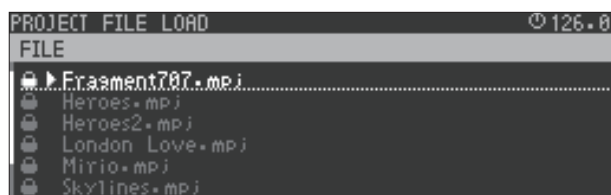
### 1. Press the [PROJECT] button.

The PROJECT MENU screen appears.



### 2. Use the cursor buttons to select “LOAD,” and then press the [ENTER] button.

The PROJECT FILE LOAD screen appears.



### 3. Use the cursor buttons to select a project, and then press the [ENTER] button.

A confirmation message appears.



### 4. Use the cursor buttons to select “OK,” and then press the [ENTER] button.

The project is loaded from the SD card.

If you decide to cancel, use the cursor [<] [>] buttons to select **“CANCEL,”** and then press the [ENTER] button.

- \* It might take some time for the project to be loaded.
  - \* If the project has been edited, a confirmation message appears.
- When loading is completed, you return to the home screen.

### 5. Press the [START/STOP] button.

The project plays.

## Changing the Clips that Play

### 1. The HOME screen appears.



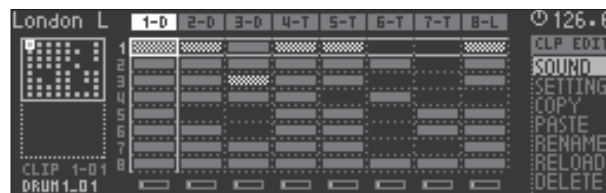
### 2. Use the cursor buttons to select the clip that you want to play.

### 3. Press the [ENTER] button to reserve playback for the clip.

### 4. Press the [START/STOP] button to start playback.

## Selecting a Tone or Drum Kit

### 1. Press the [SEL] button, and select a tone or drum kit track.



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

The Sound browser appears.



### 3. Use the cursor buttons to select “PRESET,” and then press the [ENTER] button.

The PRESET browser appears.



### 4. Use the cursor buttons to select a sound.

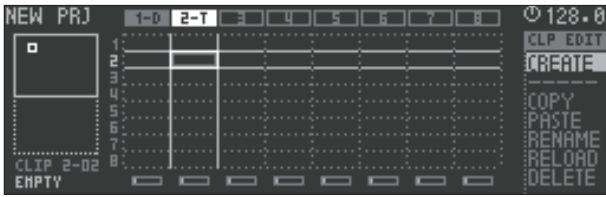
In the PRESET browser when the PAD MODE [NOTE] button is lit, you can use the pads to audition the sound.

### 5. Press the [ENTER] button to confirm the sound.

You return to the home screen.

## Importing a Clip

1. Move the cursor to the position at which you want to import a clip.



2. Press the [CLIP] button.

The clip browser shows the projects that are in the SD card.

PROJECT	SOURCE	CLIP
Fragment707.m	ALL.....	4-08: NOISE UP
Heroes.mpj	ALPHA	5-01: BASS
Heroes2.mpj	TRACK1	5-03: BASS ADD
London Love.n	TRACK2	5-08: BS DOWN.....
Mirio.mpj	TRACK3	6-01: SEQ
SkyLines.mpj	TRACK4	6-02: SEQ RES1

3. When you use the cursor buttons to select a project, the clips inside it are shown.

PROJECT	SOURCE	CLIP
Fragment707.m	ALL.....	4-01: CROWD.....
Heroes.mpj	ALPHA	4-08: NOISE UP
Heroes2.mpj	TRACK1	5-01: BASS
London Love.n	TRACK2	5-03: BASS ADD
Mirio.mpj	TRACK3	5-08: BS DOWN
SkyLines.mpj	TRACK4	6-01: SEQ

\* Clips of the same type as the track type of the currently selected track are shown.

4. Use the cursor buttons to select the clip that you want to import, and then press the [ENTER] button.

The clip is imported.

Importing might take some time.

When importing is completed, you return to the home screen.



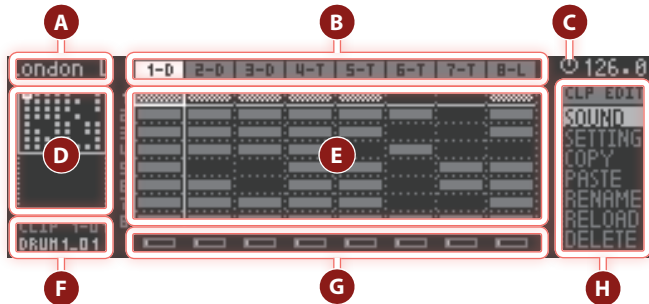
## Reference Section

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# Main Screen

## HOME Screen

When the MC-707 starts, the home screen appears.



In the home screen you can play and edit clips.

If something other than the home screen is shown, press the [EXIT] button several times to access the home screen.

### A Project name

Shows the project name.

### B Track name (type)

Shows the track number and type.

T: TONE  
D: DRUM  
L: LOOPER

### C Master clock icon

The MC-707 switches clips according to the timing of the master clock (the circle in the upper right).

The tempo is shown at the right of the icon.

→ For details, refer to **“Master Clock”** (p. 52).

### D Scroll bar

The MC-707 lets you register 16 clips in each track.

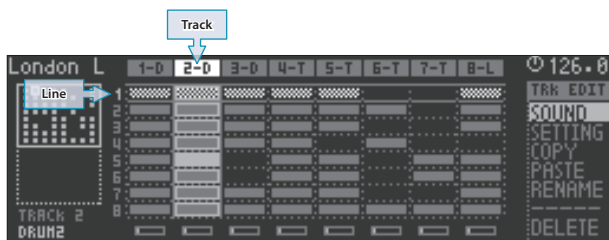
The clip screen shows up to eight clips, and you can switch this display by using the [C1] knob to scroll.

\* The scroll bar shows a miniature depiction of the clips.

### E Clip view

Lists the clips. Use the cursor buttons to move the cursor. You can use commands ( **H** ) to edit the selected item.

By pressing the cursor [^] button in the top line of the clip view, you can select/edit a track.



By pressing the cursor [>] button at the far right of the clip view, you can select and edit all clips of each line.



\* The grid locations that accommodate clips are called **“clip slots.”**

### F Clip number, clip name

Shows the number of the current track, the clip number, and clip name.

### G Level meter

Shows the output volume of each track.

If a stop-reservation (stop at the next switch) occurs in a track, this is shown with a mesh overlay.

### H Command

This area shows the commands that can be executed to edit a clip or a track.

→ **“Editing a Track or Clip ([C4] Knob)”** (p. 14)

## Selecting a Clip

1. Use the cursor buttons to move the cursor to the clip that you want to play.

2. Press the [ENTER] button

Reserves playback for the clip.

If the sequencer is playing, playback starts when the master clock points to 12 o'clock.

Use the [START/STOP] button to play/stop.

## Editing a Track or Clip ([C4] Knob)

The track or clip that's selected in the clip view can be edited by the command that's selected by the [C4] knob.

To execute the command, press the [C4] knob.

## Creating a Clip (CREATE)

1. Select a vacant clip slot in a tone or drum track.

The command indicates **“CREATE!”**

2. Use the [C4] knob to select **“CREATE,”** and then press the [C4] knob.

The clip is created.

### MEMO

You can also create a clip by using the [REC] button to newly record it.

## Editing the Sound (SOUND)

You can edit the settings of the sound (tone, drum, or looper sample) that's used by the track or clip.

→ For details, refer to **“Editing the TONE Track”** (p. 41), **“Editing the DRUM Track”** (p. 45), **“LOOPER Track”** (p. 48).

## Editing the Clip Settings (SETTING)

You can edit settings related to how the clip is played by the sequencer.

→ For details, refer to **“Editing a Clip's Settings”** (p. 50).

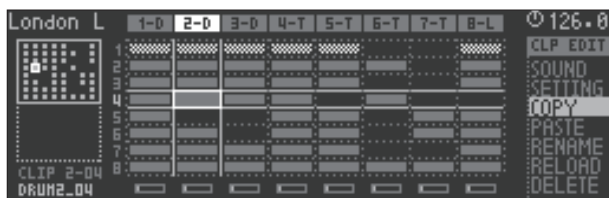
## Copying the Sound or Phrase of a Clip

(COPY/PASTE)

Here's how to duplicate the data of a clip or a sound.

You can make a complete duplicate of a clip, or you can duplicate individual lines of a clip.

1. Use the cursor buttons to select the clip that you want to copy.



2. Use the [C4] knob to select "COPY," and then press the [C4] knob.



3. Use the cursor buttons to select the copy-destination clip.



4. Use the [C4] knob to select "PASTE," and then press the [C4] knob.



5. Use cursor [<] [>] buttons to select the content that will be copied, and then press the [ENTER] button.



Operation	Explanation
CANCEL	Cancels the copy.
SOUND	Copies only the sound.
PHRASE	Copies only the phrase.
ALL	Copies the sound and the phrase.

When the copy is completed, a message appears in the upper part of the screen.



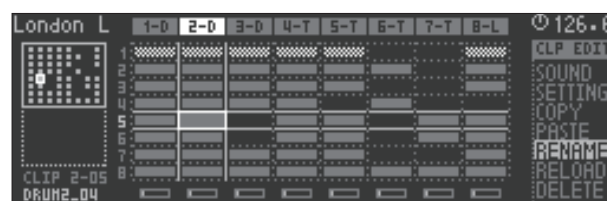
- \* You can't overwrite a clip onto a looper clip. Delete the clip first, and then copy.
- \* You can't copy a looper clip if there is insufficient memory. Either delete unneeded looper clips or execute LOOPER OPTIMIZE (p. 55).

## Renaming a Clip (RENAME)

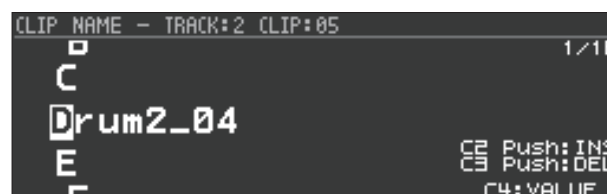
Here's how to edit the clip name that's shown in the lower left of the home screen.

If you want to use the clip in another project (when importing), this is used as the clip name shown in the browser.

1. Use the cursor buttons to select the clip that you want to rename.
2. Use the [C4] knob to select "RENAME," and then press the [C4] knob.



3. Edit the clip name.



Operating the Unit	Explanation
Cursor [<] [>] buttons	Selects the character to edit.
[C2] knob	Switches between uppercase, lowercase, numerals, and symbols.
[C3] knob [C4] knob, [VALUE] knob	Change the character.
Press the [C2] knob	Inserts a space.
Press the [C3] knob	Deletes a character.

4. To confirm the clip name, press the [ENTER] button.

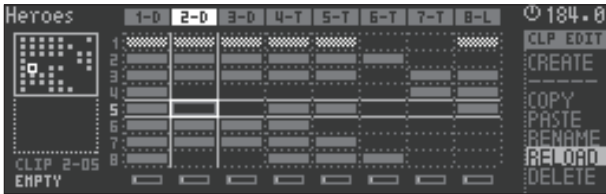
The clip name is changed.

If you decide to cancel, press the [EXIT] button.

## Reloading a Clip (RELOAD)

Here's how to recover the specified clip by loading it from the SD card.

1. Use the cursor buttons to select the clip that you want to reload.
2. Use the [C4] knob to select "RELOAD," and then press the [C4] knob.



A confirmation message appears.

3. Use the cursor [<] [>] buttons to select "OK," and then press the [ENTER] button.

The clip reverts to the state in which it was last saved in the project.

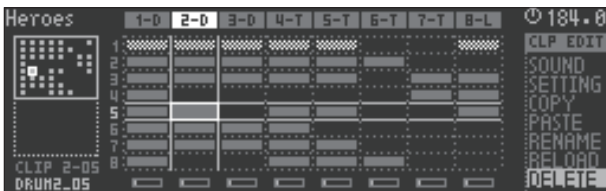
If you decide to cancel, use the cursor [<] [>] buttons to select

"CANCEL," and then press the [ENTER] button.

## Deleting (DELETE)

Here's how to delete the selected clip.

1. Use the cursor buttons to select the clip that you want to delete.
2. Use the [C4] knob to select "DELETE," and then press the [C4] knob.



A confirmation message appears.

3. Use the cursor [<] [>] buttons to select "OK," and then press the [ENTER] button.

The clip is deleted.

If you decide to cancel, use the cursor [<] [>] buttons to select

"CANCEL," and then press the [ENTER] button.

# Project Operations

## What Is a Project?

On the MC-707, data for one song is handled as a unit called a **“project.”** Projects are saved on the SD card.

A project contains data for tracks, clips, tones, and the samples that are used.

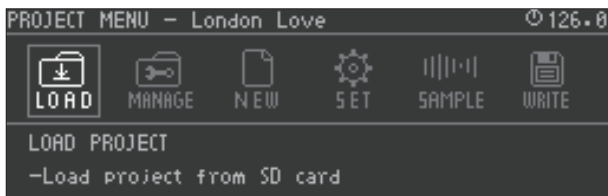
If you want to keep the results of editing, save the project.

➔ For details, refer to **“An Overview of the MC-707”** (p. 9).

## Loading a Project

Here’s how to load a project from the SD card.

### 1. Press the [PROJECT] button.



### 2. Use the cursor [<] [>] buttons to select “LOAD,” and then press the [ENTER] button.

The PROJECT FILE LOAD screen appears.



### 3. Use the cursor [^] [v] buttons to select a project file.

### 4. Press the [ENTER] button.

A confirmation message appears.



### 5. Use the cursor [<] [>] buttons to select “OK,” and then press the [ENTER] button.

The project is loaded.

If you decide to cancel, use the cursor [<] [>] buttons to select **“CANCEL,”** and then press the [ENTER] button.

- \* If you had edited the project, a confirmation message appears.
- \* When you create a new project, any unsaved content of the currently-open project is lost.

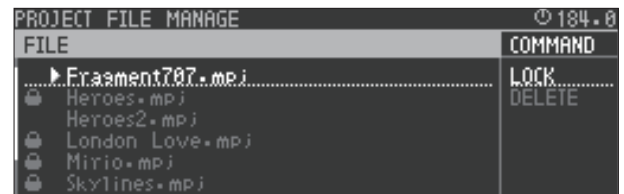
## Managing Projects

Here’s how to protect or delete project files on the SD card.

### 1. Press the [PROJECT] button.

### 2. Use the cursor [<] [>] buttons to select “MANAGE,” and then press the [ENTER] button.

The PROJECT FILE MANAGE screen appears.



\* Projects for which a lock symbol (🔒) are shown are protected, and cannot be overwritten or deleted.

### 3. Use the cursor [<] button to select “FILE,” and use the cursor [^] [v] buttons to select a project file.

### 4. Use the cursor [>] button to select “COMMAND,” and use the cursor [^] [v] buttons to select a command.

Command	Explanation
LOCK	Locks the project file. Deletion or overwrite-saving will not be possible.
UNLOCK	Unlocks the project file.
DELETE	Deletes an unlocked project file.

### 5. Press the [ENTER] button.

Execute the selected command.

## Creating a New Project

Here’s how to create a new project.

### 1. Press the [PROJECT] button.

### 2. Use the cursor [<] [>] buttons to select “NEW,” and then press the [ENTER] button.

A confirmation message appears.



- \* If the project has been edited, a confirmation message appears.
- \* When you create a new project, any unsaved content of the currently-open project is lost.

### 3. Use the cursor [<] [>] buttons to select “OK,” and then press the [ENTER] button.

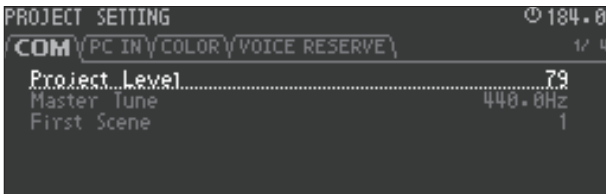
If you decide to cancel, use the cursor [<] [>] buttons to select **“CANCEL,”** and then press the [ENTER] button.

## Making Project Settings

Here's how to make settings such as the project's volume and the pad illumination colors.

1. Press the [PROJECT] button.
2. Use the cursor [←] [→] buttons to select "SET," and then press the [ENTER] button.

The PROJECT SETTING screen appears.



3. Use the cursor [←] [→] buttons to select a tab, and use the cursor [↑] [↓] buttons to select the parameter.
4. Use the [C4] knob to edit the value.

### COM tab

Here you can specify the volume, the reference pitch, and the scene that is recalled when the project is loaded.

Parameter	Value	Explanation
Project Level	0-127	Specifies the volume of the overall project.
Master Tune	415.3Hz-466.2Hz	Specifies the reference pitch for the project.
First Scene	1-8	Specifies the scene number that is recalled when the project is loaded.

### PC IN tab

Here you can make settings for audio that is input from a USB-connected computer to the PC IN port.

Parameter	Value	Explanation
PC Level	0-255	Specifies the input level from the USB PC IN port.
PC Pan	L128-127R	Specifies the pan of the USB PC IN port.

### COLOR tab

Here you can specify the color of each pad mode.

➔ For details, refer to "Pad Operations (PAD MODE)" (p. 22).

Parameter	Value	Explanation
PAD Note Color		Specifies the color of pads used for PAD MODE NOTE performance.
PAD OCT Color		Specifies the color of pads used for PAD MODE NOTE octave.
Play Clip Color	*1	Specifies the color of pads while a clip is playing for PAD MODE CLIP.
Stay Clip Color		Specifies the color of pads while a clip is stopped for PAD MODE CLIP.
Stop Clip Color		Specifies the color of pads that start/stop a track for PAD MODE MUTE.
Mute Pad Color		Specifies the color of pads that mute a track for PAD MODE MUTE.

\*1 ORANGE, YELLOW, GREEN, BLUE, PURPLE, PINK, WHITE, SKYBLUE, P.YELLOW, P.BLUE, P.PINK, L.RED, L.ORANGE, L.YELLOW, L.GREEN, P.GREEN, L.SKYBLUE, L.BLUE, L.PURPLE

### VOICE RESERVE tab

Parameter	Value	Explanation
TRACK 1-8	0-10	Specifies how polyphony resources are allocated to each tone/drum track. The track is given priority for the specified number of voices. * The number of voices used differs depending on the sound.

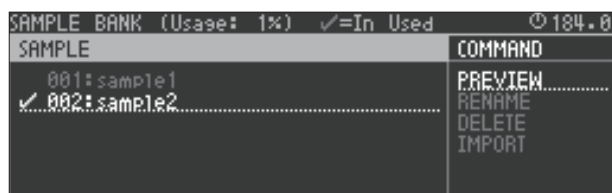
## Managing Samples Loaded into a Project

(Sample Bank)

Here's how to manage the samples that are loaded into a project.

1. Press the [PROJECT] button.
2. Use the cursor [<] [>] buttons to select "SAMPLE," and then press the [ENTER] button.

The SAMPLE BANK screen appears.



- \* Even if you delete a clip or track, the samples used by the sound will remain.
- \* Samples with a check mark are used by sounds in the project.
- \* Samples without a check mark are not used by any sound.

3. Use the cursor [<] button to select "SAMPLE," and use the cursor [^] [v] buttons to select a sample.
4. Use the cursor [>] button to select "COMMAND," and use the cursor [^] [v] buttons to select a command.

Command	Explanation
PREVIEW	Auditions the sound.
RENAME	Renames the sample.
DELETE	Deletes the sample.
IMPORT	Imports a sample from the SD card.

5. Press the [ENTER] button.

Execute the selected command.

## Saving a Project

Here's how to save the project to the SD card.

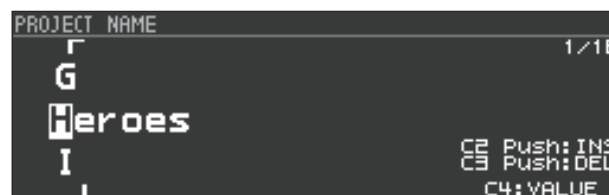
1. Press the [PROJECT] button.

### MEMO

You can also save by holding down the [SHIFT] button and pressing the [FUNC] button.

2. Use the Cursor [<] [>] buttons to select "WRITE," and then press the [ENTER] button.

The PROJECT NAME screen appears.



3. Use the cursor buttons to edit the project name.

Operating the Unit	Explanation
Cursor [<] [>] buttons	Selects the character to edit.
[C2] knob	Switches between uppercase, lowercase, numerals, and symbols.
[C3] knob [C4] knob, [VALUE] knob	Change the character.
Press the [C2] knob	Inserts a space.
Press the [C3] knob	Deletes a character.

4. Press the [ENTER] button.

A confirmation message appears.

5. Use the cursor [<] [>] buttons to select "OK," and then press the [ENTER] button.

If you decide to cancel, use the cursor [<] [>] buttons to select "CANCEL," and then press the [ENTER] button.

- \* If there is a project of the same name, it is overwritten.
- \* Projects with a lock symbol are locked, and cannot be overwritten.
- \* If there is no project of the same name, the project is saved as a new project.

# Track Operations

## Creating a Track

The MC-707 has four track types: TONE, DRUM, DRUM + COMP, and LOOPER.

Up to eight track types can be freely combined in each track.

Depending on the track type, there is a maximum number that can be used simultaneously.

### 1. Press the [SEL] button of an empty track.

The TRACK TYPE SELECT screen appears.



### 2. Use the cursor [<] [>] buttons to select type, and then press the [ENTER] button.

The track is created, and you return to the home screen.

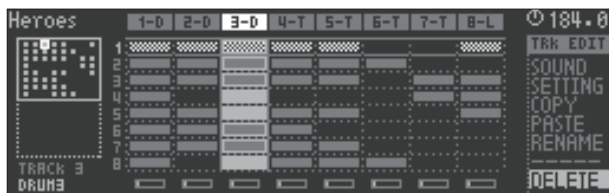
Track type	Explanation
TONE	This is a synthesizer sound engine. It can also be used as a pitched sampler.
DRUM	This is a drum sound engine. It can also be used as a sampler.
DRUM + COMP	This is a drum sound engine with compressor (maximum one track). If this track is used, looper tracks are limited to five.
LOOPER	This is a sampling looper that supports time stretch. It supports loading samples from SD card, and recording from an external input or a track. (A maximum of five looper tracks can be used if the project uses a DRUM + COMP track; if not, a maximum of eight looper tracks can be used.)

## Changing a Track to a Different Type

To change the type of a track, delete the track and then create a new track.

### 1. In the home screen, press the cursor [^] button several times to select the entire track.

### 2. Use the cursor [<] [>] buttons to select the track that you want to change.



### 3. Turn the [C4] knob to select "DELETE," and then press the [C4] knob.

A confirmation message appears.

### 4. Use the cursor [<] [>] buttons to select "OK," and then press the [ENTER] button.

The track is deleted.

If you decide to cancel, use the cursor [<] [>] buttons to select "CANCEL," and then press the [ENTER] button.

#### MEMO

You can also execute by pressing the [C4] knob once again.

### 5. With the track that you want to delete selected, press the [ENTER] button.

The TRACK TYPE SELECT screen appears.



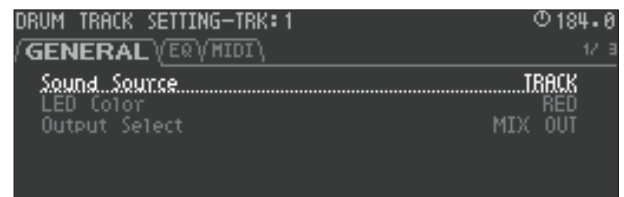
### 6. Use the cursor [<] [>] buttons to select type, and then press the [ENTER] button.

The track is created, and you return to the home screen.

## Making Track Settings

### 1. Hold down the [SHIFT] button and press the [SEL] button of the track for which you want to make settings.

The setting screen appears.



### 2. Use the cursor [<] [>] buttons to select a tab, and use the cursor [^] [v] buttons to select a parameter.

### 3. Use the [C4] knob to edit the value.

#### GENERAL tab

Parameter	Value	Explanation
Sound Source	TRACK, CLIP	Specifies whether the track's sound uses the settings of the track or of the clip. * If this is TRACK, all sounds used in the same track will be in common. * If this is CLIP, different sounds can be used for each clip. * A looper track does not have this setting.
LED Color	*1	Specifies the color shown for the level fader.
Output Select	MIX OUT, ASSIGN OUT	Specifies the output destination of assignable out.

\*1 ORANGE, YELLOW, GREEN, BLUE, PURPLE, PINK, WHITE, SKYBLUE, P.YELLOW, P.BLUE, P.PINK, L.RED, L.ORANGE, L.YELLOW, L.GREEN, P.GREEN, L.SKYBLUE, L.BLUE, L.PURPLE

#### EQ tab

These are the track EQ settings.

Parameter	Value	Explanation
EQ Sw	OFF, ON	Turns the equalizer on/off.
EQ Input Gain	-24+24 [dB]	Adjusts the amount of boost/cut at the input to the EQ.
EQ Low Gain	-24+24 [dB]	Gain of the low frequency range.
EQ Low Frequency	20-16000 [Hz]	Frequency of the low range.
EQ Mid Gain	-24+24 [dB]	Adjusts the amount of boost/cut for the mid frequency range.
EQ Mid Frequency	20-16000 [Hz]	Specifies the center frequency of the mid frequency range.



Parameter	Value	Explanation
EQ Mid Q	0.5–16.0	Specifies the width of the mid frequency range. Set a higher value for Q to narrow the range to be affected.
EQ High Gain	-24–+24 [dB]	Gain of the high frequency range.
EQ High Frequency	20–16000 [Hz]	Frequency of the high range.

## MIDI tab

Here you can switch on/off the output of MIDI messages from the sequencer to each port.

Parameter	Value	Explanation
TX MIDI OUT1	OFF, ON	Enables output to the rear panel MIDI OUT 1 connector.
TX MIDI OUT2	OFF, ON	Enables output to the rear panel MIDI OUT 2 connector.
Tx USB MIDI	OFF, ON	Enables output to the rear panel USB port.

# Pad Operations (PAD MODE)

## Using Mute Mode

This lets you use the pads to mute tracks or stop/play clips.

### 1. Press the [MUTE] button.

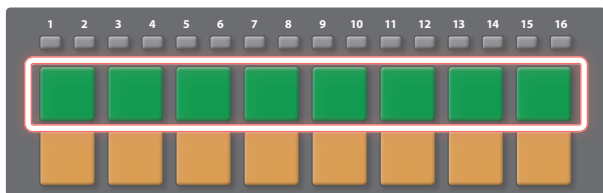
Operation switches to Mute mode.

## Stopping/Playing Tracks (Pads [1]–[8])

### 1. Press a pad [1]–[8].

You can reserve play/stop independently for each track.

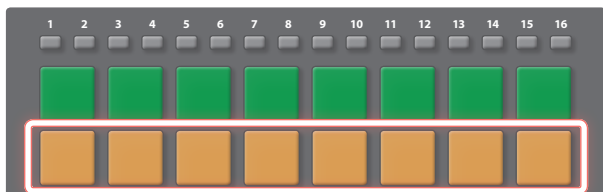
\* Play and stop occur at the timing of the master clock.



## Muting a Track (Pads [9]–[16])

### 1. Press a pad [9]–[16].

The track is muted. Press the pad once again to unmute.



## Changing a pad's color

→ "Making Project Settings" (p. 18)

## Using Cue Mode

This lets you use the pads to audition the playback content of a pad via your headphones (PHONES), or to stop/play clips.

### 1. Hold down the [SHIFT] button and press the [MUTE] button.

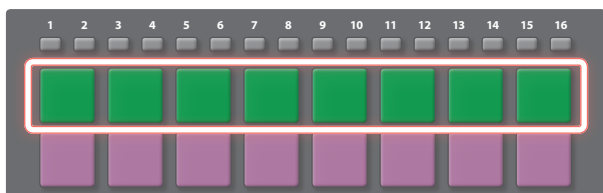
Operation switches to Cue mode.

## Stopping/Playing Tracks (Pads [1]–[8])

### 1. Press a pad [1]–[8].

You can reserve play/stop independently for each track.

\* Play and stop occur at the timing of the master clock.



## Using the Cue Function (Pads [9]–[16])

### 1. Press a pad [9]–[16].

The track is specified for cue. Press the pad once again to clear.

## Changing a pad's color

→ "Making Project Settings" (p. 18)

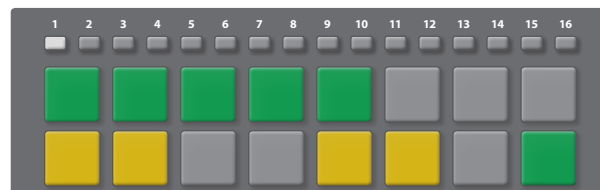
## Using Clip Mode

When you press the PAD MODE button CLIP, the pads switch to Clip mode.

This mode lets you use the pads to play/stop clips.

## Switching Clips

Of the 16 lines in track, the pads show two adjacent lines. You can use the [1]–[16] buttons to switch the lines that are shown.



### 1. Press the PAD MODE [CLIP] button.

The pads are in Clip mode.

You can select the clips that are played by the pads.

### 2. Press the pads to select clips.

The clips are switched.

## Making Clip Mode Settings

Here's how to change the pad illumination color for Clip mode.

### 1. Hold down the [SHIFT] button and press the [CLIP] button.

The CLIP MODE SETTING screen appears.

Parameter	Value	Explanation
PLAY	*1	Specifies the color of pads whose clip is playing.
STOP		Specifies the color of pads whose clip is playing.

\*1 ORANGE, YELLOW, GREEN, BLUE, PURPLE, PINK, WHITE, SKYBLUE, P.YELLOW, P.BLUE, P.PINK, L.RED, L.ORANGE, L.YELLOW, L.GREEN, P.GREEN, L.SKYBLUE, L.BLUE, L.PURPLE

## Using Note Mode

This lets you perform or create phrases.

For details on how to create phrases, refer to the section that explains creating musical phrases and motions.

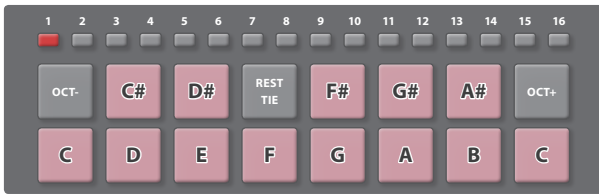
### 1. Press the [NOTE] button.

The pads switch to Note mode.

## Playing

### TONE track

For a TONE track, you can play the pads as a keyboard.



[OCT-] [OCT+]: Shift octaves.

[REST/TIE]: Use to create phrases.

➔ For details, refer to **“Step-Recording a Phrase”** (p. 28).

### DRUM track

For a DRUM track, you can use the pads to play the drum kit, or use the pads with TR-REC to create phrases.

In a drum kit, 16 instruments are assigned to the pads, one instrument to each pad.

By pressing the pads, you can switch the pad that you’re editing.

➔ For details, refer to **“Editing the DRUM Track”** (p. 45).

#### MEMO

By holding down the [NOTE] button and pressing a pad, you can switch pads without sounding a note.

### LOOPER track

For a LOOPER track, you can use the pads to change the pitch of the sample that’s played.

You can use the [OCT-] [OCT+] buttons to shift the pitch in a range of -2+2 octaves.

## DRUM PAD MUTE

For a DRUM track, you can mute individual pads.

### 1. Hold down the [MUTE] button and press the pad.

That pad’s clip is muted.

#### MEMO

You can combine this with a copy of the clip, and use it as a convenient function for creating a variation of the drum kit.

## Making Note Mode Settings

### 1. Hold down the [SHIFT] button and press the [NOTE] button.

The NOTE MODE SETTING screen appears.

### PAD tab

These are settings related to pad performance.

Parameter	Value	Explanation
OCTAVE	-5+5	Specifies the octave for pad performance.
TRANSPOSE	-6+6	Specifies the key transpose for pad performance.
PAD VELO	LINEAR, EXP, LOG, FIX10-127	Specifies the velocity sensitivity of the pads. You can also specify a fixed value.

### TR-REC tab

Parameter	Value	Explanation
VELOCITY	1-127	Specifies the velocity when using TR-REC to input a drum track. 1-127

### COLOR tab

Parameter	Value	Explanation
PAD	*1	Specify the color of the pads used for performance (PAD) and for octave (OCTAVE).
OCTAVE		

\*1 ORANGE, YELLOW, GREEN, BLUE, PURPLE, PINK, WHITE, SKYBLUE, P.YELLOW, P.BLUE, P.PINK, L.RED, L.ORANGE, L.YELLOW, L.GREEN, P.GREEN, L.SKYBLUE, L.BLUE, L.PURPLE

## Using Chord Mode

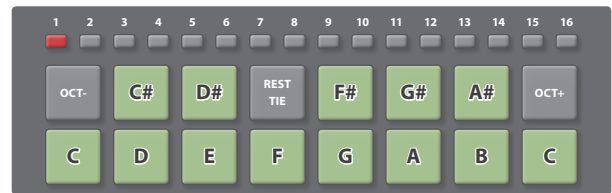
You can assign chords to the pads and play them.

\* Chord mode is used for a TONE track.

### 1. In a TONE track, press the [CHORD] button.

The pads switch to Chord mode.

## Playing



[OCT-] [OCT+]: Shift the octave.

[REST/TIE]: Used to enter a musical phrase.

➔ For details, refer to **“Step-Recording a Phrase”** (p. 28).

## Editing a Chord

### 1. Hold down the [SHIFT] button and press the [CHORD] button.

The CHORD MODE EDIT screen appears.

Here you can specify the chord.



### Selecting a pad

Use the cursor buttons to move.

Alternatively, strike a pad to specify it.

## Specifying a chord

### 1. Use the [C1]–[C4] knobs to edit the value.

**Turning a knob:** 1 (C-1)–127 (G9)

**Pressing a knob:** Switches on/off

\* To switch between parameter edit pages, press the [FUNC] button.

Parameter	Value	Explanation
NOTE1–4	OFF, 1 (C-1) –127 (G9)	Specify the notes in the chord.
COLOR	*1	Specifies the pad color.

\*1 ORANGE, YELLOW, GREEN, BLUE, PURPLE, PINK, WHITE, SKYBLUE, P.YELLOW, P.BLUE, P.PINK, L.RED, L.ORANGE, L.YELLOW, L.GREEN, P.GREEN, L.SKYBLUE, L.BLUE, L.PURPLE

## Copying the selected chord

### 1. Hold down the [FUNC] button and press the cursor [▲] button.

This specifies the chord copy-source.

### 2. Hold down the [FUNC] button and press the cursor [▼] button.

The chord is pasted.

## Scatter Mode

You can use the pads to apply Scatter, and edit the effect.

### 1. Press the [SCATTER] button.

Scatter mode is selected.

## Using the Pads to Apply the Effect

### 1. Press a pad.



The effect is applied while you hold down the pad.

The effect differs for each pad.

When you take your hand off the pad, it returns to the previous state.

## Using the [SCATTER] Button to Apply the Effect

### 1. While in Scatter mode, press the [SCATTER] button.

Step mode is selected.

While you hold down the [SCATTER] button, the effects specified for the steps are applied consecutively, starting from the first (momentary mode).

You can also make the effect continue even after you release the button (alternate mode).

➔ For details, refer to “SCATTER” (p. 38).

## Recording Effects in Steps

### 1. Hold down a step [1]–[16] button and press a pad [1]–[16].

The effect of the specified pad is assigned to the specified step.

In addition to assigning pads to steps, you can also assign each step its own effect.

➔ For details, refer to “SCATTER” (p. 38).

## Making Scatter Settings

### 1. Hold down the [SHIFT] button and press the [SCATTER] button.



➔ For details, refer to “SCATTER” (p. 38).

# Importing Clips (Clip Browser)

The clip browser lets you import clips from a project saved on the SD card.

**1. In the home screen, use the cursor buttons to select the clip slot into which you want to import a clip.**

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

The PROJECT FILE CLIP screen (clip browser) appears.

Shows the projects.

Shows the clips.

PROJECT	SOURCE	CLIP
Fragment707.m	ALL.....	4-01: CROWD
Heroes.mpj	ALPHA	4-08: NOISE UP
Heroes2.mpj	TRACK1	5-01: BASS
London Love.n	TRACK2	5-03: BASS ADD
Mirio.mpj	TRACK3	5-08: BS DOWN
SkyLines.mpj	TRACK4	6-01: SEQ

Sorts or filters the clips in the column at right.  
**ALL:** Show all.  
**ALPHA:** Sort in alphabetical order.  
**TRACK 1-8:** Filter by track.

**3. Select a clip.**

Use the cursor buttons to move between items (PROJECT, SOURCE, CLIP).

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

The clip is imported, and you return to the home screen.

## MEMO

- You can't import a clip of a different track type.
- If you want to use the sound of the import-source clip in a tone or drum track, specify the track mode as Clip.
  - ➔ For details, refer to **"Making Track Settings"** (p. 25).

# Selecting Sounds (Sound Browser)

The sound browser lets you load sounds or sample files into a project.

## Loading a Preset Sound

Here's how internal sounds of the MC-707 unit can be loaded into a project.

1. Use the [SEL] buttons to select the track whose sound you want to change.

If you're in Clip mode, select a clip.

2. Press the [SOUND] button.


The menu screen appears.

3. Use the cursor buttons to select "PRESET," and then press the [ENTER] button.

Now you can use the sound browser.

Shows the sound categories.

Shows a list of sounds.  
If you move the cursor to a sound, you can use the pads to audition that sound.



PRESET	TONE	TRACK 4	184.0
CATEGORY	FILTER	TONE	
ALL	NUM	A-001: SysCtrl DeepEcho2	
Syn. Bass	ALPHA	A-002: Horn Blast	
Syn. Lead	BANK A	A-003: Step Arabesque	
Syn. Pad	BANK B	A-004: X-MOD2 Bass1B	
Poly Key	BANK C	A-005: Dark Sub	
Syn. Seq	BANK D	A-006: Wub Bass	

Sorts or filters the sounds.  
**NUM:** Sort in number order.  
**ALPHA:** Sort in alphabetical order.  
**BANK A-F:** Filter by bank.

4. Select a sound.  
Use the cursor buttons to move to an item (CATEGORY/BANK, FILTER, TONE/DRUM).

5. Press the [ENTER] button.  
The sound is imported, and you return to the home screen.  
\* If SOUND SOURCE is Clip mode, the selecting clip must be the currently-playing clip in order for it to be auditioned.

## Loading from a Project on the SD Card

Here's how to load a sound (tone, drum, instrument) or sample (looper) from a project that's saved on the SD card.

1. Use the [SEL] buttons to select the track whose sound you want to change.

If you're in Clip mode, select a clip.

2. Press the [SOUND] button.

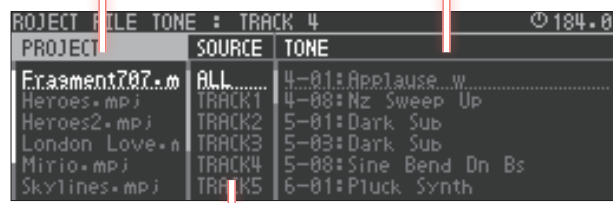
The menu screen appears.

3. Use the cursor buttons to select "PROJECT," and then press the [ENTER] button.

Now you can use the sound browser.

Shows the projects.

Lists the sounds/samples.  
When you press the [ENTER] button to select a sound/sample, it is imported.



PROJECT	SOURCE	TONE
Fragment707.m	ALL	4-01: Applause...w
Heroes.mpj	TRACK1	4-08: Nz Sweep Up
Heroes2.mpj	TRACK2	5-01: Dark Sub
London Love.n	TRACK3	5-03: Dark Sub
Mirio.mpj	TRACK4	5-08: Sine Bend Dn Bs
Skylines.mpj	TRACK5	6-01: Pluck Synth

Sorts or filters the clips in the right column.  
**ALL:** Show all.  
**TRACK 1-8:** Show only the selected track of the project.

4. Use the cursor buttons to select a sound.  
Use the cursor [<] [>] buttons to move to an item (PROJECT, SOURCE, TONE/DRUM/LOOP).

5. Press the [ENTER] button.  
The sound is imported, and you return to the home screen.

## Loading Samples from the SD Card

Here's how you can load samples that are saved on the SD card.

\* Samples that you want to load must be placed in the ROLAND/GROOVEBOX/ SAMPLE folder of the SD card.

1. Use the [SEL] buttons to select the track into which you want to load the sample.

If you're in Clip mode, select a clip.

2. Press the [SOUND] button.


The menu screen appears.

3. Use the cursor buttons to select "WAVE FILE," and press the [ENTER] button.

Now you can use the sound browser.

Shows the samples that are saved on the SD card.

**PREVIEW:** Previews the sample.  
**IMPORT:** Imports the sample.



WAVE FILE	COMMAND
bass.wav	PREVIEW...
chord.wav	IMPORT
guitar.wav	
sample1.wav	
sample2.wav	
sample3.wav	

4. Use the cursor buttons to select a sample.  
Use the cursor [<] [>] buttons to move to an item (FILE, COMMAND).

5. Press the [ENTER] button.  
The content shown in COMMAND is executed.

## The content that can be loaded depends on the track type

	TONE track	DRUM track (kit)	DRUM track (INST)	LOOPER track
Loading a preset sound (PRESET)	✓	✓	✓	
Loading a sound from a project on the SD card (PROJECT)	✓	✓	✓	
Loading a sample from a project on the SD card (PROJECT)				✓
Loading a sample file from the SD card (WAVE FILE)	✓		✓	✓

# Step-Recording a Phrase

When the pads are in Note mode, you can use the step buttons and the pads to step-record phrases.

You'll create a pattern by specifying the steps at which each pad will sound.

## Tone Track

### 1. Press the **PAD MODE [NOTE]** button.

The pads are in Note mode.

### 2. Use the step buttons to select the step that you want to input.

That step is selected for editing, and the step button blinks.

\* The currently displayed measures are indicated by the MEASURE LEDs in the lower left.

You can use the MEASURE [<] [>] buttons to move between measures.

### 3. Press pads (keys) to enter notes.

The pad that you input is lit.

If the EDIT screen is also displayed, the screen shows the notes that are input.

### 4. Repeat steps 2–3.

### 5. Press the **[EXIT]** button when you're finished editing.

You can also stop editing by pressing the currently-selected step button once again.

## Quick Input

### 1. Press the **PAD MODE [NOTE]** button.

The pads are in Note mode.

### 2. Hold down the button of the step that you want to input, and press a pad (key) to input a note.

## Inputting a Long Note (Inputting a Tie)

### 1. Press the **PAD MODE [NOTE]** button.

The pads are in Note mode.

### 2. Use the step buttons to select the step that you want to input.

That step is selected for editing, and the step button blinks.

### 3. Hold down a pad (key) and press the pad **[REST/TIE]** button.

A tie is input for the specified pitch.

## Changing the Measure Settings

### 1. Hold down the **[SHIFT]** button and press the **MEASURE [<] [>]** button.

The MEASURE EDIT screen appears.



In the MEASURE EDIT screen, you can make settings for the clip's notes.

Parameter	Value	Explanation
STEP LEN	1–128	Specifies the length of the clip.
SCALE	1/8, 1/16, 1/32, 1/4T, 1/8T, 1/16T	Specifies the resolution of the clip. <b>1/8:</b> eighth notes <b>1/16:</b> sixteenth notes <b>1/32:</b> thirty-second notes <b>1/4T:</b> quarter note triplets <b>1/8T:</b> eighth note triplets <b>1/16T:</b> sixteenth note triplets
MODE	FWD, REV, FWD+REV, INV, RND	Specifies how the clip will play back. <b>FWD:</b> Play forward from the first step. <b>REV:</b> Play in reverse from the last step. <b>FWD+REV:</b> Play forward from the first step, then play backward from the last step. <b>INV:</b> Play even-numbered and odd-numbered notes inverted. <b>RND:</b> Play randomly.
SHUFFLE	-50–+50	Specifies the amount of shuffle (bounce).

## Duplicating a Measure (Duplicate)

### 1. Hold down the **[FUNC]** button and press the **MEASURE [>]** button.

The current measure is duplicated.

## Automatically Advancing the Step During Input (Step Input Mode)

Step input mode automatically advances to the next step each time you press and release a pad. This is a convenient way to quickly enter an arpeggio pattern.

### 1. Hold down the **[REC]** button and press the step button.

You're in step input mode.

### 2. Press a pad (key) to input a note.

When you release the pad, the step advances.

\* By pressing the **[REST/TIE]** button you can advance the step without inputting a step.



## Editing the Notes of Each Step

### 1. Hold down the [SHIFT] button and press the step button.

The STEP EDIT screen appears.

EDIT STEP 1 / CLIP 4-01				184.0
MOTION :		NOTE :		
01	055 (G3)	127	0	25.99
02	063 (D#4)	64	0	0.80
	EVENT (NOTE)	VELOCITY	START	LENGTH

The notes of the selected step are shown.

### 2. Use the cursor to select the note that you want to edit.

#### NOTE tab

Knob	Explanation
[C1] knob	EVENT (NOTE) Specifies the note.
[C2] knob	VELOCITY Adjusts the velocity.
[C3] knob	START Adjusts the start timing of the note.
[C4] knob	LENGTH Specifies the length of the note. If the same note exists at the distance to which the note was extended, it cannot be extended further.

#### MOTION tab

Here you can make settings related to Motion.

Parameter	Value	Explanation
FILTER		
MOD	OFF, 0-127	Adjust the motion value for each knob.
FX		

➔ For details, refer to **“Recording Knob Movement in Steps (MOTION)”** (p. 34).

## Drum Track: TR-REC

### 1. Press the PAD MODE [NOTE] button.

The pad mode is set to Note mode.

### 2. Press a pad (key) to select the pad that you want to edit.

The selected pad is lit, and now you can use the step buttons to edit the notes of the selected pad.

### 3. Press the step buttons for the steps at which you want to input notes.

Notes are input.

If the EDIT screen is also shown, the screen shows the notes that you input.

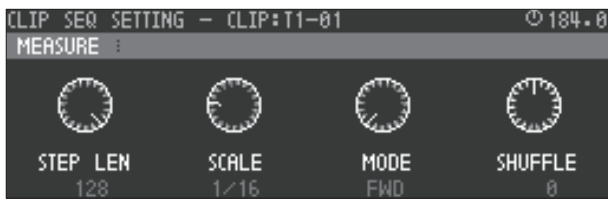
### 4. Repeat steps 2–3.

## Increasing the Measures

Here you can make settings for the notes of the clip.

### 1. Hold down the [SHIFT] button and press the MEASURE [<] [>] buttons.

The CLIP SEQ SETTING: MEASURE screen appears.



## Editing the Steps

### 1. Press a pad to select the pad that you want to edit.

### 2. Hold down the [SHIFT] button and press a step button.

The EDIT STEP screen appears.

### 3. Use the cursor buttons to switch tabs, and use the [C1]–[C4] knobs to edit the parameters.



Tab	Parameter	Explanation/Controller
MOTION tab	Here you can make settings related to Motion. ➔ For details, refer to "Recording Knob Movement in Steps (MOTION)" (p. 34).	
	FILTER	Adjust the motion value of each knob.
	MOD	OFF, 0–127
	FX	

Tab	Parameter	Explanation/Controller
NOTE (1/2) tab	VEL	Adjusts the velocity. [C1] knob
	START	Adjusts the timing at which the start note begins. [C2] knob
	MUTE	Adjusts the probability that a mute note will sound. [C3] knob
NOTE (2/2) tab	SUB STEP	Specifies a sub step. [C4] knob
	END	Specifies the end timing of the end note. [C1] knob

\* By holding down the [CLEAR] button and pressing the currently-selected step button, you can delete a note.

## Track Pad Mute

Here's how to specify drum pad muting for each track.

This function is useful during a live performance when you want to add development to your song by inserting and removing pads.

### 1. While holding down the [SEL] button of a drum track, press the pad that you want to mute.

The pad you specified is muted.

This setting applies to the track, and is maintained even if you change clips.

### 2. Once again, hold down the [SEL] button and press the pad.

Muting is cleared.

\* This is also available if the pads are set to something other than Note mode.

## Clip Pad Mute

Here's how to specify drum pad muting for each clip.

By inserting or removing parts, you can create additional variations of a drum pattern.

### 1. Press the PAD MODE [NOTE] button.

The pads are in Note mode.

### 2. While holding down the [MUTE] button, press the pad that you want to mute.

The specified pad is muted.

## Specifying the Last Step and First Step

### Specifying the Last Step

By specifying the Last Step, you can make a mid-way step play as the last step.

**1. Press the PAD MODE [NOTE] button.**

The pads are in Note mode.

**2. Hold down the [SHIFT] button and press the MOTION [REC] button.**

Step Setting mode is selected.

**3. Press the step button that you want to specify as the Last Step.**

The Last Step is specified, and the playback region is lit green.

If you press the same step button once again, the setting is cancelled.

**4. Press the MOTION [REC] button.**

You exit Step Setting mode.

### Specifying the First Step

By specifying the First Step, you can make a mid-way step play as the first step.

**1. Press the PAD MODE [NOTE] button.**

The pads are in Note mode.

**2. Hold down the [SHIFT] button and press the MOTION [REC] button.**

Step Setting mode is selected.

**3. Hold down the [SHIFT] button, and press the step button that you want to specify as the First Step.**

The First Step is specified; the First Step is lit orange, and the playback region is lit green.

To cancel the setting, once again hold down the [SHIFT] button and press the same step button.

**4. Press the MOTION [REC] button.**

You exit Step Setting mode.

### Deleting the First Step and Last Step

**1. Press the PAD MODE [NOTE] button.**

The pads are in Note mode.

**2. Hold down the [SHIFT] button and press the MOTION [REC] button.**

Step Setting mode is selected.

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

The First Step and Last Step are both deleted.

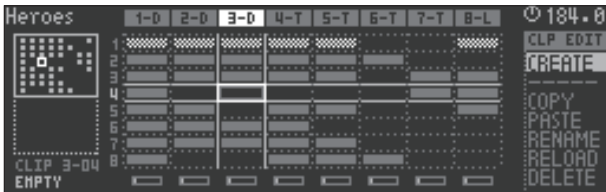
# Recording

You can record your performance or audio, and save it as clips.

## Recording a Performance to a Tone or Drum Track

### Creating a new clip and recording on it

1. In the home screen, move the cursor to an empty clip slot in which you want to create a clip.



2. Use the [MEASURE] buttons to specify the length of the clip that you want to record.

3. Press the [REC] button.

A clip is created at the specified location, and recording starts.

\* If playback is stopped, press the [START/STOP] button to start playback.

4. Press the PAD MODE [NOTE] button.

The pads are in Note mode.

5. Play the pads.

6. To stop recording, press the [REC] button.

Recording ends.

#### MEMO

You can also end recording by moving the clip.

### Overwriting a clip (Overdub)

Here's how to add notes to an existing clip.

1. In the home screen, move the cursor to select a clip.

2. Press the [REC] button.

Recording starts.

\* If playback is stopped, press the [START/STOP] button to start playback.

3. Play the pads.

4. To stop recording, press the [REC] button.

Recording ends.

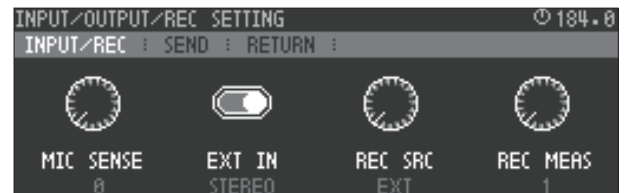
#### MEMO

You can also end recording by moving the clip.

## Recording Audio on a Looper Track

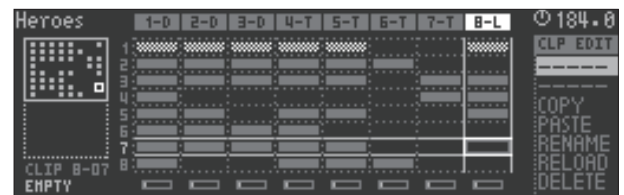
### Creating a new clip and recording

1. Hold down the [SHIFT] button and press the [INPUT] button.
2. Select the audio source that you want to record.



Audio source to record	Explanation
EXT	Record audio from the EXT IN jacks. If you pressed the [INPUT] button to make it light, turn the [VALUE] dial to adjust the volume.
PC	If the input from a USB-connected computer is assigned to the MC-707's PC IN, you can record from it. Switch the USB output port of the computer to PC (Ch3-4). * The default USB output port is MIXOUT.
TRK1-8	Record from a track.
MIXOUT	Record the overall sound. * If the output port of the computer is MIX (Ch1-2) and USB Mix Select is POST-TFX, the audio output from the computer is not recorded.

3. In the home screen, move the cursor to select the clip slot that you want to create.



#### MEMO

In Clip mode, you can use the pads to select this.

4. Use the [MEASURE] buttons to specify the length of the clip.

5. Press the [REC] button.

Record is reserved.

At the next timing cycle of the master clock, a clip is created in the specified position and recording starts.

Recording ends when the specified number of measures is reached.

- \* This does not support overwriting the clip.
- \* The track being recorded stops producing sound.
- \* If playback is stopped, press the [START/STOP] button to start playback.
- \* When recording ends, the recorded clip plays.

# Quantize

Two types of quantization can be applied to tone tracks and drum tracks.

## MEMO

Quantization cannot be applied to a looper track.

## INPUT QUANTIZE

The timing of the performance is corrected (quantized) during recording.

If this setting is on, irregularities in the performance timing are not recorded.

## SEQUENCER QUANTIZE

The timing of the performance is corrected (quantized) during playback.

Quantization can be specified in a range of 1–100%.

This setting is provided for each individual clip and also as a master setting (common to all clips). If the clip setting and the master setting are different, the larger number takes priority.

## Enabling Quantize During Recording

### 1. Press the [QUANTIZE] button.

Quantization is switched on/off.

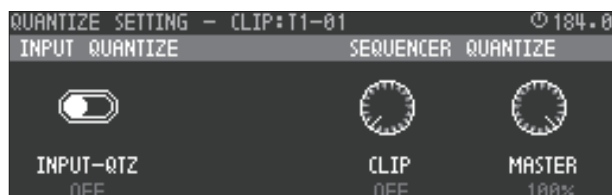
## Specifying Playback Quantization

### 1. Hold down the [SHIFT] button and press the [QUANTIZE] button.

The QUANTIZE SETTING screen appears.

## MEMO

You can also access the QUANTIZE SETTING screen by long-pressing the [QUANTIZE] button.



Parameter	Value	Explanation
INPUT-QTZ (INPUT QUANTIZE)	OFF, ON	Specifies whether quantization is applied (ON) or not applied (OFF) when recording the performance. [C1] knob * This can also be switched on/off by pressing the QUANTIZE button.
CLIP (SEQUENCER QUANTIZE)	OFF, 1–100%	Specifies the strength of quantization for the currently selected clip. Quantization is applied during playback. [C3] knob
MASTER (SEQUENCER QUANTIZE)	OFF, 1–100%	Specifies the strength of quantization common to all clips. Quantization is applied during playback. [C4] knob

# Recording Knob Movement in Steps (MOTION)

Movements of the [FILTER], [MOD], and [FX] knobs (MOTION) can be recorded in a clip.

## Turning Motion On/Off

For each clip, you can specify whether Motion is played back.

If the MOTION [ON] button is lit, the recorded movements (Motion) of the [FILTER], [MOD], and [FX] knobs are played back.

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

Motion plays back.

2. Press the **MOTION [ON]** button to make it go dark.

Motion playback ends.

## Recording Motion

When the MOTION [REC] button is lit, movements (Motion) of each track's [FILTER], [MOD], and [FX] knobs are recorded in the currently playing step.

1. Play back the clip.
2. Press the **MOTION [REC]** button to make it light.

Motion recording starts.

3. Operate the [FILTER], [MOD], and [FX] knobs.

The knob movements are recorded in each step of each track.

4. Press the **MOTION [REC]** button to make it go dark.

Motion recording ends.

## Deleting Motion

1. In the home screen, move the cursor to select a clip.
2. Hold down the **[SHIFT]** button and press the **MOTION [ON]** button.

A confirmation message asks you whether you want to delete the Motion of the currently selected clip.

3. Use the cursor buttons to select **"OK,"** and then press the **[ENTER]** button.

The Motion is deleted.

If you decide to cancel, choose **"CANCEL"** and then press the **[ENTER]** button.

### Deleting the Motion of a Specific Knob

1. While holding down the **MOTION [ON]** button, turn the knob whose Motion you want to delete.

The Motion of the specified knob is deleted.

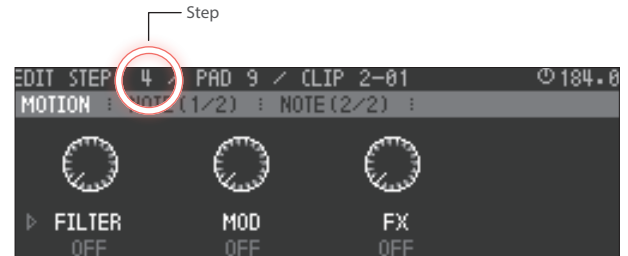
## Editing Motion

In the EDIT STEP screen, you can edit the Motion for each step.

1. While holding down the **[SHIFT]** button, press a step button.

The EDIT STEP screen appears.

2. Press the **cursor [ < ]** button to select the **"MOTION"** tab.



3. Use the **MEASURE [ < ] [ > ]** buttons and the step buttons to select the step that you want to edit.

Parameter	Value	Explanation
FILTER		
MOD	OFF, 0-127	Adjust the motion values of each knob.
FX		

4. When you have finished editing, press the **[EXIT]** button to return to the home screen.

### Switching the Motion that's edited or viewed by the step buttons

Steps that contain Motion data are indicated by whether the corresponding step button is lit (data exists) or unlit (no data).

For the Motion data that is indicated by illuminated step buttons, an **"▷"** or **"▶"** icon appears at the left of the parameter name.



Icon identifying the Motion data indicated by illuminated step buttons

1. Press the **PAD MODE [NOTE]** button.

The pads are in Note mode.

2. While holding down the **[SHIFT]** button, press a step button.

The EDIT STEP screen appears.

3. Press the **cursor [ < ]** button to select the **"MOTION"** tab.

4. At the **"MOTION"** tab, press the **cursor [ v ]** button.

The **"▷"** icon changes to **"▶"**.

5. Use the **cursor [ < ] [ > ]** buttons to select the Motion that is indicated.

## Deleting Motion from a step

### 1. While holding down the [SHIFT] button, press a step button.

The EDIT STEP screen appears.

### 2. Press the cursor [<] button to select the “MOTION” tab.

### 3. Use the MEASURE [<] [>] buttons and the step buttons to select the step from which you want to delete Motion.

### 4. While holding down the [CLEAR] button, press the [C1]–[C3] knobs.

The Motion is deleted.

#### NOTE

If the [REC] button is lit, pressing the [CLEAR] button deletes the notes.

#### MEMO

You can also delete by turning the [C1]–[C3] knobs all the way to the left.

### 5. When you have finished editing, press the [EXIT] button to return to the home screen.

## Inputting smooth Motion (MOTION DESIGNER)

By using MOTION DESIGNER, you can input Motion data that changes smoothly in time.

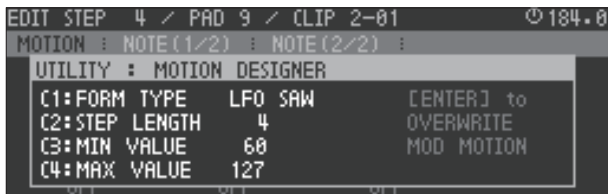
This function is a convenient way to create effects such as ducking (side-chain).

### 1. Select the Motion that you want to edit.

→ “Switching the Motion that’s edited or viewed by the step buttons” (p. 34)

### 2. In the EDIT STEP screen, press the [FUNC] button.

The screen indicates “UTILITY: MOTION DESIGNER.”



### 3. Use the [C1]–[C4] knobs to adjust the parameters that you want to input.

Controller	Parameter	Explanation
[C1] knob	FORM TYPE	Selects the waveform of the time-varying change.
[C2] knob	STEP LENGTH	Specifies the number of steps from beginning to end.
[C3] knob	MIN VALUE	Specifies the minimum value of the waveform.
[C4] knob	MAX VALUE	Specifies the maximum value of the waveform.

### 4. Press the [ENTER] button.

Time-varying values are written as Motion for the specified knob.

### 5. When you are finished editing, press the [EXIT] button to return to the home screen.

# Saving and Recalling a Scene

By using the Scene function you can recall a combination of clips to play back.

A project can store eight scenes.

## Recalling a Scene

When you press a SCENE button, a playback reservation is made for the recorded combination of playback clips.

The scene is applied at the next timing interval of the master clock.



- \* By holding down the [SHIFT] button and pressing a SCENE [1]-[4] button, you can recall SCENE 5-8.

## Storing a Scene

By long-pressing a SCENE button, you can store the current combination of playback clips.



- \* By holding down the [SHIFT] button and long-pressing a SCENE [1]-[4] button, you can store to SCENE 5-8.



# Total Effects

The MC-707 is equipped with five **“total effects.”** Settings for these effects are saved in the project.

➔ For details, refer to **“Parameter List”** (p. 61).

## Reverb

Adds reverberation to the sound.

## Chorus/Delay

Gives the sound depth and spaciousness (Chorus), or delays the sound in an echo-like manner (Delay).

## Multi FX

Lets you select and use one of various effects such as filter or overdrive.

## Compressor

Compresses loud peaks of the master output, making the volume more consistent.

## Equalizer

An equalizer with three frequency bands (low, mid, high).

## Using the [FX PRM] [FX DEPTH] Knobs and the [ON] Button to Select the Target of Operation



By pressing one of the [REVERB] [DELAY] [MULTI] buttons you can change the target that is operated by the knobs.

Pressing the [ON] button switches the effects on/off.

## Editing Reverb or Delay

Hold down the [SHIFT] button and press the [REVERB] [DELAY] button.

The SEND EFFECTS EDIT screen appears.

Use the cursor [←] [→] buttons to select the effect that you want to edit.

Turn the effect on/off, and select the type of the effect that you want to use.  
Use the cursor keys to select the check box located beside the effect name, and press ENTER to add a “✓” symbol.

Edit the parameters of the selected effect.  
➔ **“Total Effect Parameters”** (p. 80)

➔ For details, refer to **“Total Effect Parameters”** (p. 80).

## Editing MFX/COMP/EQ

### 1. Hold down the [SHIFT] button and press the [MULTI] button.

The TOTAL EFFECTS EDIT screen appears.

Use the cursor [←] [→] buttons to select the effect that you want to edit.

Turn the effect on/off, and select the type of the effect that you want to use.  
Use the cursor keys to select the check box located beside the effect name, and press ENTER to add a “✓” symbol.

Edit the parameters of the selected effect.  
➔ **“Total Effect Parameters”** (p. 80)

➔ For details, refer to **“Total Effect Parameters”** (p. 80).

## Changing the Knob Assignments

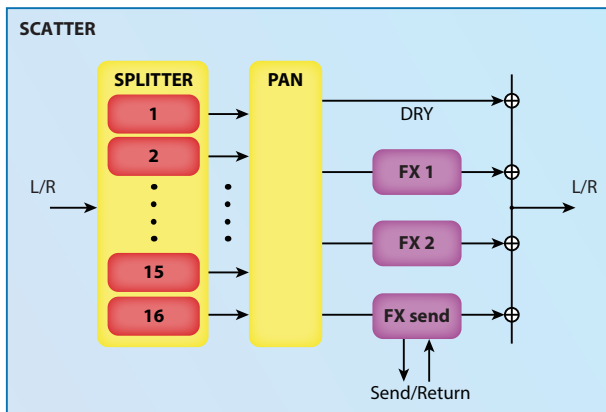
While holding down one of the [REVERB] [DELAY] [MULTI] buttons and turning a [FX PRM] [FX DEPTH] knob, you can change the parameter that is assigned to the knob.

# SCATTER

“Scatter” adds a digital-feeling groove to the loop playback by exchanging individual steps within the loop playback and also by changing the playback direction or gate length.

You can apply the effect by pressing the pads, or sequence the effect and apply it to audio input.

## Signal flow



## Applying the Scatter Effect

### Using the Pads to Apply the Effect

By pressing pads, you can apply the effect that is assigned to each pad.

#### 1. Press the PAD MODE [SCATTER] button.

The [SCATTER] button is lit, and the pads are in Scatter mode.

#### 2. Press a pad.

The scatter effect specified for each pad is applied.

#### MEMO

- Depending on the settings of the pad, the effect is applied in one of two ways: applied as long as you hold down the pad, or applied cyclically.
- If the SIZE or HOLD is set to a value greater than 1, the effect is applied cyclically only to the step at the moment you press the pad.

### Pressing the [SCATTER] Button to Apply the Effect

You can press the [SCATTER] button to apply the effect that is specified for the step.

#### 1. Press the PAD MODE [SCATTER] button.

The pads are in Scatter mode.

#### 2. While in Scatter mode, press the [SCATTER] button.

The [SCATTER] button blinks, and the effect specified for each step is applied.

**MOMENTARY mode:** The effect is applied only while you hold down the [SCATTER] button.

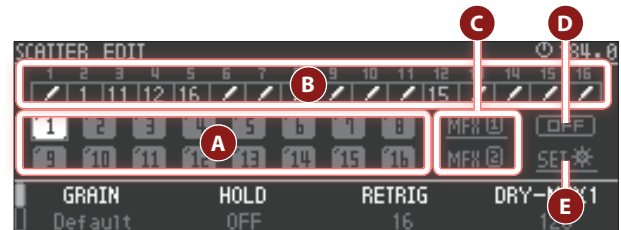
**ALTERNATE mode:** The effect turns on/off each time you press the [SCATTER] button.

➔ “D STEP MODE SW” (p. 38)

## Editing the Scatter Effect

### 1. Hold down the [SHIFT] button and press the PAD MODE [SCATTER] button.

The SCATTER EDIT screen appears.



#### A PAD

You can use the [C1]–[C4] knobs to edit the parameters shown in the bottom of the screen.

Press the [FUNC] button to switch between parameters to edit.

Parameter	Value	Explanation
GRAIN	Default, 1–16	Modifies the grain played for each step and the timing at which it plays.
HOLD	OFF, x1–x16	Repeatedly plays the range of steps specified by SIZE for the specified number of times.
RETRIG	1–32	Repeatedly plays within the range of steps specified by SIZE for the specified number of times.
DRY-MFX1	0–255	Specifies the amount of send to MFX1. The dry sound decreases inversely.
COLOR	*1	Specifies the color of the pads.
GLIDE (PITCH GUIDE)	–400%–400%	Gradually modifies the pitch.
REVERSE	OFF, ON	Plays in reverse.
DRY-MFX2	0–255	Specifies the amount of send to MFX2. The dry sound decreases inversely.

\*1 ORANGE, YELLOW, GREEN, BLUE, PURPLE, PINK, WHITE, SKYBLUE, P.YELLOW, P.BLUE, P.PINK, L.RED, L.ORANGE, L.YELLOW, L.GREEN, P.GREEN, L.SKYBLUE, L.BLUE, L.PURPLE

➔ For details, refer to “Detailed Editing” (p. 39).

#### B STEP

Select a step and press the [ENTER] button to access the step edit screen.

#### C MFX1, 2

Here you can make MFX settings.

Parameter	Value	Explanation
SWITCH	OFF, ON	Switches the effect on/off.
TYPE	Specifies the effect type. ➔ “MFX/IFX Parameters” (p. 84)	
Parameter	Parameters for the selected effect type are shown. ➔ “MFX/IFX Parameters” (p. 84)	

#### D STEP MODE SW

This indicates the step mode on/off status.

You can also press the [ENTER] button to switch it on/off.

Parameter	Value	Explanation
MODE	MOMENTARY, ALTERNATE	Use the [SCATTER] button to switch this on/off. You can use the [C4] knob to switch between ALTERNATE mode and MOMENTARY mode. <b>MOMENTARY:</b> Press the [SCATTER] button to turn it on, release the button to turn it off. <b>ALTERNATE:</b> The effect alternates on/off each time you press the [SCATTER] button.

**E SET**

Parameter	Value	Explanation
POS	EXT, PC, TRACK1–8, MIXOUT	Selects the position at which Scatter is inserted. <b>EXT:</b> Input from the EXT IN jacks <b>PC:</b> Input from the USB PC-IN port <b>TRACK 1-8:</b> Output of tracks 1–8 <b>MIXOUT:</b> Before the compressor
SPLIT	1/1, 1/2, 1/3, 1/4, 1/5, 1/6, 1/7, 1/8, 1/9, 1/10, 1/11, 1/12, 1/13, 1/14, 1/15, 1/16	Specifies the width of the divisions when dividing the clip. For example, if <b>SCALE:</b> 1/16, <b>LENGTH:</b> 16, and <b>MEASURE:</b> 1, then <b>SPLIT:</b> 1/16 → sixteenth notes <b>SPLIT:</b> 1/12 → eighth note triplets <b>SPLIT:</b> 1/8 → eighth notes <i>* Step numbers beyond the number of divisions specified by SPLIT are ignored.</i>
LOOP-HOLD	OFF, ON	This lets you loop the playback while holding the audio that is loaded into Scatter. If you change the tempo, the playback speed and pitch will change simultaneously.
SCALE	1/8, 1/16, 1/32, 1/4T, 1/8T, 1/16T	Specifies the beat that is the basis of the measure.
LENGTH	1–16	Specifies the basic number of beats (SCALE) in a measure.
MEASURE	1–8	Specifies the number of measures used by Scatter.

## Detailed Editing

You can edit the effect individually for each pad and step.

### 1. Hold down the [SHIFT] button and press the PAD MODE [SCATTER] button.

The SCATTER menu appears.

### 2. Press the [ENTER] button to select the item that you want to edit.

- \* Step cannot be edited if pads are assigned to steps.
- \* When you edit a step, the step is lit red.

### Editing a step/pad



You can use the [C1]–[C4] knobs to edit the parameters shown in the screen.

## SETTING

Parameter	Value	Explanation
COLOR	*1	Specifies the pad color. <i>* This setting is only for PAD.</i>
SEQ	Default, 1–16	Specifies the timing of playback. <i>* This setting is only for STEP.</i>
MASK	OFF, ON	Specifies whether playback of another step will overlap during playback. If you raise Size or Hold to extend the playback time of the step, and do not want it to overlap the playback of another step, you can turn this ON so that the step whose timing overlaps is muted. However, the step for which this is turned ON is not muted.

\*1 ORANGE, YELLOW, GREEN, BLUE, PURPLE, PINK, WHITE, SKYBLUE, P.YELLOW, P.BLUE, P.PINK, L.RED, L.ORANGE, L.YELLOW, L.GREEN, P.GREEN, L.SKYBLUE, L.BLUE, L.PURPLE

## REVERSE

Parameter	Value	Explanation
SIZE	1–16	Specifies the range of steps to which the effect is applied.
MUTE	OFF, ON	Mutes the sound.
REVERSE	OFF, ON	Plays in reverse.

## RETRIG

Parameter	Value	Explanation
RETRIG	1–32	Repeatedly plays the sound for the specified number of times within the range of steps specified by SIZE.
RETRIG GLD	1/32–OFF–32, Inf	Gradually applies change to the sound specified by Retrig. This is effective when you want the glitch effect to change over time. You can also produce change over a longer time by raising Hold. By setting this in the opposite direction than a paired parameter, you can create large change.
HOLD	OFF, x1 - x16	Repeatedly plays the range of steps specified by SIZE for the specified number of times. If this is OFF, playback continues to the end of the steps available, regardless of the step range.

## PITCH

Parameter	Value	Explanation
PIT CHRM (PITCH CHRM)	-24 (-2oct) 0 (Original) +24 (+2oct)	Specifies the pitch in semitone units.
PIT FINE (PITCH FINE)	-100cent–0cent– +100cent	Finely adjusts the pitch.
PIT BEND (PITCH BEND)	1%–100%–400%	Smoothly varies the pitch across a wide range.
PIT GLD (PITCH GLIDE)	-400%–400%	Applies gradual change to the specified pitch.

## PAN

Parameter	Value	Explanation
PAN	L128–0–127R	Specifies the panning of the sound.
LEVEL	0–255	Adjusts the volume.
LEV GLD (LEVEL GUIDE)	-255–0–+255	Applies gradual change to the sound specified by LEVEL.

## FX SEND

Parameter	Value	Explanation
MF1	0–255	Specifies the send amount of Scatter to MF1.
MF2	0–255	Specifies the send amount of Scatter to MF2.
FX SEND	0–255	Specifies the send amount to the SEND/RETURN jacks. <i>* SEND/RETURN POS must be set to SCATTER.</i>
DRY	0–255	Specifies the volume of sound that does not pass through the effect.

ENV

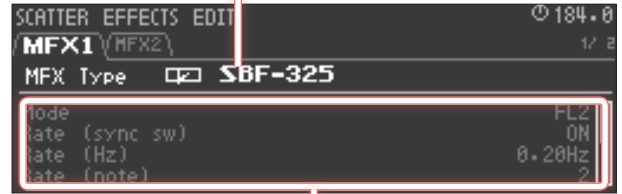
Parameter	Value	Explanation
ATK TIME	0ms–1000ms	Specifies the speed at which the volume is gradually raised when the effect starts being applied. With a setting of 0ms this has no effect.
DCY TIME	0ms–1000ms	Specifies the speed at which the volume is gradually lowered when the effect stops being applied. With a setting of 0ms this has no effect. In some cases, an extremely high setting of DCY TIME could overlap with the operation of ATK TIME, resulting in silence.

GRAIN

Parameter	Value	Explanation
GRAIN	Default, 1–16	Lets you change the grains played back by each step.

Editing MFX

Turn the effect on/off, and select the type of effect to use.  
To turn the effect on, add a “✓” symbol to the check box located beside the effect name.



Edit the parameters of the selected effect.  
➔ “MFX/IFX Parameters” (p. 84)

Parameter	Explanation
MFX Type	Turns MFX on/off, and selects the type of MFX to use. To turn MFX on, add a “✓” symbol to the check box located beside the effect name. ➔ “MFX/IFX Parameters” (p. 84)
MFX parameters	Edit the parameters of the selected MFX. ➔ “MFX/IFX Parameters” (p. 84)

# Editing the TONE Track

A tone track is a track that provides PCM/VA synthesis and sample playback functionality.

Use a tone track when you want to play pitched phrases.

## Simple Sound Editing

### 1. In the home screen, use the cursor buttons to select the tone track that you want to edit.

\* If the sound source is Clip, select the clip that you want to edit.

### 2. Hold down the [SHIFT] button and press the [SOUND] button.

The TONE EDIT screen appears.



### 3. Use the cursor buttons to select an icon, and use the [C1]–[C4] knobs to edit.

Press the [FUNC] button to access the second page of the editing items.

#### CTRL

Here you can make settings related to voicing.

Parameter	Value	Explanation
OCT (Octave Shift)	-3–+3	Specifies the pitch of the tone in octave units (maximum of ±3 octaves).
VOICE (Mono/Poly)	MONO, POLY	Specifies whether the tone plays polyphonically (POLY) or monophonically (MONO). <b>MONO:</b> Only the note of the last-played key is played, one note at a time. <b>POLY:</b> Multiple notes can be played simultaneously.
PORTAMENT (Portamento Switch)	OFF, ON	Specifies whether the portamento (*1) effect is applied (ON) or not applied (OFF).
P.TIME (Portamento Time)	0–127	Specifies the time over which the pitch changes when using portamento. Higher settings will cause the pitch change to the next note to take more time.

\*1 Portamento is an effect that smoothly changes the pitch from one key to the next key that you press. Applying portamento when Mono/Poly is set to **“MONO”** will produce an effect reminiscent of the slide performance technique on a violin.

#### OSC 1–4

Here you can make settings for the oscillators of each partial.

Parameter	Value	Explanation
OSC (OSC Type)	OFF, PCM, VA, PCM-Sync, SuperSAW, Noise	Specifies the oscillator type. <b>PCM:</b> Sound is produced by PCM. This sounds the wave specified by Wave Group and Wave Number L/R. <b>VA:</b> Sound is produced by an analog-modeled wave generated by calculation. This sounds the wave of the number specified by Waveform. <b>PCM-Sync:</b> Sound is produced by the wave specified by the PCM-Sync Wave Number. <b>SuperSAW:</b> Sound is produced by SuperSAW. <b>Noise:</b> White noise is produced.

Parameter	Value	Explanation
GROUP TYPE (Wave Group Type)	INT, SAMP	<b>INT:</b> When OSC TYPE is PCM, the internal waveforms of the MC-707 are used. <b>SAMP:</b> When OSC TYPE is PCM, the waveforms loaded into the project are used.
BANK (Wave Bank)	A, B, C	Specifies the bank (A–C) that is sounded when OSC Type is INT.
WAVE (Wave Number L/R)		Specifies the wave number within the group specified by Wave Group. Specifies the sample number when TYPE is SAMP. * In EASY MODE, the same waveform is specified for L and R.
FORM	SAW, SQR, TRI, SIN, RAMP, JUNO, TRI2, TRI3, SIN2	Specifies the wave that is sounded when OSC Type is VA. <b>SAW:</b> Sawtooth wave <b>SQR:</b> Square wave <b>TRI:</b> Triangle wave <b>SIN:</b> Sine wave <b>RAMP:</b> Ramp wave <b>JUNO:</b> Modulated sawtooth wave <b>TRI2:</b> Triangle wave variation <b>TRI3:</b> Triangle wave variation <b>SIN2:</b> Sine wave variation
PW	0–127	This is an effect obtained by varying the pulse width duty cycle to modify the waveform. It is available when OSC Type is VA, and also allows you to create effects with other than SQR (square wave).
PWM	-63–+63	Specifies the amount (depth) of LFO applied to PW (pulse width). LFO follows the settings of LFO2.

#### OSC (PCM-SYNC)

Parameter	Value	Explanation
WAVE (PCM-Sync Wave No.)		Specifies the wave that sounds when OSC Type is PCM-Sync. The PCM-Sync oscillator is effective when Structure is SYNC and set to Slave (the sync-modulated Partial 1, 3).

#### OSC (SuperSAW)

Parameter	Value	Explanation
DETUNE (SuperSAW Detune)	0–127	Specifies the width of pitch variance between the seven sawtooth waves that are layered within one oscillator. Higher values produce greater pitch variance. (When doing this, OSC Detune changes the pitch for each of the seven sawtooth waves by the same width.)

#### OSC (common to P2)

Parameter	Value	Explanation
SW	OFF, ON	Turns the partial on/off.
COARSE	-48–+48	Specifies the pitch in semitone units (maximum ±4 octaves).
FINE	-50cen–+50cen	Specifies the pitch in one-cent units (maximum ±50 cents).
VOL	0–127	Specifies the volume of the partial.

### STRUCT

Structure lets you play two partials as a pair. By using partial 1 or 3 (the carrier) to modulate the other partial 2 or 4 (the modulator), you can create a wide range of tonal characters.

Parameter	Value	Explanation
OSC1-2/OSC3-4		Partial 2 is used to modulate the sound of partial 1.
	OFF	off
	SYNC	This implements the oscillator sync function that is provided by analog synthesizers. The oscillator of partial 1 is reset at pitch cycles of partial 2. * This is available only when OSC Type is Virtual Analog or PCM Sync.
	RING	This implements the ring modulator that is provided by analog synthesizers. The output of partial 2 is multiplied with partial 1. ➔ "RING" (p. 63)
	XMOD XMOD2	This implements the cross modulation function that is provided by analog synthesizers. The output of partial 2 is applied as the pitch of partial 1. ➔ "XMOD" (p. 63)
OSC1 / OSC3	0–127	Adjusts the volume of OSC 1/3.
OSC2 / OSC4	0–127	Adjusts the volume of OSC 2/4.
RING (RING1-2 Level)	0–127	Adjusts the volume of ring modulation.
MOD (XMOD)	0–9600 [cent] (XMOD) 0–127 (XMOD2)	Adjusts the depth of cross modulation.

### PENV

Here you can make pitch envelope settings.

Parameter	Value	Explanation
DEPTH (Depth)	-100–+100	Specifies the depth of the pitch envelope. Higher values make the pitch envelope produce greater change. Negative "-" values invert the shape of the envelope. If the OSC Type is other than VA, this is limited to ±63.
ATTACK (T1)	0–1023	Specifies the time over which the initial value changes to the maximum value after the note starts.
DECAY (T3)	0–1023	Specifies the time over which the SUSTAIN value is reached following the ATTACK.
SUSTAIN (L3)	-511–+511	Specifies the sustain value of the pitch envelope.

### LFO

Here you can make LFO settings.

Parameter	Value	Explanation
FROM		Specifies the LFO waveform.
	SIN	Sine wave
	TRI	Triangle wave
	SAW-UP	Sawtooth wave
	SAW-DW	Sawtooth wave (negative polarity)
	SQR	Square wave
	RND	Random wave
	TRP	Trapezoidal wave
	S&H	Sample and Hold wave (changes the LFO value once every cycle)
	CHS	Sine wave modified by a VSIN chaos wave. The amplitude of a sine wave is randomly changed once every cycle.
	VSIN	Modified sine wave. The amplitude of the sine wave is randomly varied once every cycle.
	STEP	A waveform generated from data specified by LFO Step 1–16. This produces a fixed pattern of stepped change like a step modulator. You can edit this in the TONE PARTIAL EDIT screen. ➔ Refer to "Detailed Sound Editing" (p. 43).
RATE	0–1023, 1/64T–4	This is available if Rate Sync is OFF. It specifies the LFO cycle regardless of the tempo. Higher values shorten the LFO cycle.
>CUTOFF (Filter Depth)	-100–+100	Specifies the depth at which the LFO is applied to the cutoff frequency.
>PITCH (Pitch Depth)	-100–+100	Specifies the depth at which the LFO is applied to pitch. * If OSC Type is other than Virtual Analog, the range is limited to -63–+63.
>AMP	-100–+100	Specifies the depth at which the LFO is applied to volume.
>PAN	-63–+63	Specifies the depth at which the LFO is applied to pan.

### FENV

Here you can make filter envelope settings.

Parameter	Value	Explanation
ATTACK (T1)	0–1023	Specifies the time over which the initial value changes to the maximum value after the key is pressed.
DECAY (T3)	0–1023	Specifies the time over which the SUSTAIN value is reached following the ATTACK.
SUSTAIN (L3)	0–1023	Specifies the sustain value of the filter envelope.
RELEASE (T4)	0–1023	Specifies the time over which the minimum value is reached after the key is released.

### MATRIX

Here you can connect various parameters as if you were patching them.

You can connect up to four parameters.

Parameter	Value	Explanation
FROM		Specifies the control-source signal. * If you specify SycCtrl 1–4, you can use the panel [FILTER] [MOD] [FX] knobs to control the parameters.
TO		Specifies the parameter that is controlled. ➔ For an explanation of each parameter, refer to "Parameter List" (p. 61).
DEPTH (Depth)	-63–+63	Specifies the amount (depth) by which the parameter is varied.

## MIX

Here you can set the reverb, delay, pan, and level of the total effect.

Parameter	Value	Explanation
LEVEL (MIX LEVEL)	0-127	Specifies the volume of the clip.
PAN	L64-63R	Specifies the pan of sound.
>REVERB (Reverb Send)	0-127	Specifies the amount sent to TOTAL FX REVERB.
>DELAY (Delay Send)	0-127	Specifies the amount sent to TOTAL FX DELAY.

## FILTER

Here you can make filter settings.

Parameter	Value	Explanation
TVF TYPE	OFF, LPF, BPF, HPF, PKG, LPF2, LPF3	Selects the type of TVF filter. <b>OFF:</b> Off <b>LPF:</b> Low pass filter <b>BPF:</b> Band pass filter <b>HPF:</b> High pass filter <b>PKG:</b> Peaking filter <b>LPF2:</b> Low pass filter 2 <b>LPF3:</b> Low pass filter 3
VCF TYPE	FLAT, TYPE-JP, TYPE-M, TYPE-P	Selects the type of VCF filter when the filter TYPE is VCF. Each of these simulates the operation of an analog synthesizer's LPF.
TYPE	TVF, VCF	Select either TVF or VCF as the filter type. * TVF stands for Time Variant Filter, and is a filter that allows detailed settings to be made for the time-varying change in the sound's frequency components. If VCF is selected, the simultaneous polyphony will be less than when TVF is selected.
CUTOFF (Cutoff)	0-1023	Selects the frequency at which the filter begins to have an effect on the waveform's frequency components.
RES (Resonance)	0-1023	Boosts the region of the sound near the cutoff frequency, adding a distinctive character to the sound.
ENV DEP (Env Depth)	-63+63	Specifies the depth of the filter envelope.
KEYF	-200+200	Set this if you want the cutoff frequency to change according to the keyboard position of the note you play.
SLOPE	-12, -18, -24 [dB/Oct]	This button selects the slope (steepness) of the filter. For VCF, you can choose -12, -18, or -24. For TVF, you can choose only -12 or -24. If the filter TYPE is TVF, the following limitations apply. Only -12 dB or -24 dB can be specified. Even if you specify -18 dB, the sound engine operates internally with the -12 dB setting. If you specify -24 dB, the simultaneous polyphony will be less than when -12 dB is selected.

## AMP

Here you can make amp envelope settings.

Parameter	Value	Explanation
ATTACK (T1)	0-1023	Specifies the time over which the initial value changes to the maximum value after the key is pressed.
DECAY (T3)	0-1023	Specifies the time over which the SUSTAIN value is reached following the ATTACK.
SUSTAIN (L3)	0-1023	Specifies the sustain value of the amp envelope.
RELEASE (T4)	0-1023	Specifies the time over which the minimum value is reached after the key is released.
PAN PTL1-4 (Pan)	L64-63R	Specifies the pan of each partial's sound.

## EQ

Here you can make equalizer settings.

Parameter	Value	Explanation
SW	OFF, ON	Turns the equalizer on/off.
LOW	-24+24 [dB]	Gain of the low frequency range.
MID	-24+24 [dB]	Gain of the mid frequency range.
HIGH	-24+24 [dB]	Gain of the high frequency range.
MIDQ	0.5-16.0	Bandwidth of the mid frequency range. Set a higher value for Q to narrow the range to be affected.
LOW	20-16000 [Hz]	Frequency of the low range.
MID	20-16000 [Hz]	Frequency of the mid range.
HIGH	20-16000 [Hz]	Frequency of the high range.

## EFFECT

Here you can make effect settings.

Parameter	Value	Explanation
SWITCH	OFF, ON	Turns the effect on/off.
TYPE		Switches the type of effect.
Effect parameters	Refer to the MFX/IFX parameters.	The displayed parameters depend on the effect type that is selected.

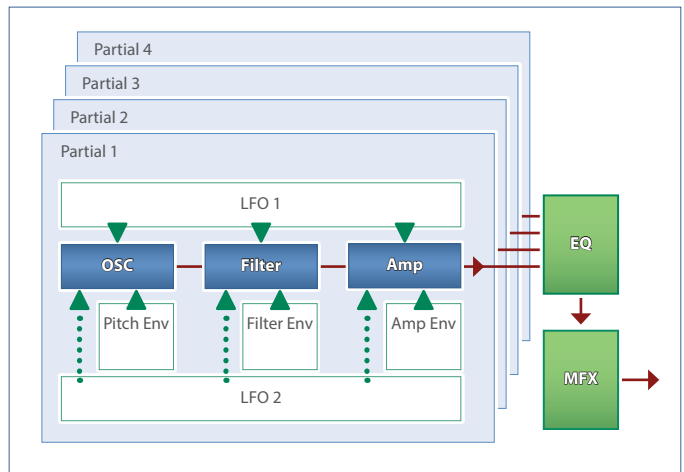
# Detailed Sound Editing

## How a Tone Is Constructed

A tone consists of four (Partial 1-4) sets of OSC, Filter, AMP, LFO x 2, and EQ settings, together with multi-effect (MFX) settings.

You can create sounds by combining the four partials.

Each partial can be turned on/off, allowing you to select which partials produce sound.



### OSC (oscillator)

This selects the waveform that is the basis of the sound, and specifies how its pitch will change.

### Filter

This modifies the frequency components of the sound.

### Amp (amplifier)

This creates changes in volume and pan.



### LFO (Low Frequency Oscillator)

LFO stands for Low Frequency Oscillator, and is an oscillator with a very slow cycle. It can output waveforms such as sine wave, triangle wave, square wave, or sawtooth wave.

By using the LFO to modulate another audio signal, you can create effects such as vibrato or tremolo.

### PARTIAL EDIT Screen

Here you can make settings for each partial.

1. In the TONE EDIT screen, select an icon such as OSC or FILTER, and then press the [ENTER] button.

The PARTIAL EDIT screen appears.

Select the general category of parameter that you want to edit.

Select the category of parameter that you want to edit.

Use the [C1]–[C4] knobs to edit the parameters that are shown for each knob.

If you want to edit multiple partials simultaneously, press the [C1 (partial 1)], [C2 (partial 2)], [C3 (partial 3)], or [C4 (partial 4)] knob. Partial that can be edited are highlighted.

By holding down the [SHIFT] button and pressing a [C1]–[C4] knob, you can turn the corresponding partial on/off.

For details, refer to “Parameter List” (p. 61).

### UTILITY window

Here you can copy or initialize a partial. You can also initialize a tone.

1. Press the [FUNC] button.

The UTILITY screen appears.

2. Use the cursor [<] [>] buttons to switch menu items.

Menu	Explanation
PARTIAL COPY	Copies a partial. Use the [C1]–[C4] knobs to make settings, and press the [ENTER] button to execute.
PARTIAL INITIALIZE	Initializes a partial. Use the [C1]–[C4] knobs to make settings, and press the [ENTER] button to execute. The contents of INITIAL TONE are assigned.
TONE INITIALIZE	Initializes the tone. Press the [ENTER] button to execute. * The currently-edited sound is deleted.

### COMMON SETTING Screen

Here you can make settings for the tone.

1. In the TONE EDIT screen, select the CTRL, STRUCT, or MIX icon, and then press the [ENTER] button.

The TONE COMMON SETTING screen appears.

Select the category of parameter that you want to edit.  
Use the cursor buttons or the [C1] [C2] knobs to switch categories.

Use the [C3] knob to select the parameter that you want to edit, and use the [C4] knob to edit the value.  
You can also use the cursor buttons to select a parameter.

For details, refer to “Parameter List” (p. 61).



# Editing the DRUM Track

A drum track is a track that provides PCM synthesis and sample playback functionality.

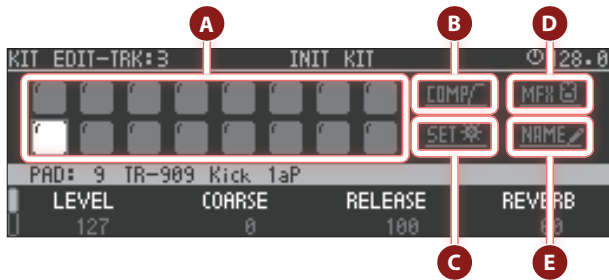
## Simple Sound Editing

### 1. In the home screen, use the cursor buttons to select the drum track that you want to edit.

\* If the sound source is Clip, select the clip that you want to edit.

### 2. Hold down the [SHIFT] button and press the [SOUND] button.

The KIT EDIT screen appears.



### 3. Use the cursor buttons to select an icon.

### 4. Use the [C1]–[C4] knobs to edit.

You can also select an icon and press the [ENTER] button to edit.

#### MEMO

Press the [FUNC] button to access the second page.

#### A PAD

You can use the [C1]–[C4] knobs to perform simple editing for the selected pad.

Press the [ENTER] button to open the edit menu.

Parameter	Value	Explanation
LEVEL	0–127	Adjusts the volume.
COARSE	-24–+24	Adjusts the pitch in semitone units.
RELEASE	0–1023	Specifies the time over which the sound disappears after the key is released. Larger values produce a longer decay, and shorter values produce a crisper sound.
REVERB	0–127	Specifies the amount sent to TOTAL FX REVERB.
FINE	-50cen–+50cen	Finely adjusts the pitch in one-cent units.
PAN	L64–63R	Specifies the pan of the sound.
ENV MODE	NO-SUS, SUSTAIN	Specifies the behavior when a pad is pressed. <b>NO-SUS:</b> The volume immediately starts decaying when you press the pad. <b>SUSTAIN:</b> The volume starts decaying when you release the pad.
DELAY	0–127	Specifies the amount sent to TOTAL FX DELAY.

With a pad selected, press the [ENTER] button to access the pad edit menu. Here you can exchange or edit sounds.

You can use the [C1]–[C4] knobs to perform simple editing of the sound.

#### B COMP (DRUM+COMP track only)

If you select “COMP” and then press the [ENTER] button, the compressor setting screen appears.

Six channels of compressors can be applied to one (and only one) of the drum tracks.

When you create the track, specify whether it will have these compressors.

If you use this track, the maximum number of Looper tracks is reduced from six to four.

#### C SET

When you select “SET” and press the [ENTER] button, the setting screen for the part parameters and drum kit appears.

You can use the [C1]–[C4] knobs to edit the reverb, delay, pan, and level for the total effect.

Parameter	Value	Explanation
LEVEL (MIX LEVEL)	0–127	Specifies the volume of the clip.
PAN	L64–63R	Specifies the pan of the sound.
>REVERB (Reverb Send)	0–127	Specifies the amount sent to TOTAL FX REVERB.
>DELAY (Delay Send)	0–127	Specifies the amount sent to TOTAL FX DELAY.

#### D MFX

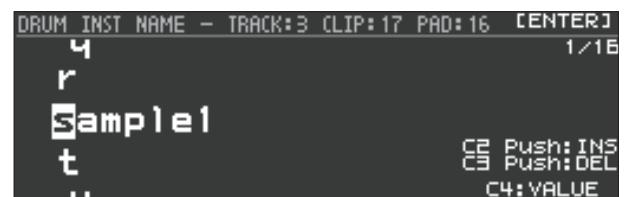
Here you can edit the effect settings.

Parameter	Value	Explanation
SWITCH	OFF, ON	Turns the effect on/off.
TYPE		Switches the effect type.
Effect parameters	Refer to the MFX/IFX parameters.	The parameters shown depend on the selected effect type.

For details, refer to “Parameter List” (p. 61).

#### E NAME

Press the [ENTER] button to access the drum kit (KIT) name editing screen.



Operating the Unit	Explanation
Cursor [←] [→] buttons	Selects the character to edit.
[C2] knob	Switches between uppercase, lowercase, numerals, and symbols.
[C3] knob [C4] knob, [VALUE] knob	Change the character.
Press the [C2] knob	Inserts a space.
Press the [C3] knob	Deletes a character.

## Pad Settings (PAD MENU)

Here you can assign an instrument to each pad.  
In PAD MENU you can change the instrument, and load or edit samples.

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

The KIT EDIT screen appears.



2. Use the cursor buttons to select the pad that you want to edit, and then press the [ENTER] button.

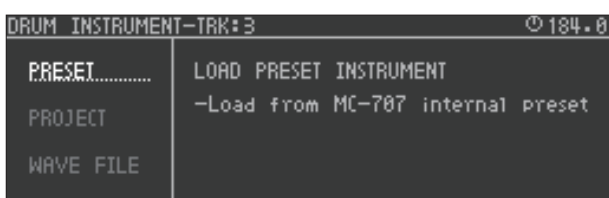
The DRUM INST MENU screen appears.



## Changing the Pad's Sound (Instrument) (INST SELECT)

1. Use the cursor buttons to select "INST SELECT," and then press the [ENTER] button.

The DRUM INSTRUMENT browser appears.



In the DRUM INSTRUMENT browser, instruments or sample files can be loaded into a kit.

- **PRESET:** Load an instrument or kit from the MC-707's presets
- **PROJECT:** Load an instrument from a project saved on the SD card
- **WAVE FILE:** Load a sample file from the SD card

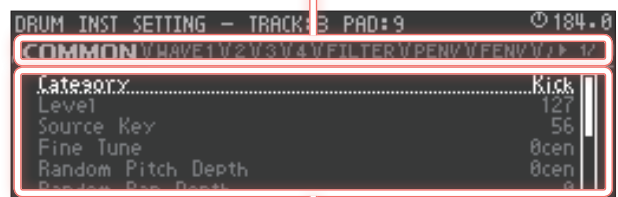
## Editing an Instrument (INST EDIT)

Here's how to edit the instrument that's loaded into the pad.

1. Use the cursor buttons to select "INST EDIT," and then press the [ENTER] button.

The DRUM INST SETTING screen appears.

Select the category of parameter that you want to edit.  
Use the cursor buttons or the [C1] [C2] knobs to switch categories.



Use the cursor buttons or the [C3] knob to select the parameter that you want to edit, and use the [C4] knob to edit the value.  
➔ "Parameter List" (p. 61)

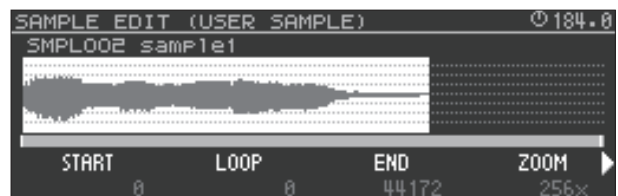
\* If sample is selected as the WAVE GROUP TYPE, you can move the cursor to Wave Number and press the [ENTER] button to edit the waveform.

## Editing a Sample (SAMPLE EDIT)

Here's how to edit the user sample that's loaded.

1. Use the cursor buttons to select "SAMPLE EDIT," and then press the [ENTER] button.

The SAMPLE EDIT screen appears.



Parameter	Value	Explanation
START	0-8388607	Specifies the position at which playback starts.
LOOP	0-8388607	Specifies the loop position.
END	0-8388607	Specifies the position at which playback ends.
ZOOM	x65536-x1	Zooms the waveform display in or out.
MODE	FWD, ONE-SHOT, REV, REV-ONE	Specifies the playback method.
LEVEL	0-127	Adjusts the volume.
TUNE	-50.0 cent-50.0 cent	Finely adjusts the pitch.
gain	0db, +6db, +12db	Specifies the sample's approximate volume.
Original Key	C-1-G9	Registers the sample's pitch.

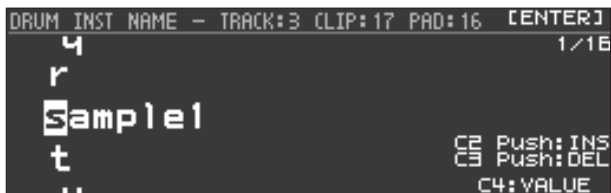
- \* The waveform specified as the instrument's WMT1 is edited.
- \* If you want to edit the WMT2-3 waveform, move the cursor to WAVE NUMBER in the INST EDIT screen, and press the [ENTER] button.

## Editing the Instrument Name (INST NAME EDIT)

The DRUM INST NAME screen appears, allowing you to edit the instrument name.

1. Use the cursor buttons to select “INST NAME EDIT,” and then press the [ENTER] button.

The DRUM INST NAME screen appears.



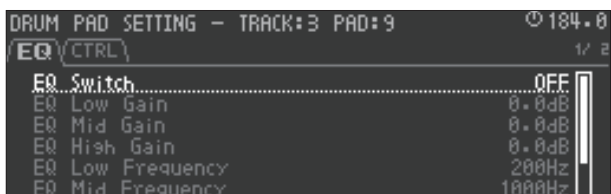
Operating the Unit	Explanation
Cursor [<] [>] buttons	Selects the character.
[C2] knob	Switches between uppercase, lowercase, numerals, and symbols.
[C3] knob [C4] knob, [VALUE] knob	Change the character.
Press the [C2] knob	Inserts a space.
Press the [C3] knob	Deletes a character.

## Pad Editing (PAD EDIT)

Here's how to edit pad settings.

1. Use the cursor buttons to select “PAD EDIT,” and then press the [ENTER] button.

The DRUM PAD SETTING screen appears.



\* Pad settings are maintained even if you change instruments.

### EQ tab

Here you can make EQ settings for the pad.

For details, refer to Drum Kit Tone Parameters (Drum), “PAD EQ” (p. 75).

### CTRL tab

Here you can edit the control parameters.

For details, refer to Drum Kit Tone Parameters (Drum), “PAD CTRL” (p. 75).

## Initializing an Instrument (INIT INST)

Here's how to initialize the instrument that's loaded into the pad.

1. Use the cursor buttons to select “INIT INST,” and then press the [ENTER] button.

A confirmation message appears.

2. Use the cursor [<] [>] buttons to select “OK,” and then press the [ENTER] button.

The instrument is initialized.

### NOTE

The instrument being edited is deleted.

# LOOPER Track

This is a track that can play back audio files, or record and play back audio from the input of a track, EXT IN, or a USB-connected computer.

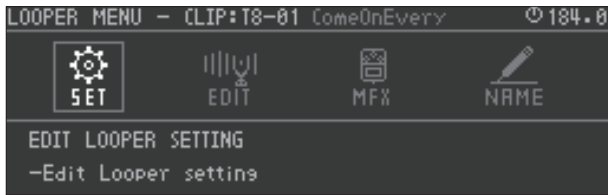
## To load a sample into a looper track

- “Selecting Sounds (Sound Browser)” (p. 26)
- “Importing Clips (Clip Browser)” (p. 25)

## Making Looper Settings

### 1. Hold down the [SHIFT] button and press the [SOUND] button.

The LOOPER MENU screen appears.



## Playback Settings

Here's how to make playback-related settings for a Looper track.

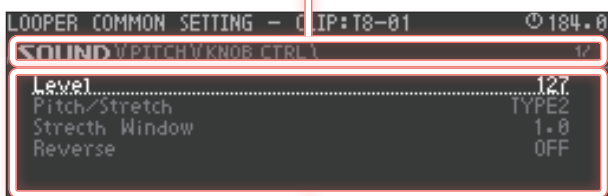
### 1. Hold down the [SHIFT] button and press the [SOUND] button.

The LOOPER MENU screen appears.

### 2. Use the cursor buttons to select “SET (EDIT LOOPER SETTING),” and then press the [ENTER] button.

The LOOPER COMMON SETTING screen appears.

Select the category of the parameter that you want to edit  
Use the cursor buttons or the [C1] [C2] knobs to switch categories.



Use the cursor buttons or the [C3] knob to select the parameter that you want to edit, and use the [C4] knob to edit the value.

## SOUND tab

Parameter	Value	Explanation
Level	0–127	Specifies the volume at which the sample plays.
Pitch/Stretch	OFF, TYPE1, TYPE2	<p>Selects the pitch shift / time stretch method.</p> <p><b>OFF:</b> Time stretch is not used; the sample is lengthened by changing its pitch.</p> <p>* If OFF is selected, the settings in the PITCH tab are ignored (pitch shift is not applied).</p> <p><b>TYPE1:</b> Time stretch optimized for melodic material is applied.</p> <p><b>TYPE2:</b> Time stretch optimized for rhythmic material is applied.</p>

Parameter	Value	Explanation
Stretch Window	1.0, 0.75, 0.5, 0.375, 0.25	<p>This parameter applies to time stretch. Higher values improve the audio quality. If an unnatural impression results when pitch shift or time stretch is used to create a large amount of change, lowering this value might improve the result.</p>
Reverse	OFF, ON	<p><b>OFF:</b> The sample plays forward.</p> <p><b>ON:</b> The sample plays backward.</p>

## PITCH tab

Parameter	Value	Explanation
Pitch Chromatic	-24+24	<p>Specifies the pitch in semitone steps (maximum ±2 octaves). This setting can also be made in PAD MODE NOTE.</p>
Pitch Fine	-100+100	Finely adjusts the pitch.
Pitch Shift	0%–400%	Smoothly modifies the pitch in a wide range.

## KNOB CTRL tab

Parameter	Value	Explanation
Level	0–127	Specifies the volume.
Pan (CC#10)	L64–63R	Specifies the pan of the sound.
Delay Send Level (CC#93)	0–127	Adjusts the amount sent to the total effect delay.
Reverb Send Level (CC#91)	0–127	Adjusts the amount sent to the total effect reverb.

## Editing the Sample's Waveform

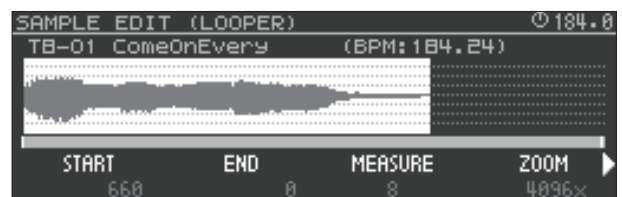
(Playback Region and Time Stretch Settings)

Here you can specify the playback region of the sample, and make settings for time stretch.

### MEMO

#### About time stretch

Looper tracks support time stretch, so that a sample's playback speed can match the BPM without changing its pitch.



Use the cursor [<] [>] buttons to switch parameters.

Parameter	Value	Explanation
START	0–8388607	Specifies the position at which the sample starts playing.
END	0–8388607	Specifies the position at which the sample stop playing.
MEASURE	1–8	<p>Specifies the number of measures that the sample plays.</p> <p>If STRETCH is specified as ENDPOINT, the playback speed changes to match the number of measures.</p>
ZOOM	1x–65536x	Zooms the waveform in or out.
SCALE	1/8, 1/16, 1/8T	Specifies the step resolution on which MEASURE is based.
LENGTH	1–16	Specifies the number of steps on which MEASURE is based.

Parameter	Value	Explanation
STRETCH	END POINT, ORG BPM	Specifies how to set the tempo that is the reference for time stretch. <b>END POINT:</b> The tempo (BPM) is automatically specified according to the END POINT, START POINT, MEASURE, and SCALE. <b>ORG BPM:</b> The tempo (BPM) is specified manually. The upper right of the screen indicates <b>"BPM: value."</b> If BPM is 512 or higher, time stretch will not occur correctly.
ORG BPM	20.00–250.00	If STRETCH is set to ORG BPM, this specifies the BPM of the sample before it was stretched.

## MFX Editing

Use the [C2] knob to select the effect type, and press the [C2] knob to turn the effect on/off. To turn the effect on, add a "✓" symbol to the check box located beside the effect name.



Use the cursor buttons or the [C3] knob to select the parameter that you want to edit, and use the [C4] knob to edit the value.  
➔ "MFX/IFX Parameters" (p. 84)

Parameter	Value/Explanation
MFX Type	Turns MFX on/off, and selects the type of MFX that is used. To turn MFX on, add a "✓" symbol to the check box located beside the effect name. ➔ "MFX/IFX Parameters" (p. 84)
MFX parameters	Edit the parameters of the selected MFX. ➔ "MFX/IFX Parameters" (p. 84)
Level	Specifies the MFX output volume. Specifies the MFX depth when applying MFX, or specifies the volume of the original sound when not applying MFX. 0–127
Dly Send	Specifies the level of the signal sent to delay. 0–127
Rev Send	Specifies the level of the signal sent to reverb. 0–127

## Editing the Sample Name

The LOOPER NAME screen appears, allowing you to edit the sample name.

1. Use the cursor buttons to select **"LOOPER NAME EDIT,"** and then press the [ENTER] button.

The LOOPER NAME screen appears.



Operating the Unit	Explanation
Cursor [←] [→] buttons	Selects the character to edit.
[C2] knob	Switches between uppercase, lowercase, numerals, and symbols.
[C3] knob [C4] knob, [VALUE] knob	Change the character.
Press the [C2] knob	Inserts a space.
Press the [C3] knob	Deletes a character.

\* The edited name is shown in the content browser.

# Editing a Clip's Settings

Here's how to specify a clip's length and playback method.

## Tone Tracks or Drum Tracks

### Making sequencer settings

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

The CLIP SEQ SETTING screen appears.



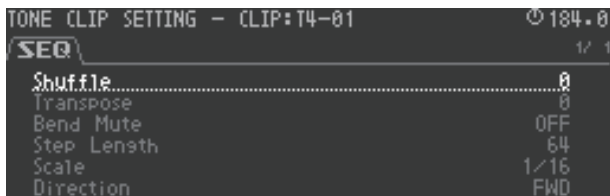
2. Use the **[C1]–[C4]** knobs to make settings.

Parameter	Value	Explanation
STEP LEN	1–128	Specifies the length of the clip.
SCALE	1/8, 1/16, 1/32, 1/4T, 1/8T, 1/16T,	Specifies the step resolution. <b>1/8:</b> eighth notes <b>1/16:</b> sixteenth notes <b>1/32:</b> thirty-second notes <b>1/4T:</b> quarter note triplets <b>1/8T:</b> eighth note triplets <b>1/16T:</b> sixteenth note triplets
DIRECTION	FWD, REV, FWD+REV, INV, RND	Specifies how the sequence plays. <b>FWD:</b> Play forward from the first step. <b>REV:</b> Play backward from the last step. <b>FWD+REV:</b> Play forward from the first step, and after reaching the last step, play backward. <b>INV:</b> Play even numbers and odd numbers inverted. <b>RND:</b> Play randomly.
SHUFFLE	-50–+50	Adjusts the strength of shuffle (bounce) for the playback timing. This can be set individually for each clip.

### Editing the settings of a clip

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

The clip setting screen appears.



2. Use the cursor **[Λ]** **[V]** buttons to select a parameter, and use the **[C4]** knob to edit the value.

Parameter	Value	Explanation
Shuffle	-50–+50	Adjusts the strength of shuffle (bounce) for the playback timing. This can be set individually for each clip.
Transpose	-12–+12	Shifts the playback transposition (Tone only).
Bend Mute	OFF, MUTE	Disables bend (Tone only).
Step Length	1–128	Specifies the length of the clip.

Parameter	Value	Explanation
Scale	1/8, 1/16, 1/32, 1/4T, 1/8T, 1/16T,	Specifies the step resolution. <b>1/8:</b> eighth notes <b>1/16:</b> sixteenth notes <b>1/32:</b> thirty-second notes <b>1/4T:</b> quarter note triplets <b>1/8T:</b> eighth note triplets <b>1/16T:</b> sixteenth notes triplets
Direction	FWD, REV, FWD+REV, INV, RND	Specifies how the sequence plays. <b>FWD:</b> Play forward from the first step. <b>REV:</b> Play backward from the last step. <b>FWD+REV:</b> Play forward from the first step, and after reaching the last step, play backward. <b>INV:</b> Play even numbers and odd numbers inverted. <b>RND:</b> Play randomly.

## LOOPER

### Specifying the playback method

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

The CLIP SEQ SETTING screen appears.

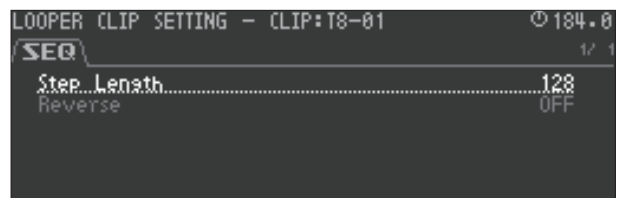


Parameter	Value	Explanation
STEP LEN	1–128	Specifies the length of the clip. * The same setting can also be made in the CLIP settings screen ( <b>[SHIFT]</b> + <b>[CLIP]</b> ).
REVERSE	OFF, ON	Specifies the sample playback method. * The same setting can also be made in the CLIP settings screen ( <b>[SHIFT]</b> + <b>[CLIP]</b> ).

### Editing the settings of a clip

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

The LOOPER CLIP SETTING screen appears.



2. Use the cursor **[Λ]** **[V]** buttons to select a parameter, and use the **[C4]** knob to edit the value.

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

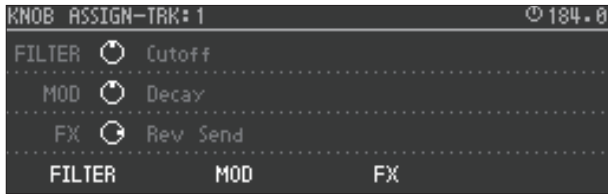
# Assigning Parameters to the Knobs (KNOB ASSIGN)

You can assign the desired parameters to each track's [FILTER], [MOD], and [FX] knobs, and use the knobs to control those parameters.

## Operating the Unit

### 1. Press the [KNOB ASSIGN] button.

The KNOB ASSIGN screen appears.



Here you can make knob assignments for the current track.

### 2. Use the [C1]–[C3] knobs to make the settings.

Knob	Explanation
C1	Specifies the [FILTER] knob assignment.
C2	Specifies the [MOD] knob assignment.
C3	Specifies the [FX] knob assignment.

## Parameter list

Parameter	Explanation
No Assign	No assignment.
Level	Adjusts volume.
Pan	Adjusts pan.
Coarse Tune (Tone, Drum only)	Adjusts the pitch in units of one semitone.
Fine Tune (Tone, Drum only)	Finely adjusts the pitch in units of one cent.
Portament (Tone only)	Specifies whether portamento is applied. Specify "ON" to apply portamento, or "OFF" if not.
Porta Time (Tone only)	Specifies the time over which the pitch changes when using portamento. Larger values lengthen the time over which the pitch moves to the next note.
Cutoff (Tone, Drum only)	Adjusts the openness of the filter. Larger values make the sound brighter, and smaller values make the sound darker.
Resonance (Tone, Drum only)	Boosts the region of the sound near the cutoff frequency, adding a distinctive character to the sound. Excessively raising this value may cause oscillation, distorting the sound. Larger values produce a stronger character, and smaller values weaken the character.
Attack (Tone, Drum only)	Specifies the time from when the key is pressed until the sound reaches the maximum. Larger values make the attack more gradual, and smaller values make the attack sharper.
Decay (Tone, Drum only)	Specifies the time from when the attack is completed until the volume decays. Larger values lengthen the time over which the volume decays, and smaller values shorten the time.
Release (Tone, Drum only)	Specifies the time from when the key is released until the sound becomes inaudible. Larger values produce a longer decay, and smaller values make the sound crisper.
Vib Rate (Tone only)	Adjusts the vibrato rate (the speed at which pitch is modulated). Larger values modulate the pitch more rapidly, and smaller values modulate it more slowly.
Vib Depth (Tone only)	Adjusts the vibrato depth (the depth at which pitch is modulated). Larger values modulate the pitch more widely, and smaller values modulate the pitch less widely.
Vib Delay (Tone only)	Adjusts the time until vibrato (pitch modulation) starts to be applied. Larger values lengthen the time until vibrato starts to be applied, and smaller values shorten the time.
Oct Shift (Tone only)	Shifts the pitch in units of one octave.

Parameter	Explanation
Delay Send	Specifies the send level of the total effect to the delay.
Reverb Send	Specifies the send level of the total effect to the reverb.
Pitch Bend (Tone only)	Uses the FILTER, MOD, or FX knob as pitch bender.
Pitch Chrom (Looper only)	Specifies the pitch in semitone steps (maximum $\pm 2$ octaves).
Pitch Fine (Looper only)	Finely adjusts the pitch.
Pitch Shift (Looper only)	Smoothly modifies the pitch in a wide range.
Reverse (Looper only)	<b>OFF:</b> The sample plays forward. <b>ON:</b> The sample plays backward.
SYS-Ctrl1–4	Connects to a parameter specified by MATRIX CONTROL in SOUND EDIT. ➔ For details, refer to "MATRIX" (p. 42).

## Returning Parameter Values to the Default Value

### 1. Hold down the [CLEAR] button and press a [C1]–[C3] knob.

The assigned parameter value returns to its default value.

# Tempo Settings

## Master Clock

Clip switching and play/stop occurs at intervals of the master clock.

This means that the performances of each track can be synchronized regardless of the timing of operation.

The status of the master clock is shown by the circle displayed in the upper right of the screen. When the master clock indication points to 12 o'clock (straight up), the clip is switched or the play/stop operation is executed.

The cycle of the master clock is specified by "**SCALE**" and "**STEP LENGTH**."

## Master Clock Settings

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



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

## Tap Tempo

Holding down the [SHIFT] button and pressing the [ENTER] button three or more times.

The tempo is specified as average timing at which you press the button.



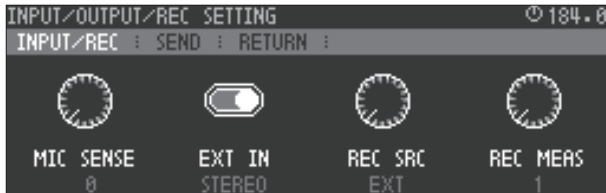
# Input and Output Settings

## Input and Recording Settings (INPUT/REC)

Here's how to make external input settings, and settings for looper recording.

### 1. Hold down the [SHIFT] button and press the [INPUT] button.

The INPUT/OUTPUT/REC SETTING screen appears.

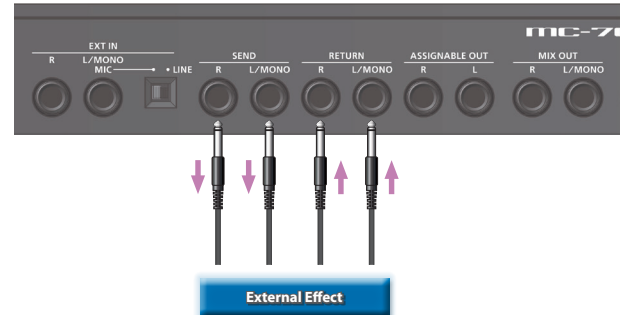


Parameter	Value	Explanation
MIC SENSE	0-7	Specifies the MIC IN gain. * This is valid when the rear panel input switch is set to MIC IN.
EXT IN	MONO, STEREO	Switches the EXT IN input between mono or stereo.
REC SRC	EXT, PC, TRK1-8, MIXOUT	Specifies the recording source for the Looper. <b>EXT:</b> Record from the EXT IN jacks. <b>PC:</b> Record from the PC IN port of USB audio. <b>TRK 1-8:</b> Record from a track. <b>MIXOUT:</b> Record the audio output of the entire MC-707. * If the USB Mix Select setting is POST T-FX, the audio input from the USB MIX OUT port is not recorded.
REC MEAS	1-8	Specifies the clip length (number of measures) that will be recorded.

## Using an External Effect (SEND/RETURN Jacks)

This allows you to connect an external effects device to the SEND/RETURN jacks and use it as part of the MC-707's effects.

### 1. Connect your effect unit to the SEND/RETURN jacks.



### 2. Hold down the [SHIFT] button and press the [INPUT] button.

The input/output settings are displayed.

### 3. Use the cursor buttons to select the SEND/RETURN tabs, and make settings.

Parameter	Value	Explanation
<b>SEND tab</b>		
POS	OFF, PC, TRACK1-8, DELAY, REVERB, SCATTER, MIXOUT	Specifies the position at which SEND/RETURN is used.
LEVEL	0-255	Specifies the SEND output level.
SEND	MONO, STEREO	Switches the SEND output between mono and stereo.
<b>RETURN tab</b>		
POS	OFF, PC, TRACK1-8, DELAY, REVERB, SCATTER, MIXOUT	Specifies the position at which SEND/RETURN is used. This is the same setting as in the SEND tab.
LEVEL	0-255	Specifies the RETURN input level.
RETURN	MONO, STEREO	Switches the RETURN input between mono and stereo.

## Individually Outputting Each Track (ASSIGNABLE OUT)

(ASSIGNABLE OUT)

A specified track can be output from the ASSIGNABLE OUT jacks.

The ASSIGNABLE OUT setting is made in the track settings.

### 1. Hold down the [SHIFT] button and press the [SEL] button.

➔ For details, refer to "Making Track Settings" (p. 20).

## System Settings (SET)

In MENU, choose SET and make settings to specify the operation of the pads, MIDI, and knobs.

These settings are saved in the MC-707 unit.

### 1. Hold down the [SHIFT] button and press the [KNOB ASSIGN] button.

The UTILITY MENU screen appears.



### 2. Use the cursor [←] [→] buttons to select "SET," and then press the [ENTER] button.

The SYSTEM SETTING screen appears.



### 3. Use the cursor buttons to select the tabs, and make settings.

#### CTRL tab

Here you can make settings for the pads and knobs.

Parameter	Value	Explanation
Knob Mode	DIRECT, CATCH	<b>DIRECT:</b> When a knob is moved, control data of the corresponding position is always output. <b>CATCH:</b> Control data is output after the knob passes through the current value of the parameter.
Pad Curve Type	LINEAR, EXP, LOG, FIX10-127	Specifies how the volume changes in response to the force of your strike on the pad. <b>LINEAR:</b> This is the normal setting. This allows the most natural-feeling relation between strike strength and volume change. <b>EXP:</b> Compared to LINEAR, this produces greater volume change for stronger strikes. <b>LOG:</b> Compared to LINEAR, this produces greater volume change for softer strikes. <b>FIX10-127:</b> Enters a specified fixed value.
Pad Threshold	0-15	Specifies the pad's minimum sensitivity so that a trigger signal is read only if the pad is struck more strongly than a specified level. This can be used to prevent the pads from picking up vibration from the environment.
Pad Trigger Sensitivity	10-200	Adjusts the sensitivity of the pads to repeated strikes. With lower values, the pads will accept repeated strikes at a shorter time interval. Increase this value if you don't want repeated strikes to be accepted inadvertently.
USB Mix Select	Pre T-FX, Post T-FX	Specifies whether sound that is input via the USB-connected MIX OUT port is input before or after TOTAL FX. ➔ "Block Diagram" (p. 121)

Parameter	Value	Explanation
Load Project	LAST, INIT	<b>LAST:</b> At startup, the project that was last saved will be loaded. <b>INIT:</b> At startup, a project will not be loaded. A new project will be created.

#### MIDI tab

Parameter	Value	Explanation
MIDI Sync	AUTO, INT, MIDI, USB	Specifies the tempo source. If this is "AUTO," the tempo automatically synchronizes to MIDI clock if MIDI clock is being input via the MIDI IN connector or the USB port. If this is "INT," the tempo specified on the MC-707 is used.
MIDI Sync Out1 MIDI Sync Out2	OFF, ON	Specifies whether clock, start, and stop messages are transmitted (ON) or are not transmitted (OFF) to the devices connected to the corresponding MIDI port.
MIDI Sync Out USB	OFF, ON	Specifies whether clock, start, and stop messages are transmitted (ON) or are not transmitted (OFF) to the USB-connected device.
RX Start Stop	OFF, ON	When synchronized to external MIDI clock, this setting specifies whether the step sequencer's start/stop is controlled from the device connected to the corresponding MIDI port (ON) or is not controlled (OFF).
RX Start Stop USB	OFF, ON	When synchronized to external MIDI clock, this setting specifies whether step sequencer's start/stop is controlled from the USB-connected device (ON) or is not controlled (OFF).
Track Channel 1-8	CH1-CH16	Specifies the MIDI channel of each track.
Device ID	17-32	When transmitting and receiving system exclusive messages, the device ID numbers of both devices must match.
Soft Through 1 Soft Through 2	OFF, ON	If this is ON, MIDI messages that are input from the MIDI IN connector are re-transmitted without change from the MIDI OUT connector.
USB-MIDI Thru 1 USB-MIDI Thru 2	OFF, ON	Specifies whether MIDI messages received at the USB port or MIDI IN port are retransmitted without change from the MIDI OUT connector and USB port (ON) or not (OFF). If this is ON, MIDI messages received at the USB port are sent to the internal sound engine and to the MIDI OUT connector, and MIDI messages received at the MIDI IN connector are sent together with messages from the internal sound engine to the USB port.

#### DISPLAY tab

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

## Initializing a New SD Card (FORMAT)

1. Hold down the [SHIFT] button and press the [KNOB ASSIGN] button.

The UTILITY MENU screen appears.



2. Use the cursor [<] [>] buttons to select "FORMAT," and then press the [ENTER] button.

A confirmation message appears.



3. Use the cursor [<] [>] buttons to select "OK," and then press the [ENTER] button.

The SD card is initialized.

If you decide to cancel, use the cursor [<] [>] buttons to select "CANCEL," and then press the [ENTER] button.

## Returning to the Factory Settings (FACTORY RESET)

(FACTORY RESET)

This returns the system settings to their factory-set state.

### NOTE

If necessary, be sure to save the project before you execute FACTORY RESET.

1. Hold down the [SHIFT] button and press the [KNOB ASSIGN] button.

The UTILITY MENU screen appears.



2. Use the cursor [<] [>] buttons to select "FACTORY RESET," and then press the [ENTER] button.

A confirmation message appears.



3. Use the cursor [<] [>] buttons to select "OK," and then press the [ENTER] button.

The system settings return to their factory-set state.

If you decide to cancel, use the cursor [<] [>] buttons to select "CANCEL," and then press the [ENTER] button.

4. As directed in the screen, turn the power off and then on again.

## Optimizing the Internal Memory (LOOPER OPTIMIZE)

(LOOPER OPTIMIZE)

As samples are loaded into the looper and then deleted, the free space in memory can become fragmented, so that the available space cannot be used efficiently.

By using Looper Optimize, you can optimize the internal memory usage and increase the storage that is available for recording.

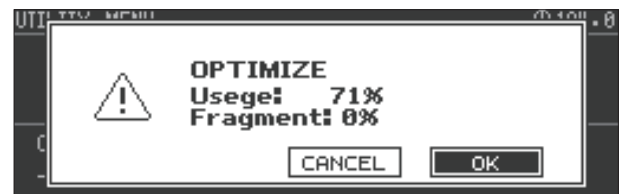
1. Hold down the [SHIFT] button and press the [KNOB ASSIGN] button.

The UTILITY MENU screen appears.



2. Use the cursor [<] [>] buttons to select "LOOPER OPTIMIZE," and then press the [ENTER] button.

A confirmation message appears.



**Usage:** The amount of occupied storage space.

**Fragment:** The proportion that is fragmented. Higher values mean that memory usage is less efficient, so that you can expect an improvement in recordable time by executing Looper Optimize.

\* Optimization is also performed when a project is loaded.

3. Use the cursor [<] [>] buttons to select "OK," and then press the [ENTER] button.

Memory optimization is executed.

If you decide to cancel, use the cursor [<] [>] buttons to select "CANCEL," and then press the [ENTER] button.

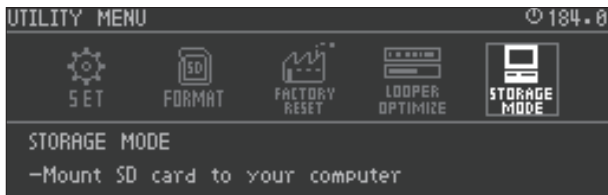
## Using a Connected Computer to Manage the SD Card

By USB-connecting the MC-707 in Storage mode to your computer, you can use the computer to manage the contents of the SD card in the MC-707.

\* Other operations cannot be performed while in Storage mode.

1. **Make sure that the USB cable is not inserted in the MC-707.**
2. **Hold down the [SHIFT] button and press the [KNOB ASSIGN] button.**

The UTILITY MENU screen appears.



3. **Use the cursor [<] [>] buttons to select "STORAGE MODE," and then press the [ENTER] button.**

The MC-707 is now in Storage mode.



4. **Insert the USB cable, and connect it to your computer.**
5. **Before disconnecting, use your computer to perform the appropriate operation for safely removing the external device.**

# List of Shortcut Keys

## Switching Screens and Modes

Operation	Operation	Operation
To access the quantize edit screen		Press the [QUANTIZE] button.
To access the sound edit screen		Press the [SOUND] button.
To access the UTILITY screen		Press the [KNOB ASSIGN] button.
To access the master clock setting screen		Press the [TEMPO] button.
To access the input/output and recording settings screen		Press the [INPUT] button.
To access the project save screen		Press the [FUNC] button.
To access the MOTION ERASE screen		Press the MOTION [ON] button.
To switch to LAST STEP mode		Press the MOTION [REC] button.
To recall SCENE 5		Press the SCENE [1] button.
To recall SCENE 6	Hold down the [SHIFT] button and	Press the SCENE [2] button.
To recall SCENE 7		Press the SCENE [3] button.
To recall SCENE 8		Press the SCENE [4] button.
To edit PAD MODE "CLIP"		Press the PAD MODE [CLIP] button.
To edit PAD MODE "NOTE"		Press the PAD MODE [NOTE] button.
To edit PAD MODE "CHORD"		Press the PAD MODE [CHORD] button.
To edit PAD MODE "SCATTER"		Press the PAD MODE [SCATTER] button.
To edit the total effect Reverb		Press the [REVERB] button.
To edit the total effect Delay	Press the [DELAY] button.	
To edit the total effect Multi-Effect	Press the [MULTI] button. Select the MFX tab.	
To edit the total effect Comp/EQ	Press the [MULTI] button. Select the COMP tab or EQ tab.	
To access the clip setting screen	In the home screen, select the clip for which you want to make settings, then hold down the [SHIFT] button and	Press the [CLIP] button (below the [C2] knob).
To access the clip sequence setting screen		Press the MEASURE [<] or [>] button.

## Adjusting the Mix Sound

Operation	Operation	Operation
To adjust the volume of the sound		Turn the [C1] knob.
To adjust the pan of the sound	Hold down the [SEL] button of the corresponding track and	Turn the [C2] knob.
To adjust the delay send of the sound		Turn the [C3] knob.
To adjust the reverb send of the sound		Turn the [C4] knob.

## MOTION

Operation	Operation	Operation
To delete a knob's motion	Hold down the MOTION [ON] button and	Operate the [FILTER] [MOD] [FX] knob of the corresponding track.
To punch-in motion	Hold down the MOTION [REC] button and	

## Phrase Editing

Operation	Operation	Operation
To step-record (Tone track only)		Hold down the [REC] button and press the [STEP] button.
To input Motion in a step	When in Note mode,	Hold down the [STEP] button, and operate the [FILTER] [MOD] [FX] knobs of the corresponding track.
To mute the drum part (for each clip)		Hold down the PAD MODE [MUTE] button, and press a pad.
To enter weak drum beats		Hold down the pad, and press the [STEP] button.
To clear the phrase from a clip	Hold down the [CLEAR] button, and	Press the [SEL] button of the corresponding track.
To clear the phrase from a drum part		Press a pad.
To duplicate a phrase	When the CLIP SEQ SETTING screen (p. 50) displayed,	Hold down the [FUNC] button and press the MEASURE [>] button.

## Performance

Operation	Operation	
To audition a track in your headphones (CUE)	When in MUTE mode	Hold down the PAD MODE [MUTE] button and press a pad. * The PAD MODE changes to CUE mode.
To mute a track	Hold down the PAD MODE [MUTE] button and	Press the [SEL] button of the corresponding track.
To mute a drum part (for each track)	Hold down the [SEL] button of the corresponding track, and	Press a pad.
To switch parts without sounding the drums	Hold down the PAD MODE [NOTE] button and	
To start/stop each track	Hold down the PAD MODE [CLIP] button and	Press the [SEL] button of the corresponding track.
To forcibly return to the beginning of the pattern during pattern playback	During playback	Hold down the [SHIFT] button and press the [START/STOP] button.
To silence sound that continues after stopping	While stopped	

## Controller Values and Parameter Editing

Operation	Operation	
To specify the parameter operated by the total effect knobs	Hold down the [REVERB], [DELAY], or [MULTI] button that you want to assign, and	Turn the [FX PRM] or [FX DEPTH] knob.
To view the value of a knob		Move the knob.
To change the parameter value more greatly	Hold down the [SHIFT] button and	Turn the [C1] [C2] [C3] [C4] knob or the [VALUE] knob.
To adjust the pad velocity curve	Hold down the PAD MODE [NOTE] button and	Turn the [VALUE] knob.
To specify tap tempo	Hold down the [SHIFT] knob and	Press the [ENTER] button three or more times.
To clear the Scatter pad parameters	When in Scatter mode	Press a pad.
To clear the Scatter Step parameter	Hold down the [CLEAR] button and	Press the [STEP] button.
To jump between effect type categories	When the MFX EDIT screen is displayed	Hold down the [SHIFT] button and turn the [C2] knob.
To move to the same parameter for each band (low, mid, high) of the TOTAL COMP	While the TOTAL COMP EDIT screen is displayed	Hold down the [SHIFT] button and use the <b>cursor [^] [v] buttons</b> .

# Error Message List

Display	Explanation	Action/Explanation
Now Playing!	This operation cannot be executed because playback is occurring.	Stop playback, and then execute.
CLIP NOT EXIST!	The clip that is the target of the operation does not exist. This appears if an empty clip is selected as the target of a copy or edit operation.	Make sure that the target clip is correctly selected.
EMPTY CLIP	The clip that is the target of the operation does not exist.	
EMPTY TRACK	The track that is the target of the operation does not exist. This appears if an empty track is selected as the target of a copy or edit operation.	Make sure that the target track is correctly selected.
CLIP NOT EMPTY	The clip slot that is the target of the operation is already in use. It is possible to simultaneously select the same clip number of all tracks (p. 14) and perform copy and paste, but the paste-destination clip slots must all be empty.	Either select an empty clip slot, or delete clips before executing.
For new loop, delete the existing clip!	When loading a looper clip, this message appears if you attempt to overwrite an existing clip. Looper clips cannot be imported by overwriting an existing clip.	
TRACK NOT EMPTY	The track paste-destination is not empty.	Either select an empty track, or delete the applicable track before executing.
WRONG TRACK TYPE	The copy-source and copy-destination track types are different. You can't copy clips between tracks of different types.	Copy the clip to a track type that is the same as the copy-source.
PLEASE SELECT TRACK	A track is selected for copying, but a track is not selected as the paste-destination.	Select a track and then paste.
PLEASE SELECT LINE	The clip line is selected for copying, but a clip line is not selected as the paste-destination.	Select a clip line and then paste.
PLEASE SELECT CLIP	A clip is selected for copying, but a clip is not selected as the paste-destination.	Select a clip and then paste.
ALREADY USED!	The specified track type is already used. This appears if a drum track with compressors is already in use, and you attempt to create a new drum track with compressors.	Either delete the existing drum track with compressors, or use a conventional drum track.
File Write Error!	Failed to save the project file.	For some reason, the file could not be saved. You might be able to solve this problem by formatting the SD card. Before formatting the SD card, make a backup by saving any important files to your computer.
Can't Write This file name is locked.	Writing is not possible because the file is locked.	You can't save using the same name as a locked project. As described in "Managing Projects" (p. 17), unlock the file and then overwrite it, or save the file with a different name.
Abort. **** is locked file.	The file could not be deleted because it is locked.	A locked project cannot be deleted. If you want to delete the project, unlock it.
Now Playing. Please Stop the Sequencer.	This operation cannot be executed because playback is in progress.	Stop playback and then execute the operation.
Abort! File can't open	The wave file could not be opened.	The file or SD card that you attempted to load might be damaged.
Abort! File format error	The sample file format is not supported by the MC-707.	The MC-707 supports 32–96 kHz, 16-bit and 24-bit (mono/stereo) Wav format files. Use your computer to convert the file format, and try the operation again.
Abort! File read error	The file could not be read for some reason.	If the Wav file format you are attempting to read is not common, there might be cases when the file cannot be read.
Abort! Memory full	The file could not be imported because there is insufficient internal memory in the MC-707.	Use the Sample Bank browser (p. 19) to delete unneeded user samples.
Abort! Not enough contiguous memory	Unable to allocate enough contiguous memory for importing.	It might be that the internal memory has been fragmented. Execute "Optimizing the Internal Memory (LOOPER OPTIMIZE)" (p. 55). If the same error occurs even after optimizing, delete unneeded looper clips from the project.
Abort! Exceed the Max samples count	Import was not possible because it would exceed the maximum number of user samples.	The MC-707 can handle a maximum of 500 user samples. Use the Sample Bank browser (p. 19) to delete unneeded user samples.
Abort! Too short samples	The file could not be imported because the sample is too short.	The length of samples that can be handled by a looper clip is from one second to 60 seconds. Use your computer to edit the Wav file to this length, and execute the operation again.
Abort! Too long samples	The file could not be imported because the sample is too long.	* Depending on the tempo setting, there are cases in which an even shorter or longer sample can be handled.
Format SD CARD Error!	Failed to format the SD card.	Turn off the power, firmly insert the SD card, and then turn the power on again.
NO SD CARD	The SD card is not inserted. Alternatively, it is incompletely inserted.	
SD CARD PROTECTED	The SD card is set to a write-protect state.	Remove the SD card, and change the position of the lock switch on its left side.
TOO MANY LOOPER TRACKS!	The operation could not be executed because the maximum number of looper tracks that can be created has been reached.	Delete unneeded looper tracks, and execute the operation again.
WAVE1 SAMPLE OFF	The sample cannot be edited because a user sample is not assigned to WAVE1 of the instrument being edited.	Make sure that a sample is assigned to the instrument that you're editing, and execute the operation again.
WAVE1 NOT USER SAMPLE	The sample cannot be edited because a user sample is not specified for WAVE1 of the instrument being edited.	Make sure that a sample is assigned to the instrument that you're editing, and execute the operation again.
Memory Full!	The operation could not be executed because there is insufficient looper memory.	Delete unneeded looper clips, and execute the operation again.

# Interoperation with Other Devices

## Synchronizing with a DAW

The MC-707 can transmit and receive MIDI clock (F8) to synchronize its tempo.



## Synchronizing with a TR-8S

The MC-707 can synchronize with a TR-8s by connecting the units via a commercially available MIDI cable.





# Parameter List

## ZEN-Core Tone Parameter (Z-Core)

### SOUND

Parameter	Value	Explanation
Level	0–127	Adjusts the overall volume of the tone
Pan	L64–0–63R	Specifies the pan of the tone. "L64" is far left, "0" is center, and "63R" is far right.
Soft Level Sens	0–100	Specifies the amount of volume change that occurs when you operate the soft pedal (CC#67). This is effective when specified for piano sounds.
Priority	This determines how notes will be managed when the maximum polyphony is exceeded.	
	LAST	The last-played voices will be given priority, and currently sounding notes will be turned off in order, beginning with the first-played note.
	LOUDEST	The voices with the loudest volume will be given priority, and currently sounding notes will be turned off, beginning with the lowest-volume voice.
Analog Feel	0–127	Applies time-varying change to the pitch and volume of the tone that is producing sound, adding a sense of variability. As you increase this value toward the maximum, the variability becomes greater, producing instability.
Mono/Poly	Specifies whether the tone will play polyphonically (POLY) or monophonically (MONO). The "MONO" setting is effective when playing a solo instrument tone such as sax or flute.	
	MONO	Only the last-played note will sound.
	POLY	Two or more notes can be played simultaneously.
Coarse Tune	-48–+48 [semitone]	Adjusts the pitch of the tone's sound up or down in semitone steps (+/-4 octaves).
Fine Tune	-50–+50 [cent]	Adjusts the pitch of the tone's sound up or down in 1-cent steps (+/-50 cents).
Octave Shift	-3–+3	Adjusts the pitch of the tone's sound up or down in units of an octave (+/-3 octaves).
Stretch Tune Depth	This setting allows you to apply "stretched tuning" to the tone (Stretched tuning is a system by which acoustic pianos are normally tuned, causing the lower range to be lower and the higher range to be higher than the mathematical tuning ratios would otherwise dictate). With a setting of "OFF," the tone's tuning will be equal temperament. A setting of "3" will produce the greatest difference in the pitch of the low and high ranges.	
	OFF, 1–3	The diagram shows the pitch change relative to equal temperament that will occur in the low and high ranges. This setting will have a subtle effect on the way in which chords resonate.
Legato Switch	OFF, ON	This is effective when Mono/Poly is set to MONO and Legato Switch is turned ON. When you press the next key while still holding down the previous key (legato performance), the pitch changes smoothly. The way in which the change occurs depends on the Legato Retrigger Interval.

Parameter	Value	Explanation
Legato Retrigger Interval	When LegatoSwitch is enabled and you play legato, this specifies whether retriggering occurs (0–12) or does not occur (OFF). If this is off, only the pitch of the currently-sounding tones changes according to the pitch of the key. If this is set to 1–12, retriggering occurs smoothly when the pitch difference during legato performance exceeds the specified value. For example, if this is set to 4, and using C4 as the reference pitch, playing notes Db4–E4 legato will change only the pitch without retriggering, but playing the F4 note (which is five semitones away from C4) legato will retrigger F4. When F4 is retriggered at this time, F4 now becomes the reference pitch. If this is set to 0, each note is retriggered every time regardless of the pitch difference. For acoustic-type sounds in particular, an unnatural impression can occur if only the pitch is changed, so you'll need to adjust the Legato Retrigger Interval.	
	0–12, OFF	
Portamento Switch	OFF, ON	Specifies whether the portamento effect will be applied (ON) or not (OFF). * Portamento is an effect which smoothly changes the pitch from the first-played key to the next-played key. By applying portamento when the Mono/Poly parameter is "MONO," you can simulate slide performance techniques on a violin or similar instrument.
Portamento Mode	Specifies the performance conditions for which portamento will be applied.	
	NORMAL	Portamento will always be applied.
	LEGATO	Applies portamento only when you play legato (i.e., when you press the next key before releasing the previous key).
Portamento Type	Specifies the type of portamento effect.	
	RATE	The time it takes will depend on the distance between the two pitches.
	TIME	The time it takes will be constant
Portamento Start	When another key is pressed during a pitch change produced by portamento, a new pitch change will begin. This setting specifies the pitch at which the change will begin.	
	Pitch	<p>Starts a new portamento when another key is pressed while the pitch is changing.</p>
Portamento NOTE	Portamento will begin from the pitch where the current change would end.	
	Pitch	
Portamento Time	0–1023	Specifies the time taken for the pitch to change when playing portamento. Higher settings will cause the pitch change to the next note to take more time.

## Parameter List

Parameter	Value	Explanation
Bend Range Up	0–48 [semitone]	Specifies in semitones the amount of change that occurs when you press the far right end of the ribbon controller. For example, if this parameter is set to “12,” the pitch will rise one octave when the pitch bend lever is moved to the right-most position.
Bend Range Down	0–48 [semitone]	Specifies in semitone units the amount of change that occurs when you press the far left end of the ribbon controller. For example if this is set to “48” and you move the pitch bend lever all the way to the left, the pitch will fall 4 octaves.
Bend Mode	NORMAL	The pitch bend lever works in the conventional way.
	CATCH+LAST	The ribbon controller affects only the last-sounded note. If you play a note while the ribbon controller is already moved, that note sounds at its normal pitch (as though the controller were in the center). The pitch starts changing only after the controller passes through the center position.
Bend Range Fine Up	0–100 [cent]	Finely adjusts the degree of pitch change in one-cent units when the Pitch Bend lever is moved to the right.
Bend Range Fine Down	0–100 [cent]	Finely adjusts the degree of pitch change in one-cent units when the Pitch Bend lever is moved to the left.

## STRUCTURE

Structure lets you sound two partials as a set.

You can create a wide range of sounds by using partial 2 or 4 (the modulator) to modulate partial 1 or 3 (the carrier).

Since the Structure uses two partials as a pair, it provides parameters that are used in common by the carrier and modulator.

For the following parameters, only the partial settings of the carrier are valid (the settings of the modulator are ignored).

### KEYBOARD

- Keyboard Range Lower
- Keyboard Range Upper
- Keyboard Fade Width Lower
- Keyboard Fade Width Upper
- Velocity Range Lower
- Velocity Range Upper
- Velocity Fade Width Lower
- Velocity Fade Width Upper

### SWITCH

- Partial Switch

### OSC

- Delay Mode (note)
- Delay Mode
- Delay Time Sync
- Delay Time (note)
- Delay Time

### CONTROL

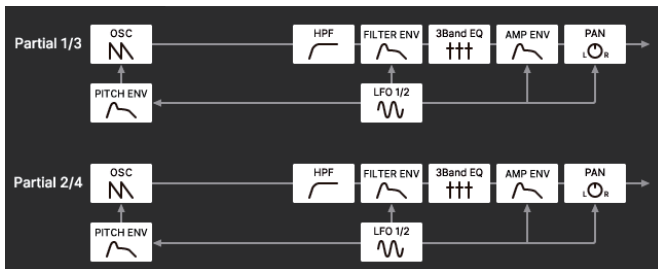
- Envelope Mode
- Receive Hold-1
- Redamper Switch
- Damper Free Note
- MATRIX CONTROL
- Destination: PMT
- Destination: CROSS-MOD

Parameter	Value	Explanation
Structure1-2	The sound of partial 1 is modulated by partial 2.	
	OFF	OFF
	SYNC	Implements the oscillator sync function that is provided by an analog synthesizer. The partial 1 oscillator is reset at intervals of partial 2's pitch cycle. This is effective only if OSC Type is VirtualAnalog or PCM-Sync.
Structure1-2	RING	Implements the ring modulator function that is provided by an analog synthesizer. The output sound of partial 2 is multiplied with partial 1.
	XMOD, XMOD2	Implements the cross modulation function that is provided by an analog synthesizer. The output sound of partial 2 is applied as the pitch of partial 1. XMOD2 is available only when Partial 1 and 3 are OSC Type “VA.”
Structure3-4	The output sound of partial 3 is modulated by partial 4.	
	OFF	OFF
	SYNC	Implements the oscillator sync function that is provided by an analog synthesizer. The partial 3 oscillator is reset at intervals of partial 4's pitch cycle. This is effective only if OSC Type is VirtualAnalog or PCM-Sync.
Structure3-4	RING	Implements the ring modulator function that is provided by an analog synthesizer. The output sound of partial 4 is multiplied with partial 3.
	XMOD, XMOD2	Implements the cross modulation function that is provided by an analog synthesizer. The output sound of partial 4 is applied as the pitch of partial 3. XMOD2 is available only when Partial 1 and 3 are OSC Type “VA.”
RING1-2 Level	0–127	RING level when Structure1-2 is RING.
RING3-4 Level	0–127	RING level when Structure3-4 is RING.
RING OSC1 Level	0–127	Effective when Structure1-2 is RING. Sets the partial 1 OSC level.
RING OSC2 Level	0–127	Effective when Structure1-2 is RING. Sets the partial 2 OSC level.
RING OSC3 Level	0–127	Effective when Structure3-4 is RING. Sets the partial 3 OSC level.
RING OSC4 Level	0–127	Effective when Structure3-4 is RING. Sets the partial 4 OSC level.
XMOD 1-2 Depth	0–9600 [cent]	Cross Modulation Depth when Structure1-2 is XMOD.
XMOD 3-4 Depth	0–9600 [cent]	Cross Modulation Depth when Structure3-4 is XMOD.
XMOD2 1-2 Depth	0–127	Cross Modulation Depth when Structure1-2 is XMOD2.
XMOD2 3-4 Depth	0–127	Cross Modulation Depth when Structure3-4 is XMOD2.
CrossMod OSC1 Level	0–127	Effective when Structure1-2 is XMOD/ XMOD2. Sets the partial 1 OSC level.
CrossMod OSC2 Level	0–127	Effective when Structure1-2 is XMOD/ XMOD2. Sets the partial 2 OSC level.
CrossMod OSC3 Level	0–127	Effective when Structure3-4 is XMOD/ XMOD2. Sets the partial 3 OSC level.
CrossMod OSC4 Level	0–127	Effective when Structure3-4 is XMOD/ XMOD2. Sets the partial 4 OSC level.

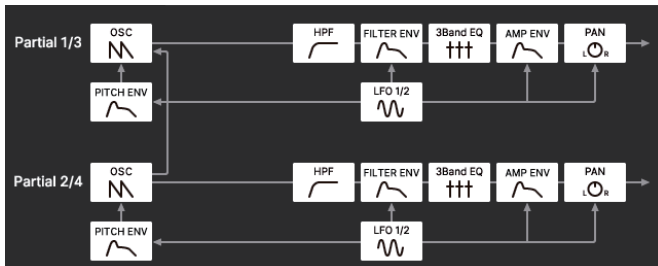
## OSC MOD COM

Parameter	Value	Explanation
Partial Phase Lock	OFF, ON	This is available if OSC Type is “VA”; it locks the waveform phase between partials. It is effective to use this with XMOD2.

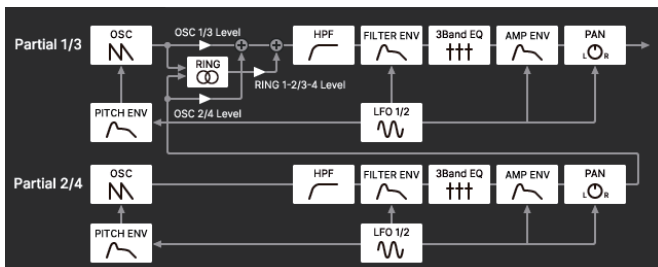
OFF



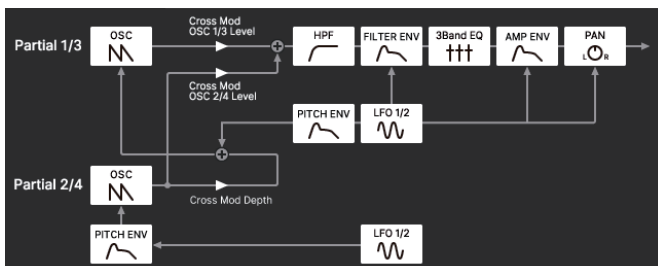
SYNC



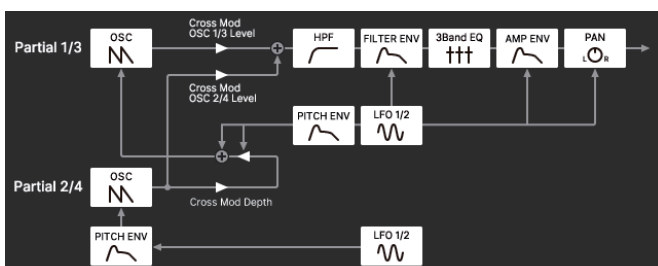
RING



XMOD



XMOD2



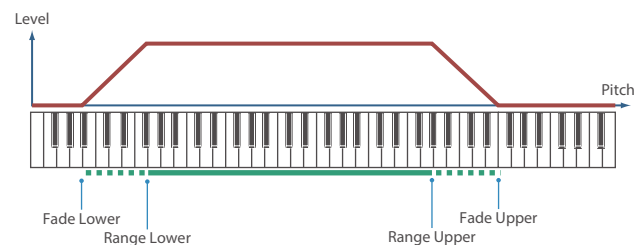
UNISON

Parameter	Value	Explanation
Unison Switch	OFF, ON	This layers a single sound. If the Unison Switch is on, the number of notes layered on one key will change according to the number of keys you play. <ul style="list-style-type: none"> <li>• If the OSC Type is PCM, this is limited to mono playing.</li> <li>• If the Legato Switch is on, the Delay Time is ignored while playing legato.</li> <li>• Even if Legato Retrigger Interval is specified, it operates as OFF.</li> </ul>
Unison Size	2-8	If unison is on, this specifies the number of notes that are assigned to each key that is pressed. Increasing the Unison Size increases the polyphony, making it more likely that notes will be cut off.
Unison Detune	0-100	Detunes each of the notes that are allocated by the Unison Size number, producing a detuned effect. As you increase this value, each note is detuned more greatly, producing a thicker sound.

PTL CTRL

Parameter	Value	Explanation
Velocity Control	OFF, ON, RANDOM, CYCLE	Specifies how partials are played according to your keyboard playing dynamics (velocity) If this is "ON," different partials are sounded according to the playing velocity and the Velocity Range Lower/Upper and Velocity Fade Lower/Upper settings <ul style="list-style-type: none"> <li>• If this is "RANDOM" or "CYCLE," each partial is sounded randomly or cyclically.</li> <li>• In the case of "RANDOM" or "CYCLE" when Structure 1-2 (3-4) has a setting other than OFF, partials 1 and 2 (3 and 4) are sounded as a pair, either randomly or in alternation.</li> <li>• In the case of "RANDOM" or "CYCLE," velocity has no effect, but you'll need to make settings for each partial so that the Velocity Range does not conflict.</li> </ul>
PMT Level Curve	EXP LINEAR	When using Velocity Control to switch between partials, the crossfade level changes in a non-linear curve. When using Velocity Control to switch between partials, the crossfade level changes in a linear curve.
Partial Switch	OFF, ON	Use these buttons to turn the partials on/off.

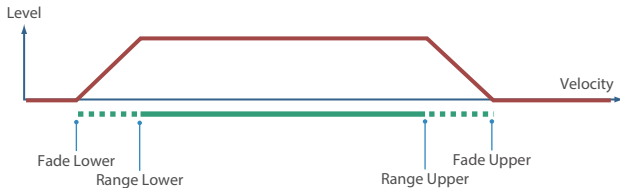
PTL RANGE



Parameter	Value	Explanation
Key Range Low	C--G9	Specify the key range for each partial. Make these settings when you want different key ranges to play different tones.
Key Range Up	C--G9	Specify the lower limit (Lower) and upper limit (Upper) of the key range.
Key Range Fade Low	0-127	Specifies the degree to which the partial is sounded by notes played below the Key Range Low. Specify "0" if you don't want such notes to be sounded.

## Parameter List

Parameter	Value	Explanation
Key Range Fade Up	0–127	Specifies the degree to which the partial is sounded by notes played above the Key Range Up. Specify "0" if you don't want such notes to be sounded.



Parameter	Value	Explanation
Velocity Range Low	1–127	Specify the lower limit (Lower) and upper limit (Upper) of the velocities that will sound the partial.
Velocity Range Up	1–127	Make these settings when you want different partials to sound depending on keyboard playing dynamics.
Velocity Fade Low	0–127	Specifies the degree to which the partial is sounded by notes played more softly than Velocity Range Low. Specify "0" if you don't want such notes to be sounded.
Velocity Fade Up	0–127	Specifies the degree to which the partial is sounded by notes played more strongly than Velocity Range Up. Specify "0" if you don't want such notes to be sounded.

## TUNING

Parameter	Value	Explanation
Type (Scale Tune Type)	CUSTOM	<b>Custom:</b> This lets you create a custom scale.
	EQUAL	<b>Equal Temperament:</b> This tuning divides an octave into 12 equal parts. Every interval produces about the same amount of slight dissonance.
	JUST-MAJ	<b>Just (Major):</b> This scale eliminates dissonance in fifths and thirds. It is unsuited to playing melodies and cannot be transposed, but is capable of beautiful sonorities.
	JUST-MIN	<b>Just (Minor):</b> The scales of the major and minor just intonations are different. You can get the same effect with the minor scale as with the major scale.
	PYTHAGORE	<b>Pythagorean:</b> This scale, devised by the philosopher Pythagoras, eliminates dissonance in fourths and fifths. Dissonance is produced in thirds, but melodies are euphonious.
	KIRNBERGE	<b>Kirnberger:</b> This scale is a modification of the meantone and just intonations that permits greater freedom in transposition to other keys. Performances are possible in all keys (III).
	MEANTONE	<b>Meantone:</b> This scale makes some compromises in just intonation, enabling transposition to other keys.
	WERCKMEIS	<b>Werckmeister:</b> This is a combination of the meantone and Pythagorean scales. Performances are possible in all keys (first technique, III).
	ARABIC	<b>Arabic Scale:</b> This scale is suitable for Arabic music.
	Key (Scale Tune Key)	C–B
C–B	-64→+63	Finely adjusts the pitch.

## Part Parameter (KNOB CTRL)

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

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

Parameter	Value	Explanation
Vib Rate (Vibrato Rate)	-64+63	Adjust the vibrato speed (the rate at which the pitch is modulated).The pitch will be modulated more rapidly for higher settings, and more slowly with lower settings.
Vib Depth (Vibrato Depth)	-64+63	This adjusts the depth of the vibrato effect (the depth at which the pitch is modulated). The pitch will be modulated more greatly for higher settings, and less with lower settings.
Vib Delay (Vibrato Delay)	-64+63	Adjusts the time until vibrato (pitch modulation) starts to apply. Higher settings will produce a longer delay time before vibrato begins, while lower settings produce a shorter time.
Oct Shift (Octave Shift)	-3+3	Shifts the pitch of the keyboard in units of one octave.
Velo Sens (Velocity Sens Offset)	-63+63	Adjusts the velocity sensitivity. Larger settings raise the sensitivity.
VoiceAsgn (Voice Assign Mode)	Assign Type sets the way sounds are played when the same key is pressed a number of times.	
	SINGLE	The previous note is silenced each time the same key is played repeatedly.
	LIMIT	When the same key is played repeatedly a certain number of times, the lowest-level of the notes sounding at the same pitch is silenced.
	FULL	Even when the same key is played repeatedly, it is sounded within the limits of available polyphony.
Bend Mode	Specifies what occurs when you operate a controller such as the pitch bend lever when pitch bend is assigned to it.	
	NORMAL	The conventional pitch bend effect occurs.
	C+L (CATCH + LAST)	The pitch bend effect applies only to the last-played note. If a note-on occurs while pitch bend is already applied, the new note sounds at the center pitch. The pitch starts changing only after the controller passes through the center position.
	TONE	The tone's settings are used.
Unison Sw (Unison Switch)	OFF, ON, TONE	This layers a single sound. Choose "ON" if you want to use unison, or "OFF" if you don't. Choose "TONE" if you want to use the setting specified by the tone. Parts whose Unison Switch is On will be MONO.
SYS-Ctrl1-4	0-127	Specify the values of SYS-Ctrl 1-4. By connecting SYS-Ctrl 1-4 with tone parameters, you can use the knobs to control values other than part parameters.

## INFO

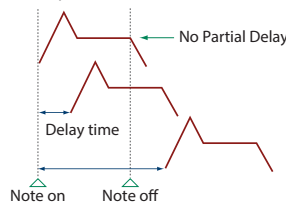
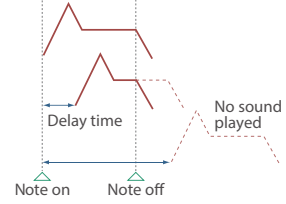
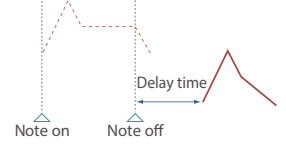
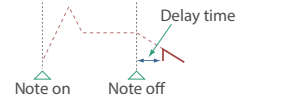
Parameter	Value	Explanation
Category	All, Ac.Piano, Pop Piano, EGrndPho, E.Piano1, E.Piano2, E.Organ, Pipe Org, Reed Org, Harpschd, Clav, Celesta, Accrdion, Harmnica, Bell, Mallet, Ac.Gtr, E.Gtr, Dist.Gtr, Ac.Bass, E.Bass, Syn.Bass, Pluck, Solo Str, Ens.Str, Orch, Solo Brs, Ens.Brs, Wind, Flute, Sax, Recorder, Vox, Scat, Syn.Lead, Syn.Brs, Syn.Pad, Bell Pad, Poly Key, Syn.FX, Syn.Seq, Phrase, Pulse, Beat&Grv, Hit, Sound FX, Drums, Perc, Stack, Zone	Selects the category of the tone.

## OSC

Parameter	Value	Explanation
OSC Type	Specifies the oscillator type.	
	PCM	PCM is used. The wave of the number specified by the Wave Group and Wave Number L/R is used.
	VA	A numerically calculated analog-modeled wave is generated. The wave of the number specified by Waveform is used.
	PCM-Sync	The wave of the number specified by PCM-Sync Wave Number is used.
	SuperSAW	SuperSAW is used.
	Noise	White noise is used.
TYPE (Wave Group Type)	INT	When OSC TYPE is set to PCM, the waveforms built into the MC-707 are used.
	SAMP	When OSC TYPE is set to PCM, waveforms loaded into the project are used.
Wave Bank	A, B, C	Specifies the bank of the wave group that is used when OSC Type is PCM.
Wave Number L		Specifies the wave number within the group specified by Wave Group. If using mono, specify only the left side (L). If using stereo, specify the right side (R) as well.
Wave Number R		If using mono, specify only Wave Number L and leave Wave Number R at 0: OFF. If you specify only Wave Number R, no sound is heard.
Waveform	Specifies the wave that is used when OSC Type is VA.	
	SAW	Sawtooth wave
	SQR	Square wave
	TRI	Triangle wave
	SIN	sine wave
	RAMP	Ramp wave
	JUNO	Modulated sawtooth wave
	TRI2	Triangle wave variation
	TRI3	Triangle wave variation
SIN2	Sine wave variation	
Waveform Invert Sw	OFF, ON	If this is ON, the phase of the VA waveform is inverted.
PCM-Sync Wave No.		Specifies the wave that is used when OSC Type is PCM-Sync. The PCM-Sync oscillator is effective when specified as the Slave (the sync-modulated partial 1 or 3) when Structure is set to SYNC.
Gain	-18+12 [dB]	Specifies the gain (amplitude) of the waveform. The value will change in 6 dB (decibel) steps. Each 6 dB increase doubles the gain.
Pulse Width	0-127	This effect is produced when the waveform is deformed by varying the duty cycle of the pulse width. It is effective when OSCType is VA, and is also effective with waveforms other than SQR (square wave). * If the value is 64, the pulse width has a 50%:50% duty cycle.
PWM Depth	-63+63	Specifies the amount (depth) of LFO applied to PW (Pulse Width). PW is modulated according to the LFO2 setting.
SuperSAW Detune	0-127	Adjusts the Detune depth for SuperSAW. Higher values produce a deeper Detune effect. * This is effective only when SuperSAW is selected as the OSC Type.
Click Type	SOFT, HARD, NATURAL, OFF	Changes the sense of attack by varying the position at which the sound starts. This is available if OSC Type is VA. However, HARD is effective only when Waveform is TRI, TRI2, SIN, or SIN2.

## Parameter List

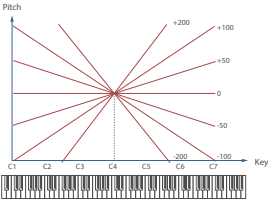
Parameter	Value	Explanation
Fat	0–127	Boosts the low-frequency region. This is effective if OSC Type is VA.
OSC Attenuator	0–255	Specifies the OSC level. 255 is the reference value. If you want only the self-oscillation of the filter to be heard, set this to 0.
FXM Switch	OFF, ON	This sets whether FXM will be used (ON) or not (OFF). * FXM (Frequency Cross Modulation) uses a specified waveform to apply frequency modulation to the currently selected waveform, creating complex overtones. This is useful for creating dramatic sounds or sound effects.
FXM Color	1–4	Specifies how FXM will perform frequency modulation. Higher settings result in a grainier sound, while lower settings result in a more metallic sound.
FXM Depth	0–16	Specifies the depth of the modulation produced by FXM.
Delay Mode	Partial Delay	<p>This produces a time delay between the moment a key is pressed (or released), and the moment the partial actually begins to sound. You can also make settings that shift the timing at which each partial is sounded.</p> <p>This differs from the Delay in the internal effects, in that by changing the sound qualities of the delayed partials and changing the pitch for each partial, you can also perform arpeggio-like passages just by pressing one key.</p> <p>You can also synchronize the partial delay time to the tempo of the external MIDI sequencer.</p> <p>If Legato Retrigger Interval is other than OFF, legato operation occurs only when Delay Mode is NORMAL.</p> <p>Also in this case, Legato Retrigger Interval operates as 0 (retriggers at each DelayTime).</p>

Parameter	Value	Explanation
Delay Mode	NORMAL	<p>The partial begins to play after the time specified in the Partial Delay Time parameter has elapsed.</p> 
	HOLD	<p>Although the partial begins to play after the time specified in the Partial Delay Time parameter has elapsed, if the key is released before the time specified in the Partial Delay Time parameter has elapsed, the partial is not played.</p> 
	KEY-OFF-NORMAL	<p>Rather than being played while the key is pressed, the partial begins to play once the period of time specified in the Partial Delay Time parameter has elapsed after release of the key.</p> <p>This is effective in situations such as when simulating noises from guitars and other instruments.</p> 
	KEY-OFF-DECAY	<p>Rather than being played while the key is pressed, the partial begins to play once the period of time specified in the Partial Delay Time parameter has elapsed after release of the key. Here, however, changes in the TVA Envelope begin while the key is pressed, which in many cases means that only the sound from the release portion of the envelope is heard.</p> 
Delay Time Sync	OFF, ON	Set this ON if you want the partial delay time to synchronize with the tempo.
Delay Time (note)	1/64T–2	This is available when Delay Time Sync is ON. It specifies the delay time in terms of a note value.
Delay Time	0–1023	This is available when Delay Time Sync is OFF. It specifies the delay time without regard to the tempo.

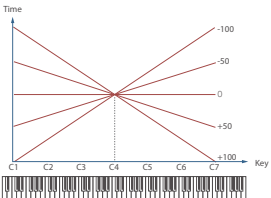
## Pitch

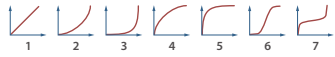
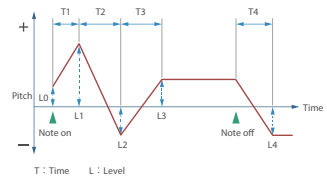
Parameter	Value	Explanation
Coarse Tune	-48–+48 [semitone]	Adjusts the pitch of the tone's sound up or down in semitone steps (+/-4 octaves).
Fine Tune	-50–+50 [cent]	Adjusts the pitch of the tone's sound up or down in 1-cent steps (+/-50 cents).
Random Depth	0–1200 [cent]	<p>This specifies the width of random pitch deviation that will occur each time a key is pressed. If you do not want the pitch to change randomly, set this to "0."</p> <p>* These values are in units of cents (1/100th of a semitone).</p>



Parameter	Value	Explanation
Pitch Keyfollow	-200~+200	This specifies the amount of pitch change that will occur when you play a key one octave higher (i.e., 12 keys upward on the keyboard). If you want the pitch to rise one octave as on a conventional keyboard, set this to "+100." If you want the pitch to rise two octaves, set this to "+200." Conversely, set this to a negative (-) value if you want the pitch to fall. With a setting of "0," all keys will produce the same pitch. 
Vibrato Pitch Sens	-100~+100	Specifies the amount by which the Pitch Depth of LFO1 is changed by the program's Modify Vib Depth.
Stereo Detune	-50~+ 50 [cent]	Specifies the detune between L#R when outputting in stereo.

## PITCH ENV

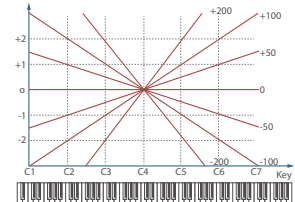

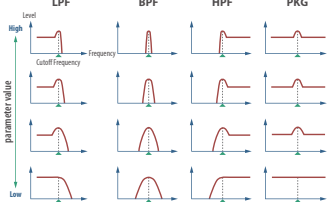
Parameter	Value	Explanation
Depth	-100~+100	Adjusts the effect of the Pitch Envelope. Higher settings will cause the pitch envelope to produce greater change. Negative (-) value will invert the shape of the envelope. If OSC Type is other than VA, this is limited to ±63.
Velocity Sens	-100~+100	Keyboard playing dynamics can be used to control the depth of the pitch envelope. If you want the pitch envelope to have more effect for strongly played notes, set this parameter to a positive (+) value. If you want the pitch envelope to have less effect for strongly played notes, set this to a negative (-) value.
T1 Velocity Sens	-100~+100	This allows keyboard dynamics to affect the Time 1 of the Pitch envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive "+" value. If you want it to be slowed down, set this to a negative "-" value.
T4 Velocity Sens	-100~+100	Use this parameter when you want key release speed to affect the Time 4 value of the pitch envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
Time Keyfollow	-100~+100	Use this setting if you want the pitch envelope times (Time 2~Time 4) to be affected by the keyboard location. Based on the pitch envelope times for the C4 key, positive (+) value will cause notes higher than C4 to have increasingly shorter times, and negative (-) value will cause them to have increasingly longer times. Higher values will produce greater change. 

Parameter	Value	Explanation
Pitch Env Velocity Curve	FIXED, 1-7	Selects one of the following 7 curves that will determine how keyboard playing dynamics will affect the pitch envelope. Set this to "FIXED" if you don't want the pitch envelope be affected by the keyboard velocity. 
PENV LFO Trigger Switch	OFF, ON	If this is ON, the pitch envelope is cyclically retriggered by LFO1. * This is effective when Envelope Mode is SUSTAIN.
T1/Attack, T2, T3/Decay, T4/Release	0-1023	Specify the pitch envelope times (Time 1~Time 4). Higher settings will result in a longer time until the next pitch is reached. (For example, Time 2 is the time over which the pitch changes from Level 1 to Level 2.) * If ADSR Envelope Switch is ON, the Time 2 has no effect. 
L0, L1, L2, L3/Sustain, L4	-511~+511	Specify the pitch envelope levels (Level 0~Level 4). It determines how much the pitch changes from the reference pitch (the value set with Coarse Tune or Fine Tune on the Pitch screen) at each point. Positive (+) value will cause the pitch to be higher than the standard pitch, and negative (-) value will cause it to be lower. * If ADSR Envelope Switch is ON, only Level 3 (Sustain) has an effect. Also in this case, settings with a negative value are ignored.

## FILTER

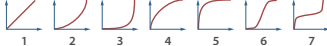
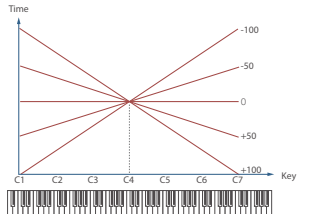
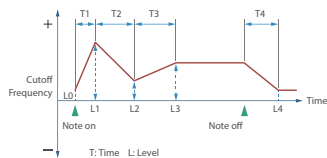
Parameter	Value	Explanation
Filter Type	TVF, VCF	Selects the type of filter. * TVF stands for Time Variant Filter, a filter that lets you specify in detail how the frequency components of the sound change over time. If you select VCF, the polyphony will be lower than if you select TVF.

Parameter	Value	Explanation
TVF Filter Type		Selects the type of TVF filter. * If Filter Type is set to VCF, this will be LPF.
	OFF	No filter is used.
	LPF	Low Pass Filter. This cuts the frequencies in the region above the cutoff frequency (Cutoff Frequency). Since this cuts the high-frequency region, the sound becomes more mellow. This is the most common filter used in synthesizers.
	BPF	Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency (Cutoff Frequency), and cuts the rest. This can be useful when creating distinctive sounds.
	HPF	High Pass Filter. This cuts the frequencies in the region below the cutoff frequency (Cutoff Frequency). This is suitable for creating percussive sounds emphasizing their higher tones.
	PKG	Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency (Cutoff Frequency). You can use this to create wah-wah effects by employing an LFO to change the cutoff frequency cyclically.
	LPF2	Low Pass Filter 2. Although frequency components above the Cutoff frequency (Cutoff Frequency) are cut, the sensitivity of this filter is half that of the LPF. This makes it a comparatively warmer low pass filter. This filter is good for use with simulated instrument sounds such as the acoustic piano. * If you set "LPF2," the setting for the Resonance parameter will be ignored (p. 68).
LPF3	Low Pass Filter 3. Although frequency components above the Cutoff frequency (Cutoff Frequency) are cut, the sensitivity of this filter changes according to the Cutoff frequency. While this filter is also good for use with simulated acoustic instrument sounds, the nuance it exhibits differs from that of the LPF2, even with the same TVF Envelope settings. * If you set "LPF3," the setting for the Resonance parameter will be ignored (p. 68).	
VCF TYPE	FLAT, TYPE-J, TYPE-M, TYPE-P	This parameter is effective when Filter Type is VCF. Each setting simulates the operation of an analog synthesizer's LPF. In particular, MG, JP, and P5 are types that are suitable for reproducing synthesizer sounds of the past.
Filter Slope	-12, -18, -24 [dB/Oct]	This button selects the slope (steepness) of the filter. For VCF, you can choose -12, -18, or -24. For TVF, only -12 or -24 can be selected. If Filter Type is TVF, the following limitations apply. <ul style="list-style-type: none"> <li>You can specify only -12 dB or -24 dB. If you specify -18 dB, the sound generator operates internally with the -12 dB setting.</li> <li>If you specify -24 dB, the polyphony will be lower than if you specify -12 dB.</li> </ul>
HPF Cutoff	0–1023	Specifies the cutoff frequency of the -6 dB high-pass filter. * This parameter is effective when Filter Type is VCF.

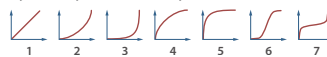
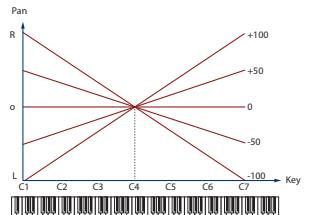
Parameter	Value	Explanation
Cutoff	0–1023	Selects the frequency at which the filter begins to have an effect on the waveform's frequency components. With "LPF/LPF2/LPF3" selected for the TVF Filter Type parameter, lower cutoff frequency settings reduce a tone's upper harmonics for a more rounded, warmer sound. Higher settings make it sound brighter. If "BPF" is selected for the Filter Type, harmonic components will change depending on the TVF Cutoff Frequency setting. This can be useful when creating distinctive sounds. With "HPF" selected, higher Cutoff Frequency settings will reduce lower harmonics to emphasize just the brighter components of the sound. With "PKG" selected, the harmonics to be emphasized will vary depending on Cutoff Frequency setting.
Keyfollow	-200+200	Use this parameter if you want the cutoff frequency to change according to the key that is pressed. Relative to the cutoff frequency at the key specified by Cutoff Keyfollow Base Point, positive "+" values cause the cutoff frequency to become higher as you play above the reference key, and negative "-" values cause the cutoff frequency to become lower. Higher values will produce greater change. Cutoff frequency (Octave) 
Cutoff Velocity Curve	FIXED, 1–7	Selects one of the following seven curves that determine how keyboard playing dynamics (velocity) influence the cutoff frequency. Set this to "FIXED" if you don't want the Cutoff frequency to be affected by the keyboard velocity. 
Cutoff Velocity Sens	-100+100	Use this parameter when changing the cutoff frequency to be applied as a result of changes in playing velocity. Specify a positive "+" value if you want the cutoff frequency to raise when you play strongly, or a negative "-" value if you want it to lower.
Cutoff Keyfollow Base Point	0–127	Specifies the reference key when using Keyfollow to modify the cutoff frequency. If this is 60, the C4 key (middle C) is the reference key.
Resonance	0–1023	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort. 
Resonance Velocity Sens	-100+100	Use this parameter when changing the resonance to be applied as a result of changes in playing velocity. Specify a positive "+" value if you want resonance to increase when you play strongly, or a negative "-" value if you want it to decrease.
Vibrato Cutoff Sens	-100+100	Specifies how the TVF Depth of LFO1 is affected by the program's Modify Vib Depth.



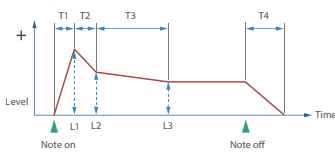
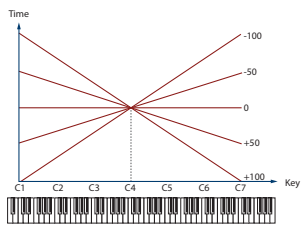
## FLITER ENV

Parameter	Value	Explanation
Env Depth	-63+63	Specifies the depth of the Filter envelope. Higher settings increase the change produced by the Filter envelope. Negative (-) value will invert the shape of the envelope.
TVF Env Fine Depth	-63+63	Finely adjusts the depth of the filter envelope.
Velocity Curve	FIXED, 1-7	Selects one of the following seven types of curve by which keyboard playing dynamics affect the depth of the filter envelope. If you don't want keyboard playing dynamics to affect the filter envelope depth, specify "FIXED." 
Velocity Sens	-100+100	Specify this if you want keyboard playing dynamics to affect the filter envelope depth. Specify a positive "+" value if you want the filter envelope to apply more deeply as you play more strongly, or a negative "-" value if you want it to apply less deeply.
T1 Velocity Sens	-100+100	Specify this if you want keyboard playing dynamics to affect Time 1 of the filter envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive "+" value. If you want it to be slowed down, set this to a negative "-" value.
T4 Velocity Sens	-100+100	Specify this if you want key release velocity to affect Time 4 of the filter envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
Time Keyfollow	-100+100	Specify this if you want the filter envelope times (Time 2-Time 4) to vary depending on the keyboard position you play. Relative to the filter envelope times at the C4 key (middle C), positive "+" values shorten the times for notes played in the region above C4, and negative "-" values lengthen the times. Higher values will produce greater change. 
FENV LFO Trigger Switch	OFF, ON	If this is ON, the filter envelope is cyclically retriggered by LFO1. * This is effective when Envelope Mode is SUSTAIN.
T1/Attack, T2, T3/Decay, T4/Release	0-1023	Specify the filter envelope times (Time 1-Time 4). Higher settings will lengthen the time until the next cutoff frequency level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.) * If ADSR Envelope Switch is ON, the Time 2 has no effect. 
L0, L1, L2, L3/Sustain, L4	0-1023	Specify the filter envelope levels (Level 0-Level 4). Specify the amount of cutoff frequency change at each point relative to the reference cutoff frequency (the cutoff frequency value specified in the Filter screen). * If ADSR Envelope Switch is ON, only Level 3 (Sustain) has an effect.

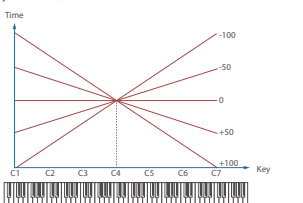
## AMP

Parameter	Value	Explanation
Level	0-127	Sets the volume of the partial. This setting is useful primarily for adjusting the volume balance between partials.
Velocity Curve	FIXED, 1-7	Selects one of the following seven curves that determine how keyboard dynamics will affect the volume. Set this to "FIXED" if you don't want the volume of the partial to be affected by the keyboard velocity. 
Velocity Sens	-100+100	Set this when you want the volume of the partial to change depending on the force with which you press the keys. Set this to a positive (+) value to have the changes in partial volume increase the more forcefully the keys are played; to make the partial play more softly as you play harder, set this to a negative (-) value.
Bias Level	-100+100	Adjusts the angle of the volume change that will occur in the selected Bias Direction. Higher values will produce greater change. Negative (-) values will invert the change direction.
Bias Position	0-127	Specifies the key relative to which the volume will be modified. A setting of 64 is the C4 key (middle C).
Bias Direction	LOWER, UPPER, LOWER&UPPER, ALL	Selects the direction in which change will occur starting from the Bias Position. LOWER: The volume will be modified for the keyboard area below the Bias Point. UPPER: The volume will be modified for the keyboard area above the Bias Point. LOWER&UPPER: The volume will be modified symmetrically toward the left and right of the Bias Point. ALL: The volume changes linearly with the bias point at the center.
Pan	L64-63R	Sets the pan of the partial. "L64" is far left, "0" is center, and "63R" is far right.
Pan Keyfollow	-100+100	Use this parameter if you want key position to affect panning. Positive (+) value will cause notes higher than C4 key (center C) to be panned increasingly further toward the right, and negative (-) value will cause notes higher than C4 key (center C) to be panned toward the left. Higher values will produce greater change. 
Random Pan Depth	0-63	Use this parameter when you want the stereo location to change randomly each time you press a key. Higher values will produce a greater amount of change.
Alternate Pan Depth	L63-63R	This setting causes panning to be alternated between left and right each time a key is pressed. Higher values will produce a greater amount of change. "L" or "R" settings will reverse the order in which the pan will alternate between left and right. For example if two partials are set to "L" and "R" respectively, the panning of the two tones will alternate each time they are played.
Vibrato Level Sens	-100+100	Specifies how the program's Modify Vib Depth affects the Amp Depth of LFO1.
Stereo Width	0-100	Adjusts the amount of width when outputting in stereo. This has no effect when outputting in mono.

## AMP ENV

Parameter	Value	Explanation
T1 Velocity Sens	-100→+100	Specify this if you want keyboard dynamics to affect the AMP envelope's Time 1. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
T4 Velocity Sens	-100→+100	Specify this if you want key release velocity to affect the AMP envelope's Time 4. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
AENV LFO Trigger Switch	OFF, ON	If this is ON, the amp envelope is cyclically retriggered by LFO1. * This is effective when Envelope Mode is SUSTAIN.
T1/Attack, T2, T3/Decay, T4/Release	0-1023	Specify the AMP envelope times (Time 1–Time 4). Higher settings lengthen the time until the next volume level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.) * If ADSR Envelope Switch is ON, the Time 2 has no effect.
L1, L2, L3/Sustain	0-1023	Specify the AMP envelope levels (Level 1–Level 3). These specify the amount of change at each point relative to the reference volume (the partial level value specified in the Amp screen).  T: Time L: Level * If ADSR Envelope Switch is ON, only Level 3 (Sustain) has an effect.
Time Keyfollow	-100→+100	Specify this if you want keyboard position to affect the AMP envelope's times (Time 2–Time 4). Relative to the AMP envelope times at the C4 key (middle C), positive (+) values cause the times to shorten as you play higher on the keyboard, and negative (-) values cause the times to lengthen. Higher values will produce greater change. 

## LFO1 / LFO2

Parameter	Value	Explanation
Waveform (LFO1, LFO2)	—	Selects the waveform of the LFO.
	SIN	Sine wave
	TRI	Triangle wave
	SAW-UP	Sawtooth wave
	SAW-DW	Sawtooth wave (negative polarity)
	SQR	Square wave
	RND	Random wave
	TRP	Trapezoidal wave
	S&H	Sample & Hold wave (one time per cycle, LFO value is changed)
	CHS	Chaos wave
Tempo Sync Sw (LFO1, LFO2)	OFF	Set this ON if you want the LFO rate to synchronize with the tempo.
	ON	
Rate Note (LFO1, LFO2)	1/64T-4	This is effective if Rate Sync is ON. Specifies the LFO rate in terms of a note value.
Rate (LFO1, LFO2)	0-1023	This is effective if Rate Sync is OFF. Specifies the LFO rate without regard to the tempo. Higher values produce a faster LFO rate (a shorter cycle).
Offset (LFO1, LFO2)	-100→+100	Raises or lowers the LFO waveform relative to the central value (pitch or cutoff frequency). Positive (+) value will move the waveform so that modulation will occur from the central value upward. Negative (-) value will move the waveform so that modulation will occur from the central value downward.
Rate Detune (LFO1, LFO2)	0-127	Subtly changes the LFO cycle speed (Rate parameter) each time you press a key. Higher values produce greater change. This parameter is invalid when Rate is set to "note."
Delay Time (LFO1, LFO2)	0-1023	Specifies the time elapsed before the LFO effect is applied (the effect continues) after the key is pressed (or released). * After referring to "How to Apply the LFO" (p. 72), change the setting until the desired effect is achieved.
Delay Time Keyfollow (LFO1, LFO2)	-100→+100	Adjusts the value for the Delay Time parameter depending on the key position, relative to the C4 key (center C). To decrease the time that elapses before the LFO effect is applied (the effect is continuous) with each higher key that is pressed in the upper registers, select a positive (+) value; to increase the elapsed time, select a negative (-) value. Higher values will produce greater change. If you do not want the elapsed time before the LFO effect is applied (the effect is continuous) to change according to the key pressed, set this to "0." 
Fade Mode (LFO1, LFO2)	ON-IN	Specifies how the LFO will be applied. * After referring to "How to Apply the LFO" (p. 72), change the setting until the desired effect is achieved.
	ON-OUT	
	OFF-IN	
	OFF-OUT	

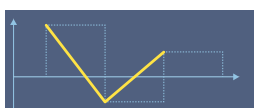
Parameter	Value	Explanation
Fade Time (LFO1, LFO2)	0–1023	Specifies the time over which the LFO amplitude will reach the maximum (minimum). * After referring to "How to Apply the LFO" (p. 72), change the setting until the desired effect is achieved.
Key Trigger Sw (LFO1, LFO2)	OFF, ON	Specifies whether the LFO cycle will be synchronized to begin when the key is pressed (ON) or not (OFF).
Pitch Depth (LFO1, LFO2)	-100–+100	Specifies how deeply the LFO will affect pitch. * If OSC Type is other than VirtualAnalog, the range is limited to -63–+63.
Filter Depth (LFO1, LFO2)	-100–+100	Specifies how deeply the LFO will affect the cutoff frequency.
Amp Depth (LFO1, LFO2)	-100–+100	Specifies how deeply the LFO will affect the volume.
Pan Depth (LFO1, LFO2)	-63–+63	Specifies how deeply the LFO will affect the pan. <b>MEMO</b> Positive (+) and negative (-) value for the Depth parameter result in differing kinds of change in pitch and volume. For example, if you set the Depth parameter to a positive (+) value for one partial, and set another partial to the same numerical value, but make it negative (-), the modulation phase for the two partials will be the reverse of each other. This allows you to shift back and forth between two different partials, or combine it with the Pan setting to cyclically change the location of the sound image.
		Specifies the LFO's starting phase value when Key Trigger is ON. * This has no effect if Waveform is RND, S&H, or CHS.
Phase Position (LFO1, LFO2)	0	1 cycle
	1	1/4 cycle
	2	1/2 cycle
	3	3/4 cycle

## STEP LFO1/ STEP LFO2

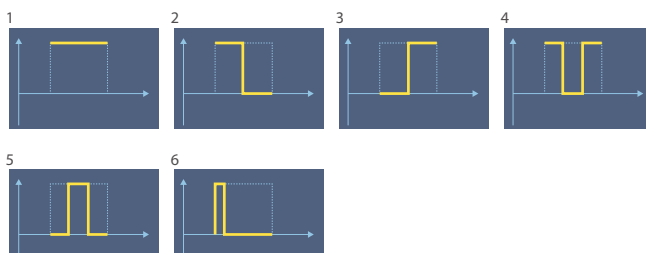
Parameter	Value	Explanation
Step Length (LFO1, LFO2)	1–16	This is effective if Waveform is STEP. Specifies the step size that is looped.
Step 1-16 (LFO1, LFO2)	-72–+72	This is effective if Waveform is STEP. Specify the Depth value of each step. If you want to specify this in pitch scale degrees (100 cents), the settings are as follows. <b>1</b> Pitch Depth: 51, Step: multiples of 6 ... up to one octave of change <b>2</b> Pitch Depth: 74, Step: multiples of 3 ... up to two octaves of change <b>3</b> Pitch Depth: 89, Step: multiples of 2 ... up to three octaves of change * If OSC Type is not VirtualAnalog, the Pitch Depth setting range is limited to -63–+63, so only "1" above is possible.
		Step Curve 1-16 (LFO1, LFO2)

### Step curve types

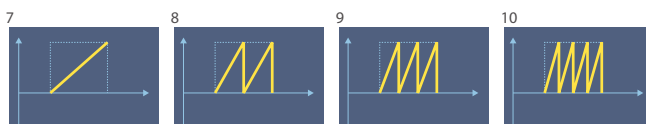
#### Step Curve 0



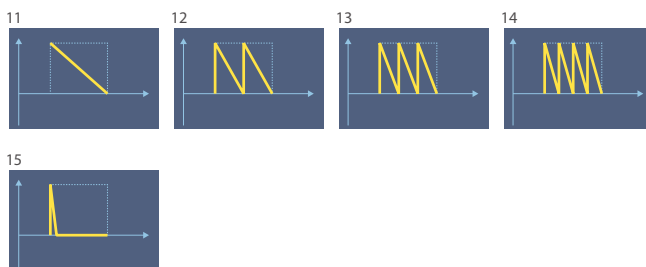
### Curve Type 1–6 (variations of square wave)



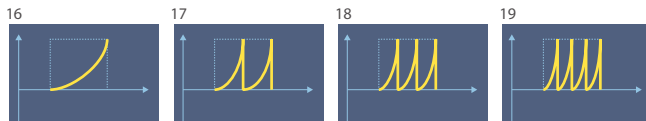
### Curve Type 7–10 (variations of ascending saw)



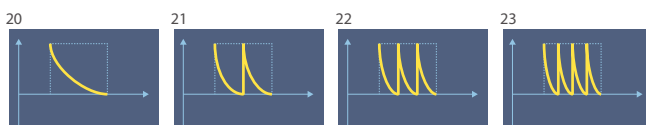
### Curve Type 11–15 (variations of descending saw)



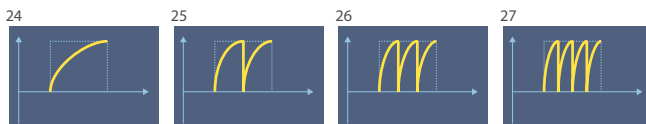
### Curve Type 16–19 (variations of ascending exponential)



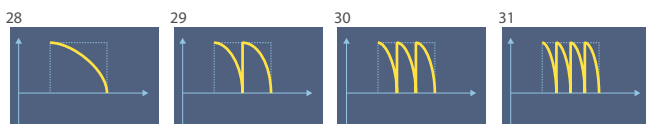
### Curve Type 20–23 (variations of descending exponential)



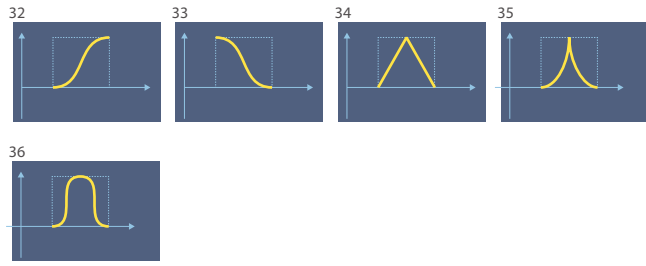
### Curve Type 24–27 (variations of ascending charging curve)



### Curve Type 28–31 (variations of descending charging curve)



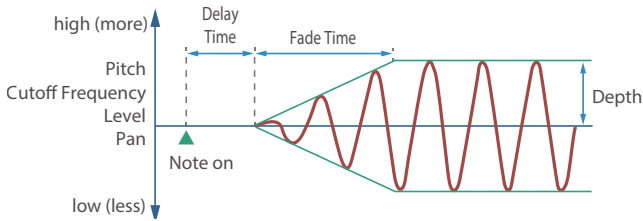
Curve Type 32–36 (other variations)



How to Apply the LFO

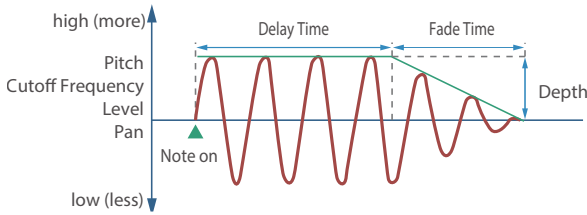
Apply the LFO gradually after the key is pressed

Fade Mode: ON-IN



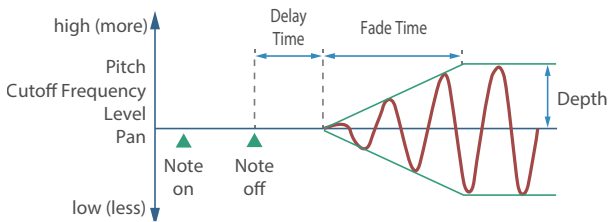
Apply the LFO immediately when the key is pressed, and then gradually begin to decrease the effect

Fade Mode: ON-OUT



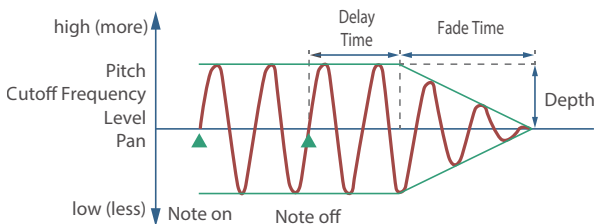
Apply the LFO gradually after the key is released

Fade Mode: OFF-IN



Apply the LFO from when the key is pressed until it is released, and gradually begin to decrease the effect when the key is released

Fade Mode: OFF-OUT



Parameter	Value	Explanation
Mid Gain	-24.0–+24.0 [dB]	Specifies the reference frequency of the mid-frequency range.
High Gain	-24.0–+24.0 [dB]	Gain of the high frequency range.
Low Frequency	20–16000 [Hz]	Frequency of the low range.
Mid Frequency	20–16000 [Hz]	Adjusts the amount of mid-frequency boost/cut.
High Frequency	20–16000 [Hz]	Frequency of the high range.
Mid Q	0.5–16.0 (0.1step)	Specifies the width of the mid-frequency range. Set a higher value for Q to narrow the range to be affected.

OUTPUT

Parameter	Value	Explanation
Output Assign	DRY, MFX	Specifies how the sound of each partial will be output.
Chorus Level Send	0–127	Specifies the level of the signal sent to the chorus for each partial.
Reverb Level Send	0–127	Specifies the level of the signal sent to the reverb for each partial.

CONTROL

Parameter	Value	Explanation
Envelope Mode	NO-SUS, SUSTAIN	If this is set to SUSTAIN, the Envelope Level 3 is held from when the envelope Time 3 has elapsed until note-off. When note-off occurs, the envelope transitions from the current value to the Time 4 segment (release segment). If this is set to NO-SUS, the envelope transitions to the release segment after passing Time 3 regardless of the note-off timing, operating according to the times specified by the envelope.
Damper Free Note	OFF, 1–127	For notes above the specified note number, the Envelope Mode operates as NO-SUS. Use this to simulate the undamped region of a piano sound.
DF Decay Offset	-100–+100	Specifies a fine adjustment to the time over which the sound decays when the Damper Free Note effect is applied.
Receive Bender	OFF, ON	Specifies for each partial whether MIDI pitch bend messages are received (ON) or not received (OFF).
Receive Expression	OFF, ON	Specifies for each partial whether MIDI expression messages are received (ON) or not received (OFF).
Receive Hold-1	OFF, ON	Specifies for each partial whether MIDI hold 1 messages are received (ON) or not received (OFF).
Redamper Switch	OFF, ON	If Redamper Switch is ON, you can perform the Half Damper operations used for piano sounds. However, the following conditions must be satisfied in order to use this operation. <ul style="list-style-type: none"> <li>Envelope Mode is NO-SUS</li> <li>Amp Envelope's Level 1 and 2 are 1 or greater</li> <li>Amp Envelope's Times are Time 3 &gt; Time 4</li> </ul>
Soft EQ Sens	0–100	Increases the proportion by which the EQ's HighGain is lowered by the amount of pedal. With a setting of 0, this has no effect.

PARTIAL EQ

Parameter	Value	Explanation
Switch	OFF, ON	Turns the equalizer on/off for each partial.
Low Gain	-24.0–+24.0 [dB]	Gain of the low frequency range.

## MATRIX CONTROL

Ordinarily, if you wanted to change partial parameters using an external MIDI device, you would need to send System Exclusive messages-MIDI messages designed exclusively for the MC-707. However, System Exclusive messages tend to be complicated, and the amount of data that needs to be transmitted can get quite large.

For that reason, a number of the more typical of the MC-707's partial parameters have been designed so they accept the use of Control Change (or other) MIDI messages for the purpose of making changes in their values. This provides you with a variety of means of changing the way tones are played.

For example, you can use the Modulation Bar to change the LFO cycle rate, or use the keyboard's touch to open and close a filter.

The function which allows you use MIDI messages to make these changes in realtime to the partial parameters is called the **"Matrix Control."**

Up to four Matrix Controls can be used in a single tone.

To use Matrix Control, you specify which MIDI message (Source) controls which parameter (Destination) and how deeply (Sens: sensitivity).

Parameter	Value	Explanation
Source 1-4 (Matrix Control 1-4)		Sets the MIDI message used to change the partial parameter with the Matrix Control.
	OFF	Matrix control will not be used.
	CC01-31, CC33-95	Controller number 1-31, 33-95
	BEND	Pitch Bend
	AFT	Aftertouch
	SYS-CTRL1-4	MIDI messages assigned by the SYSTEM parameters SYS-CTRL 1-4
	VELOCITY	Velocity (pressure you press a key with)
	KEYFOLLOW	Keyfollow (keyboard position with C4 as 0)
	TEMPO	Tempo specified by the tempo assign source
	LFO1, LFO2	LFO 1 LFO 2
	PIT-ENV	Pitch envelope
	FLT-ENV	Filter envelope
	AMP-ENV	Amp envelope
		<ul style="list-style-type: none"> <li>* Velocity and Keyfollow correspond to Note messages.</li> <li>* Although there are no MIDI messages for LFO 1 through AMP Envelope, they can be used as Matrix Control. In this case, you can change the partial settings in realtime by playing tones.</li> <li>* If you want to use common controllers for the entire MC-707, select "SYS-CTRL1"- "SYS-CTRL4." MIDI messages used as System Control 1-4 are set with the Sys-CtrlSrc1-4 (p. 42).</li> </ul>
		<p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>• There are parameters that determine whether or not Pitch Bend, Controller Number 11 (Expression) and Controller Number 64 (Hold 1) are received (p. 72). When these settings are "ON," and the MIDI messages are received, then when any change is made in the settings of the desired parameter, the Pitch Bend, Expression, and Hold 1 settings also change simultaneously. If you want to change the targeted parameters only, then set these to "OFF."</li> <li>• There are parameters that let you specify whether specific MIDI messages will be received for each part in a scene (p. 54). When a tone with Matrix Control settings is assigned to a part, confirm that any MIDI messages used for the Matrix Control will be received. If the MC-707 is set up such that reception of MIDI messages is disabled, then the Matrix Control will not function.</li> </ul>
Destination 1-4 (MATRIX CONTROL 1-4)		Selects the partial parameter that is to be controlled when using the Matrix Control. The following parameters can be controlled. When not controlling parameters with the Matrix Control, set this to "OFF."
		Up to four parameters can be specified for each Matrix Control, and controlled simultaneously.
	OFF	Matrix control will not be used.
	PCH	Changes the pitch.

Parameter	Value	Explanation
Destination 1-4 (MATRIX CONTROL 1-4)	CUT	Changes the cutoff frequency.
	RES	Emphasizes the overtones in the region of the cutoff frequency, adding character to the sound.
	LEV	Changes the volume level.
	PAN	Changes the pan.
	CHO	Changes the amount of chorus.
	REV	Changes the amount of reverb.
	PIT-LFO	Changes the vibrato depth.
	PIT-LFO2	
	FLT-LFO1	Changes the wah depth.
	FLT-LFO2	
	AMP-LFO1	Changes the tremolo depth.
	AMP-LFO2	
	PAN-LFO1	Changes the effect that the LFO will have on pan.
	PAN-LFO2	
	LFO1-RATE	Changes the speed of the LFO cycles. The speed will not change if LFO Rate is set to "note."
	LFO2-RATE	
	PIT-ATK	Changes the Time 1 of the pitch envelope.
	PIT-DCY	Changes the Time 2 and Env Time 3 of the pitch envelope.
	PIT-REL	Changes the Time 4 of the pitch envelope.
	FLT-ATK	Changes the Time 1 of the FLT envelope.
	FLT-DCY	Changes the Time 2 and Env Time 3 of the FLT envelope.
	FLT-REL	Changes the Time 4 of the FLT envelope.
	AMP-ATK	Changes the Time 1 of the AMP envelope.
	AMP-DCY	Changes the Time 2 and Env Time 3 of the AMP envelope.
	AMP-REL	Changes the Time 4 of the AMP envelope.
	PMT	<p>If the Matrix Control is used to split partials, set the PMT Velocity Control (p. 63) to "OFF."</p> <ul style="list-style-type: none"> <li>• If the Matrix Control is used to split partials, we recommend setting the Sens (p. 74) to "+63." Selecting a lower value may prevent switching of the partials. Furthermore, if you want to reverse the effect, set the value to "-63."</li> <li>• If you want to use matrix control to switch smoothly between partials, use the Velocity Fade Lower and Velocity Fade Upper (p. 64). The higher the values set, the smoother the switch is between the partials.</li> </ul>
	FXM	Changing the depth of frequency modulation produced by FXM
	MFX-CTRL1	Applies a change to MFX CONTROL 1-4 Source. If this is specified for more than one partial, the result will be the summed values.
	MFX-CTRL2	
	MFX-CTRL3	
	MFX-CTRL4	
	PW	Applies change to PW.
	PWM	Applies change to PWM.
	FAT	Applies change to FAT.
	X-MOD	This setting is valid only for the carrier partial (Partial 1 or 3), and applies change to the CrossMod1-2Depth or CrossMod3-4Depth.
LFO1-STEP	This is valid if the LFO1/LFO2 Waveform is STEP; it specifies the step position. In this case, the Sens value is ignored.	
LFO2-STEP		
SSAW-DETN	This is effective if OSC Type is SuperSAW; it applies change to Super-SAW Detune.	

## Parameter List

Parameter	Value	Explanation
Destination 1–4 (MATRIX CONTROL 1–4)	PIT-DEPTH	Changes the depth of the Pitch envelope.
	FLT-DEPTH	Changes the depth of the Filter envelope.
	AMP-DEPTH	Changes the depth of the AMP envelope.
	XMOD2	This is effective when Structure 1-2 (3-4) is XMOD2; it applies change to XMOD2 1-2 (3-4) Depth.
Sens 1–4 (MATRIX CONTROL 1–4)	-63–+63	Specify the effective depth of the matrix controls. To make an increase in the currently selected value (to get higher values, move to the right, increase rates, and so on), select a positive (+) value; to make a decrease in the currently selected value (to get lower values, move to the left, decrease rates, and so on), select a negative (-) value. For either positive or negative value, greater absolute values will allow greater amounts of change. Set this to "0" if you don't want to apply the effect.

## MFX

Parameter	Value	Explanation
MFX Type		Selects the MFX type.
MFX Switch	OFF, ON	Switches the MFX on/off.
MFX Chorus Send Level	0–127	Adjusts the amount of chorus. If you don't want to add the chorus effect, set it to 0.
MFX Reverb Send Level	0–127	Adjusts the amount of reverb. If you don't want to add the reverb effect, set it to 0.
MFX parameters		Edit the parameters for the selected MFX. The available parameters differ depending on the type of the effects you selected in MFX Type. ➔ "MFX/IFX Parameters" (p. 84)

## MFX CTRL

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

### Controlling a MFX via MIDI (MFX CONTROL)

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

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

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



## Drum Kit Tone Parameters (Drum)

### SOUND

Parameter	Value	Explanation
Level	0–127	Adjusts the overall volume of the tone

### MFX

Parameter	Value	Explanation
Type	Selects the MFX type.	
Switch	OFF, ON	Switches the MFX on/off.
Chorus Send Level	0–127	Adjusts the amount of chorus. If you don't want to add the chorus effect, set it to 0.
Reverb Send Level	0–127	Adjusts the amount of reverb. If you don't want to add the reverb effect, set it to 0.
MFX parameters	Edit the parameters for the selected MFX. The available parameters differ depending on the type of the effects you selected in MFX Type. ➔ "MFX/IFX Parameters" (p. 84)	

### KIT MFX CTRL

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

### DRUM COMP1–6

\* Only a drum track with compressors can use KIT COMP.

Parameter	Value	Explanation
Switch	OFF, ON	Compressor on/off
Attack Time	0.1–100ms	Time from when the input exceeds the threshold until compression begins
Release Time	10–1000ms	Time from when the input falls below the threshold until compression is turned off
Threshold	-60–0 [dB]	Level at which compression is applied
Ratio	1:1–inf:1	Compression ratio
Knee	0–30 [dB]	This is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than Threshold. Higher values produce a smoother transition.
Output Gain	-24+24 [dB]	Level of the output sound
Output Assign	DRY, MFX	Specifies the compressor output destination.

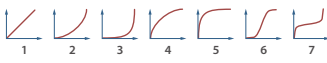
### PAD CTRL

Parameter	Value	Explanation
Level	0–127	Adjusts the volume of the key.
Pan	L64–0–63R	Adjusts the stereo location of the key.
Delay Send Level	0–127	Adjusts the amount of delay for each key.
Reverb Send Level	0–127	Adjusts the amount of reverb for each key.
Mute Group	OFF, 1–31	On an actual acoustic drum set, an open hi-hat and a closed hi-hat sound can never occur simultaneously. To reproduce the reality of this situation, you can set up a Mute Group. The Mute Group function allows you to designate two or more keys that are not allowed to sound simultaneously. Up to 31 Mute Groups can be used. Keys that are not belong to any such group should be set to "OFF."
Output Assign	DRY, MFX, COMP1–6	Specifies the output destination for each key.
Key Offset	-24+24	Shifts the pitch in units of a semitone.
Fine Tune Offset	-50+50 [cent]	Finely adjusts the pitch in units of one cent.
TVC Cutoff Offset	-100+100	Adjusts how far the filter is open. Increasing this value makes the sound brighter, and decreasing it makes the sound darker.
TVF Resonance OffSet	-100+100	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort. Increasing this value strengthens the character, and decreasing it weakens the character.
TVA Attack Time Offset	-100+100	Adjusts the time over which the sound reaches its maximum volume after you press the key. Larger settings of this value make the attack gentler, and smaller settings make the attack sharper.
TVA Decay Time Offset	-100+100	Adjusts the time over which the volume decreases from its maximum value. Larger settings of this value make the decay longer, and smaller settings make the decay shorter.
TVA Release Time Offset	-100+100	The time it takes after the key is released for a sound to become inaudible. If Envelope Mode is NO-SUS, this is the time until the sounded note becomes inaudible. Larger settings of this value make the sound linger, and smaller settings make the sound end more sharply.

### PAD EQ

Parameter	Value	Explanation
EQ Switch	OFF, ON	Turns the equalizer on/off for each key.
EQ Low Gain	-24.0+24.0 [dB]	Gain of the low frequency range.
EQ Mid Gain	-24.0+24.0 [dB]	Specifies the reference frequency of the mid-frequency range.
EQ High Gain	-24.0+24.0 [dB]	Gain of the high frequency range.
EQ Low Frequency	20–16000 [Hz]	Frequency of the low range.
EQ Mid Frequency	20–16000 [Hz]	Adjusts the amount of mid-frequency boost/cut.
EQ High Frequency	20–16000 [Hz]	Frequency of the high range.
Mid Q	0.5–16.0 (0.1 step)	Specifies the width of the mid-frequency range. Set a higher value for Q to narrow the range to be affected.

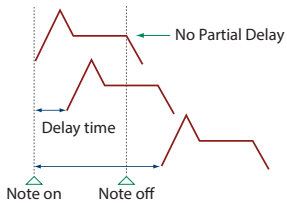
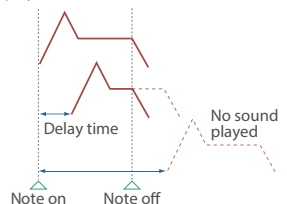
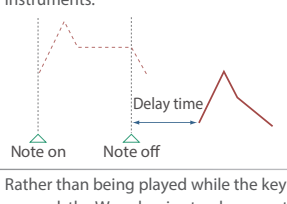
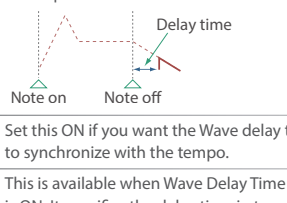
## INST COMMON

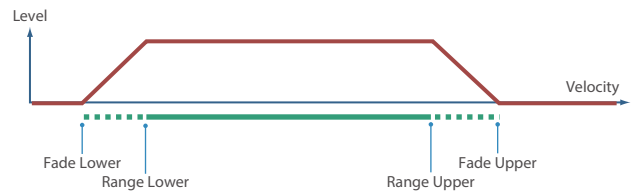
Parameter	Value	Explanation
Category	---, Kick, E.Kick, Snare, E.Snare, Stick, Clap, HH, E.HH, Ride, Cymbal, Tom, E.Tom, Perc 1, Perc 2, Perc 3, Perc 4, FX, Noise, Voice, Hit, SFX	Selects the Inst's category.
Level	0–127	Adjusts the volume of the Inst.
Source Key	0–127	Specifies the pitch in semitone steps relative to 60 (the original pitch of the instrument).
Fine Tune	-50+50 [cent]	Adjusts the pitch of the tone's sound up or down in 1-cent steps (+/-50 cents).
Random Pitch Depth	0–1200 [cent]	Specifies the width in which the pitch is randomly changed each time the note is sounded. If you do not want the pitch to change randomly, set this to "0."
Random Pan Depth	0–63	Use this parameter when you want the stereo location to change randomly each time you press a key. Higher values will produce a greater amount of change.
Alternate Pan Depth	L64–63R	This setting causes panning to be alternated between left and right each time a key is pressed. Higher values will produce a greater amount of change. "L" or "R" settings will reverse the order in which the pan will alternate between left and right. For example, if the INST WAVE setting Wave Alter Pan Sw is ON or REVS for the two waves, the pan will alternate each time the key is pressed.
Assign Type	MULTI, SINGLE	Sets the way sounds are played when the same key is pressed a number of times. <b>MULTI:</b> Layer the sound of the same keys. Even with continuous sounds where the sound plays for an extended time, such as with crash cymbals, the sounds are layered, without previously played sounds being eliminated. <b>SINGLE:</b> Only one sound can be played at a time when the same key is pressed. With continuous sounds where the sound plays for an extended time, the previous sound is stopped when the following sound is played.
Envelope Mode	NO-SUS, SUSTAIN	When a loop waveform is selected, the sound will normally continue as long as the key is pressed. If you want the sound to decay naturally even if the key remains pressed, set this to "NO-SUS." <b>*</b> If a one-shot type Wave is selected, it will not sustain even if this parameter is set to "SUSTAIN"
WMT Velocity Control	OFF, ON, RANDOM	Determines whether a different wave is played (ON) or not (OFF) depending on the force with which the key is played. When set to "RANDOM," the tone's constituent wave will sound randomly, regardless of any velocity messages.
TVA Level Velocity Curve	FIXED, 1–7	Selects one of the following seven curves that determine how keyboard dynamics will affect the volume. Set this to "FIXED" if you don't want the volume of the partial to be affected by the keyboard velocity. 
TVA Level Velocity Sens	-100+100	Set this when you want the volume of the partial to change depending on the force with which you press the keys. Set this to a positive (+) value to have the changes in partial volume increase the more forcefully the keys are played; to make the partial play more softly as you play harder, set this to a negative (-) value.

## INST WAVE

Parameter	Value	Explanation
Wave Group Type	INT SAMP	When OSC TYPE is set to PCM, the waveforms built into the MC-707 are used. When OSC TYPE is set to PCM, waveforms loaded into the project are used.
Wave Bank	A, B, C, D	Specifies the bank of the Wave Group.
Wave Number L		Specifies the wave number within the group specified by Wave Group. If using mono, specify only the left side (L). If using stereo, specify the right side (R) as well. If using mono, specify only Wave Number L and leave Wave Number R at 0: OFF.
Wave Number R		If you specify only Wave Number R, no sound is heard.
Wave Gain	-18+12 [dB]	Specifies the gain (amplitude) of the waveform. The value will change in 6 dB (decibel) steps. Each 6 dB increase doubles the gain.
Wave FXM Switch	OFF, ON	This sets whether FXM will be used (ON) or not (OFF). <b>*</b> FXM (Frequency Cross Modulation) uses a specified waveform to apply frequency modulation to the currently selected waveform, creating complex overtones. This is useful for creating dramatic sounds or sound effects.
Wave FXM Color	1–4	Specifies how FXM will perform frequency modulation. Higher settings result in a grainier sound, while lower settings result in a more metallic sound.
FXM Depth	0–16	Specifies the depth of the modulation produced by FXM.
Wave Coarse Tune	-48+48	Adjusts the pitch of each wave's sound up or down in semitone steps (+/-4 octaves). <b>MEMO</b> The Coarse Tune of the entire drum partial is set by the "Coarse Tune" (p. 64).
Wave Fine Tune	-50+50	Adjusts the pitch of each wave's sound up or down in 1-cent steps (+/-50 cents). <b>*</b> One cent is 1/100th of a semitone. <b>MEMO</b> The Fine Tune of the entire drum partial is set by the "Fine Tune" (p. 64).
Wave Level	0–127	Adjusts the level of each Wave. <b>MEMO</b> The volume level of each drum partial is set with the Partial Level; the volume levels of the entire drum kit is set with the "Level" (p. 75).
Wave Pan	L64–63R	This specifies the pan of the waveform. "L64" is far left, "0" is center, and "63R" is far right.
Wave Random Pan Sw	OFF, ON	Use this setting to cause the waveform's panning to change randomly each time a key is pressed (ON) or not (OFF). <b>*</b> The range of the panning change is set by the Random Pan Depth (p. 76).
Wave Alter Pan Sw	OFF, ON, REVS	This setting causes panning of the waveform to be alternated between left and right each time a key is pressed. Set this to "ON" to pan the Wave according to the Alternate Pan Depth settings, or to "REVS" when you want the panning reversed. If you do not want the panning to change each time a key is pressed, set this to "OFF."
Current Note	21 (A0)–108 (C8)	Selects the key.
Inst Number	000–	Selects the Inst to be assigned to the key.

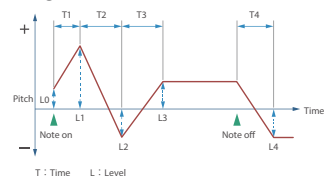


Parameter	Value	Explanation
Wave Delay Mode	Wave delay	This produces a time delay between the moment a key is pressed (or released), and the moment the Wave actually begins to sound. You can also make settings that shift the timing at which each Wave is sounded.
		This differs from the Delay in the internal effects, in that by changing the sound qualities of the delayed Wave and changing the pitch for each Wave, you can also perform arpeggio-like passages just by pressing one key. You can also synchronize the Wave delay time to the tempo of the external MIDI sequencer.
Wave Delay Mode	NORMAL	<p>The Wave begins to play after the time specified in the Wave Delay Time parameter has elapsed.</p>  <p>No Partial Delay</p> <p>Delay time</p> <p>Note on</p> <p>Note off</p>
	HOLD	<p>Although the Wave begins to play after the time specified in the Wave Delay Time parameter has elapsed, if the key is released before the time specified in the Wave Delay Time parameter has elapsed, the Wave is not played.</p>  <p>Delay time</p> <p>No sound played</p> <p>Note on</p> <p>Note off</p>
	KEY-OFF-NORMAL	<p>Rather than being played while the key is pressed, the Wave begins to play once the period of time specified in the Wave Delay Time parameter has elapsed after release of the key.</p> <p>This is effective in situations such as when simulating noises from guitars and other instruments.</p>  <p>Delay time</p> <p>Note on</p> <p>Note off</p>
	KEY-OFF-DECAY	<p>Rather than being played while the key is pressed, the Wave begins to play once the period of time specified in the Wave Delay Time parameter has elapsed after release of the key. Here, however, changes in the TVA Envelope begin while the key is pressed, which in many cases means that only the sound from the release portion of the envelope is heard.</p>  <p>Delay time</p> <p>Note on</p> <p>Note off</p>
	Wave Delay Time Sync	OFF, ON
Wave Delay Time (note)	1/64T-2	This is available when Wave Delay Time Sync is ON. It specifies the delay time in terms of a note value.
Wave Delay Time	0-1023	This is available when Wave Delay Time Sync is OFF. It specifies the delay time without regard to the tempo.

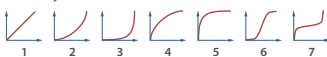


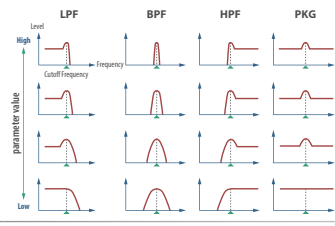
Parameter	Value	Explanation
Velocity Range Low	1-127	Specifies the lower limit (Lower) and upper limit (Upper) of the velocities that will sound the Wave.
Velocity Range Up	1-127	Make these settings when you want to play different Waves depending on your keyboard dynamics.
Velocity Fade Low	0-127	Specifies the degree to which the Wave is sounded by notes played more softly than Velocity Range Low. If you don't want the tone to sound at all, set this parameter to "0."
Velocity Fade Up	0-127	Specifies the degree to which the Wave is sounded by notes played more strongly than Velocity Range Up. If you don't want the tone to sound at all, set this parameter to "0."

## INST PENV

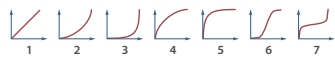
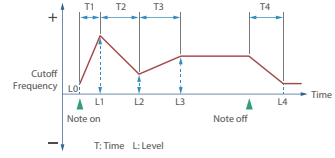
Parameter	Value	Explanation
Env Depth	-100-+100	Adjusts the effect of the Pitch Envelope. Higher settings will cause the pitch envelope to produce greater change. Negative (-) value will invert the shape of the envelope.
Env Velocity Sens	-100-+100	Keyboard playing dynamics can be used to control the depth of the pitch envelope. If you want the pitch envelope to have more effect for strongly played notes, set this parameter to a positive (+) value. If you want the pitch envelope to have less effect for strongly played notes, set this to a negative (-) value.
Env Time 1 Velocity Sens	-100-+100	This allows keyboard dynamics to affect the Time 1 of the Pitch envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive "+" value. If you want it to be slowed down, set this to a negative "-" value.
Env Time 4 Velocity Sens	-100-+100	Use this parameter when you want key release speed to affect the Time 4 value of the pitch envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
Env Time 1-4	0-1023	<p>Specify the pitch envelope times (Time 1- Time 4).</p> <p>Higher settings will result in a longer time until the next pitch is reached. (For example, Time 2 is the time over which the pitch changes from Level 1 to Level 2.)</p>  <p>T : Time L : Level</p>
Env Level 0-4	-511-+511	<p>Specify the pitch envelope levels (Level 0- Level 4).</p> <p>It determines how much the pitch changes from the reference pitch (the value set with Coarse Tune or Fine Tune on the Pitch screen) at each point.</p> <p>Positive (+) value will cause the pitch to be higher than the standard pitch, and negative (-) value will cause it to be lower.</p>

## INST FILTER

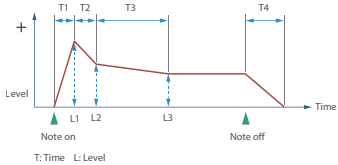
Parameter	Value	Explanation
Filter Type	Selects the type of filter.	
	OFF	No filter is used.
	LPF	Low Pass Filter. This cuts the frequencies in the region above the cutoff frequency (Cutoff Frequency). Since this cuts the high-frequency region, the sound becomes more mellow. This is the most common filter used in synthesizers.
	BPF	Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency (Cutoff Frequency), and cuts the rest. This can be useful when creating distinctive sounds.
	HPF	High Pass Filter. This cuts the frequencies in the region below the cutoff frequency (Cutoff Frequency). This is suitable for creating percussive sounds emphasizing their higher tones.
	PKG	Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency (Cutoff Frequency). This can be used to portray the resonance peak of a drum.
	LPF2	Low Pass Filter 2. Although frequency components above the Cutoff frequency (Cutoff Frequency) are cut, the sensitivity of this filter is half that of the LPF. This makes it a comparatively warmer low pass filter. This filter is good for use with simulated instrument sounds such as the acoustic piano. <i>* If you set "LPF2," the setting for the Resonance parameter will be ignored (p. 78).</i>
	LPF3	Low Pass Filter 3. Although frequency components above the Cutoff frequency (Cutoff Frequency) are cut, the sensitivity of this filter changes according to the Cutoff frequency. While this filter is also good for use with simulated acoustic instrument sounds, the nuance it exhibits differs from that of the LPF2, even with the same TVF Envelope settings. <i>* If you set "LPF3," the setting for the Resonance parameter will be ignored (p. 78).</i>
	Cutoff Frequency	0–1023
Cutoff Velocity Curve	FIXED, 1–7	Selects one of the following seven curves that determine how keyboard playing dynamics (velocity) influence the cutoff frequency. Set this to "FIXED" if you don't want the Cutoff frequency to be affected by the keyboard velocity. 
Cutoff Velocity Sens	-100–+100	Use this parameter when changing the cutoff frequency to be applied as a result of changes in playing velocity. Specify a positive "+" value if you want the cutoff frequency to raise when you play strongly, or a negative "-" value if you want it to lower.

Parameter	Value	Explanation
Resonance	0–1023	Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort. 
Resonance Velocity Sens	-100–+100	Use this parameter when changing the resonance to be applied as a result of changes in playing velocity. Specify a positive "+" value if you want resonance to increase when you play strongly, or a negative "-" value if you want it to decrease.

## INST FENV

Parameter	Value	Explanation
Env Depth	-63–+63	Specifies the depth of the Filter envelope. Higher settings increase the change produced by the Filter envelope. Negative (-) value will invert the shape of the envelope.
Env Velocity Curve	FIXED, 1–7	Selects one of the following seven types of curve by which keyboard playing dynamics affect the depth of the filter envelope. If you don't want keyboard playing dynamics to affect the filter envelope depth, specify "FIXED." 
Env Velocity Sens	-100–+100	Specify this if you want keyboard playing dynamics to affect the filter envelope depth. Specify a positive "+" value if you want the filter envelope to apply more deeply as you play more strongly, or a negative "-" value if you want it to apply less deeply.
Env Time 1 Velocity Sens	-100–+100	Specify this if you want keyboard playing dynamics to affect Time 1 of the filter envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive "+" value. If you want it to be slowed down, set this to a negative "-" value.
Env Time 4 Velocity Sens	-100–+100	Specify this if you want key release velocity to affect Time 4 of the filter envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
Env Time 1–4	0–1023	Specify the filter envelope times (Time 1–Time 4). Higher settings will lengthen the time until the next cutoff frequency level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.) 
Env Level 0–4	0–1023	Specify the filter envelope levels (Level 0–Level 4). Specify the amount of cutoff frequency change at each point relative to the reference cutoff frequency (the cutoff frequency value specified in the Filter screen).

## INST AENV

Parameter	Value	Explanation
Env Time 1 Velocity Sens	-100→+100	Specify this if you want keyboard dynamics to affect the AMP envelope's Time 1. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
Env Time 4 Velocity Sens	-100→+100	Specify this if you want key release velocity to affect the AMP envelope's Time 4. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
Env Time 1-4	0-1023	Specify the AMP envelope times (Time 1–Time 4). Higher settings lengthen the time until the next volume level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.)
Env Level 1-3	0-1023	Specify the AMP envelope levels (Level 1–Level 3). These specify the amount of change at each point relative to the reference volume (the partial level value specified in the Amp screen). 

## Total Effect Parameters

### COMP

Parameter	Value	Explanation
Switch	OFF, ON	Specifies whether the master COMP (a compressor applied to the entire sound generator of the MC-707) is used (ON) or not used (OFF).
Low Attack Time	0.1–100 [ms]	Specifies the time from when the input exceeds Low Thres until compression is applied to the volume of the low-frequency band.
Low Release Time	10–1000 [ms]	In a state when compression is already being applied, this specifies the time from when the input decreases below Low Thres until the low-frequency band stops being compressed.
Low Threshold	-60–0 [dB]	Specifies the volume level at which compression starts for the low-frequency band.
Low Ratio	1: 1, 2: 1, 3: 1, 4: 1, 8: 1, 16: 1, 32: 1, INF: 1	Specifies the compression ratio for the low-frequency band.
Low Knee	0–30 [dB]	This is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than Low Thres. Higher values produce a smoother transition.
Low Output Gain	-24.0–+24.0 [dB]	Specifies the output volume of the low-frequency band.
Mid Attack Time	0.1–100 [ms]	Specifies the time from when the input exceeds Mid Thres until compression is applied to the volume of the mid-frequency band.
Mid Release Time	10–1000 [ms]	In a state when compression is already being applied, this specifies the time from when the input decreases below Mid Thres until the mid-frequency band stops being compressed.
Mid Threshold	-60–0 [dB]	Specifies the volume level at which compression starts for the mid-frequency band.
Mid Ratio	1: 1, 2: 1, 3: 1, 4: 1, 8: 1, 16: 1, 32: 1, INF: 1	Specifies the compression ratio for the mid-frequency band.
Mid Knee	0–30 [dB]	This is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than Mid Thres. Higher values produce a smoother transition.
Mid Output Gain	-24.0–+24.0 [dB]	Specifies the output volume of the mid-frequency band.
HighAttack Time	0.1–100 [ms]	Specifies the time from when the input exceeds High Thres until compression is applied to the volume of the high-frequency band.
High Release Time	10–1000 [ms]	In a state when compression is already being applied, this specifies the time from when the input decreases below High Thres until the high-frequency band stops being compressed.
High Threshold	-60–0 [dB]	Specifies the volume level at which compression starts for the high-frequency band.
High Ratio	1: 1, 2: 1, 3: 1, 4: 1, 8: 1, 16: 1, 32: 1, INF: 1	Specifies the compression ratio for the high-frequency band.
High Knee	0–30 [dB]	This is a function that smooths the onset of compression from the uncompressed state; it gradually applies compression starting earlier than High Thres. Higher values produce a smoother transition.
High Output Gain	-24.0–+24.0 [dB]	Specifies the output volume of the high-frequency band.
Split Freq Low	16–16000 [Hz]	Specifies the frequency at which the low-frequency band (LOW) and mid-frequency band (MID) are divided.
Split Freq Hi		Specifies the frequency at which the high-frequency band (HIGH) and mid-frequency band (MID) are divided.

### EQ

Parameter	Value	Explanation
Switch	OFF, ON	Specifies whether the master EQ (an equalizer applied to the entire sound generator of the MC-707) is used (ON) or not used (OFF).
EQ Input Gain	-24–+24 [dB]	Adjusts the amount of boost/cut for the input to the EQ.
Low Gain	-24–+24 [dB]	Gain of the low frequency range.
Low Freq	20–16000 [Hz]	Frequency of the low range.
Mid1 Gain	-24–+24 [dB]	Gain of the middle frequency range 1.
Mid1Freq	20–16000 [Hz]	Frequency of the middle range 1.
Mid1 Q	0.5–16.0	Width of the middle frequency range 1. Set a higher value for Q to narrow the range to be affected.
Mid2 Gain	-24–+24 [dB]	Gain of the middle frequency range 2.
Mid2Freq	20–16000 [Hz]	Frequency of the middle range 2.
Mid2 Q	0.5–16.0	Width of the middle frequency range 2. Set a higher value for Q to narrow the range to be affected.
Mid3 Gain	-24–+24 [dB]	Gain of the middle frequency range 3.
Mid3 Freq	20–16000 [Hz]	Frequency of the middle range 3.
Mid3 Q	0.5–16.0	Width of the middle frequency range 3. Set a higher value for Q to narrow the range to be affected.
High Gain	-24–+24 [dB]	Gain of the high frequency range.
HighFreq	20–16000 [Hz]	Frequency of the high range.

### MXF

Parameter	Value	Explanation
Switch	OFF, ON	Turns the effect on/off.
MXF parameters	(Shows the parameters of the selected MXF.)	
Cho Send (Chorus Send Level)	0–127	Specifies the chorus send level of the sound after MXF is applied.
Rev Send (Reverb Send Level)	0–127	Specifies the reverb send level of the sound after MXF is applied.
MXF CTRL Src1–4 (MXF CtrlSrc 1–4)	Specifies the MIDI message that will control the corresponding MXF CONTROL parameter.	
	OFF	MXF will not be used.
	MOD: CC01–31	Controller number 1–31
	CC33–PHASR: CC95	Controller number 33–95
	BEND	Pitch Bend
AFT	Aftertouch	
SYS-CTRL1–SYS-CTRL4	The controllers assigned by the system parameters SysCtrlSrc1–4 Source are used.	
MXF CTRL Dst1–4 (MXF CtrlDst 1–4)	Specifies which of the multi-effect parameters are controlled using MXF CONTROL. The multi-effects parameters available for control will depend on the multi-effects type.	
MXF CTRL Sens1–4 (MXF CtrlSens 1–4)	-63–+63	Specifies the depth of MXF CONTROL. Specify a positive "+" value if you want to change the value of the assigned destination in a positive direction (larger, toward the right, faster, etc.), or specify a negative value "-" if you want to change the value in a negative direction (smaller, toward the left, slower, etc.). Larger values will allow a greater amount of control.

#### Controlling a MXF via MIDI (MXF CONTROL)

You can use MIDI messages such as control change messages to control the principal MXF parameters. This capability is called "MXF CONTROL (multi-effects control)." The editable parameters are pre-determined according to the MXF type. You can specify up to four parameters for multi-effect control. To use MXF CONTROL, you'll need to specify which MIDI message (Source) will affect which parameter (Destination), and how greatly (Sens).

### EQ (Part 1–4)

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

### DELAY

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

### Delay Parameters

### CHORUS

This is a stereo chorus.

Parameter	Value	Explanation
Rate	0–127	Frequency of modulation
Depth	0–127	Depth of modulation
Feedback	0–127	Level at which chorus sound is returned to the input

### CE-1

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

Parameter	Value	Explanation
Intensity	0–127	Chorus depth

### SDD-320

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

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

### JUNO-106 CHORUS

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

Parameter	Value	Explanation
Mode	I, II, I+II, JX I, JX II	Type of Chorus <b>I+II</b> : The state in which two buttons are pressed simultaneously.

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

### DELAY

This is a stereo delay.

Parameter	Value	Explanation
Delay (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Delay (msec)	1–1300 [msec]	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay (note)	Note → “Note” (p. 120)	
Feedback	-98+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don’t want to filter out any high frequencies, set this parameter to BYPASS.

### T-CTRL DELAY

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

Parameter	Value	Explanation
Delay (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Delay (msec)	1–1300 [msec]	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay (note)	Note → “Note” (p. 120)	
Acceleration	0–15	When you change the delay time, this specifies the time over which the current delay time changes to the specified delay time. This affects the speed of pitch change as well as the delay time.
Feedback	-98+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don’t want to filter out any high frequencies, set this parameter to BYPASS.

### DELAY → TREMOLO

Tremolo is applied to the delay sound.

Parameter	Value	Explanation
Input Mode	MONAURAL	The input is mono-mixed.
	STEREO	The sound is input in stereo.
Delay (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Delay (msec)	1–1300 [msec]	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay (note)	Note → “Note” (p. 120)	
Feedback	-98+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don’t want to filter out any high frequencies, set this parameter to BYPASS.
Tremolo Switch	OFF, ON	Switches the tremolo effect on/off

## Parameter List

Parameter	Value	Explanation
Tremolo Mod Wave	Modulation Wave (panning)	
	TRI	Triangle wave
	SQR	Square wave
	SIN	Sine wave
	SAW1	Sawtooth wave
	SAW2	
TRP	Trapezoidal wave	
Tremolo Rate (sync sw)	OFF, ON	If this is on, the tremolo synchronizes with the tempo.
Tremolo Rate (Hz)	0.05–10.00 [Hz]	Tremolo rate
Tremolo Rate (note)	Note ➔ "Note" (p. 120)	
Tremolo Depth	0–127	Tremolo depth

### 2TAP PAN DELAY

Delay sound is heard in the two locations you specify.

Parameter	Value	Explanation
Delay (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Delay (msec)	1–1300 [msec]	Adjusts the time until the second delay sound is heard.
Delay (note)	Note ➔ "Note" (p. 120)	
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Delay 1 Pan	L64–63R	Stereo location of Delay 1
Delay 2 Pan	L64–63R	Stereo location of Delay 2
Delay 1 Level	0–127	Volume of delay 1
Delay 2 Level	0–127	Volume of delay 2

### 3TAP PAN DELAY

Delay sound is heard in the three locations you specify.

Parameter	Value	Explanation
Delay (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Delay (msec)	1–2600 [msec]	Delay time of the third delay sound after the original sound is heard.
Delay (note)	Note ➔ "Note" (p. 120)	
Delay1 Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 [Hz], BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Delay 1 Pan	L64–63R	Stereo location of Delay 1
Delay 2 Pan	L64–63R	Stereo location of Delay 2
Delay 3 Pan	L64–63R	Stereo location of Delay 3
Delay 1 Level	0–127	Volume of delay 1
Delay 2 Level	0–127	Volume of delay 2
Delay 3 Level	0–127	Volume of delay 3

## REVERB

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

## Reverb Parameters

### INTEGRA

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

### WARM HALL

Parameter	Value	Explanation
Pre Delay	0–100 [msec]	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time	0.3–30 [sec]	Adjusts the decay length of the reverb sound.
Pre LPF	16–15000 [Hz], Bypass	Frequency above which to cut the high-frequency portion of the sound entering the reverb
Pre HPF	16–15000 [Hz], Bypass	Frequency below which to cut the low-frequency portion of the sound entering the reverb
PreLoop LPF	16–15000 [Hz], Bypass	Frequency above which to cut the high-frequency portion of the extended reverberation
Diffusion	0–127	Adjusts the change in the density of the reverb over time.
HF Damp Freq	1000–8000 [Hz]	Frequency above which to cut the high-frequency portion of the reverb
HF Damp Ratio	0.1–1.0	Amount by which to attenuate the high-frequency portion of the reverb

### HALL

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

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

## GS

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

## SRV2000

Parameter	Value	Explanation
Selection		Selects the type of reverb offered by the Roland SRV-2000 digital reverb.
	Pre Delay	Room reverb. Higher values increase the size of the room.
	Time	Hall reverb. Higher values increase the size of the concert hall.
	HF Damp	Plate reverb. A more flamboyant reverb sound than P-A.
	Density	Plate reverb.
Pre Delay	0–160	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time	1–990 [msec]	Adjusts the decay length of the reverb sound.
HF Damp	0.05–1.00	Adjusts the high-frequency portion of the reverb.
Density	0–9	Adjusts the density of the late reverberation.
Attack Gain	0–9	Adjusts the gain of the early reflections.
Attack Time	0–9	Adjusts the time of the early reflections.
ER Density	0–9	Adjusts the density of the early reflections.
ER Level	0–99	Adjusts the volume of the early reflections.
EQ Low Freq	0.04–1.00 [kHz]	Frequency of the low range.
EQ Low Gain	-24–+12 [dB]	Gain of the low frequency range.
EQ Mid Freq	0.25–9.99 [kHz]	Adjusts the amount of mid-frequency boost/cut.
EQ Mid Gain	-24–+12 [dB]	Specifies the reference frequency of the mid-frequency range.
EQ Mid Q	0.2–9.0	Specifies the width of the mid-frequency range. Set a higher value for Q to narrow the range to be affected.
EQ Hi Freq	0.80–9.99 [kHz]	Frequency of the high range.
EQ Hi Gain	-24–+12 [dB]	Gain of the high frequency range.
EQ Hi Q	0.2–9.0	Specifies the width of the high-frequency range. Set a higher value for Q to narrow the range to be affected.

## SRV2000 (NON-LINEAR)

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

## GM2 REVERB

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



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## 00 Thru

## 01 Equalizer

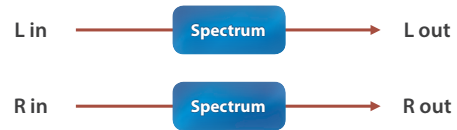
This is a four-band stereo equalizer (low, mid x 2, high).



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

## 02 Spectrum

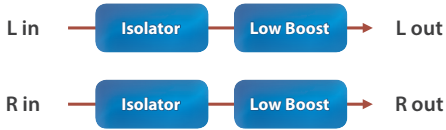
This is a stereo spectrum. Spectrum is a type of filter which modifies the timbre by boosting or cutting the level at specific frequencies.



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

### 03 Isolator

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



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

### 04 Low Boost

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



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

### 05 Super Filter

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



Parameter	Value	Explanation
Filter Type	LPF, BPF, HPF, NOTCH	Type of filter Frequency range that will pass through each filter <b>LPF</b> : frequencies below the cutoff <b>BPF</b> : frequencies in the region of the cutoff <b>HPF</b> : frequencies above the cutoff <b>NOTCH</b> : frequencies other than the region of the cutoff
Filter Slope	-12, -24, -36 [dB]	Amount of attenuation per octave <b>-12 dB</b> : Gentle, <b>-24 dB</b> : Steep, <b>-36 dB</b> : Extremely steep
Filter Cutoff	0-127	Cutoff frequency of the filter Increasing this value will raise the cutoff frequency.
Filter Resonance	0-100	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Filter Gain	0~+12 [dB]	Amount of boost for the filter output
Modulation Sw	OFF, ON	On/off switch for cyclic change
Modulation Wave	TRI, SQR, SIN, SAW1, SAW2	How the cutoff frequency will be modulated <b>TRI</b> : Triangle wave <b>SQR</b> : Square wave <b>SIN</b> : Sine wave <b>SAW1</b> : Sawtooth wave (upward) <b>SAW2</b> : Sawtooth wave (downward)
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Rate (Hz)	0.05-10.00 [Hz]	
Rate (note)	Note ⇒ "Note" (p. 120)	Frequency of modulation
Depth	0-127	Depth of modulation
Attack	0-127	Speed at which the cutoff frequency will change This is effective if Modulation Wave is SQR, SAW1, or SAW2.
Level	0-127	Output Level

## 06 Step Filter

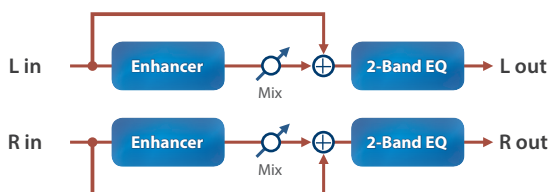
This is a filter whose cutoff frequency can be modulated in steps. You can specify the pattern by which the cutoff frequency will change.



Parameter	Value	Explanation
Step 01–16	0–127	Cutoff frequency at each step
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Rate (note)	Note → "Note" (p. 120)	
Attack	0–127	Speed at which the cutoff frequency changes between steps
Filter Type	LPF, BPF, HPF, NOTCH	Type of filter Frequency range that will pass through each filter <b>LPF</b> : frequencies below the cutoff <b>BPF</b> : frequencies in the region of the cutoff <b>HPF</b> : frequencies above the cutoff <b>NOTCH</b> : frequencies other than the region of the cutoff
Filter Slope	-12, -24, -36 dB	Amount of attenuation per octave <b>-12 dB</b> : Gentle, <b>-24 dB</b> : Steep, <b>-36 dB</b> : Extremely steep
Filter Resonance	0–127	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Filter Gain	0–+12 [dB]	Amount of boost for the filter output
Level	0–127	Output Level

## 07 Enhancer

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



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

## 08 Auto Wah

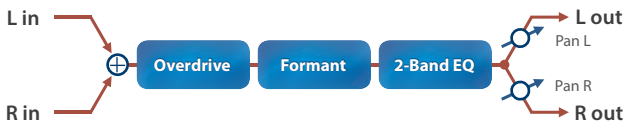
Cyclically controls a filter to create cyclic change in timbre.



Parameter	Value	Explanation
Filter Type	LPF, BPF	Type of filter <b>LPF</b> : Produces a wah effect in a broad frequency range. <b>BPF</b> : Produces a wah effect in a narrow frequency range.
Manual	0–127	Center frequency at which the wah effect is applied
Peak	0–127	Width of the frequency region at which the wah effect is applied Increasing this value will make the frequency region narrower.
Sens	0–127	Adjusts the sensitivity with which the filter is controlled.
Polarity	UP, DOWN	Direction in which the filter will move <b>UP</b> : The filter will change toward a higher frequency. <b>DOWN</b> : The filter will change toward a lower frequency.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52) "TEMPO" (p. 52) "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	Modulation frequency of the wah effect
Rate (note)	Note → "Note" (p. 120)	
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Adjusts the degree of phase shift of the left and right sounds when the wah effect is applied.
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

## 09 Humanizer

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



Parameter	Value	Explanation
Drive Sw	OFF, ON	Overdrive on/off
Drive	0–127	Degree of distortion Also changes the volume.
Vowel1	a, e, i, o, u	Selects the vowel.
Vowel2	a, e, i, o, u	Vowel2
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➔ "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	
Rate (note)	Note ➔ "Note" (p. 120)	Frequency at which the two vowels switch
Depth	0–127	Depth of the effect
Input Sync Sw	OFF, ON	LFO reset on/off If this is ON, the LFO for switching the vowels is reset by the input signal.
Input Sync Threshold	0–127	Volume level at which reset is applied
Manual	0–100	Point at which Vowel 1/2 switch <b>0–49:</b> Vowel 1 will have a longer duration. <b>50:</b> Vowel 1 and 2 will be of equal duration. <b>51–100:</b> Vowel 2 will have a longer duration.
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Pan	L64–63R	Stereo location of the output sound
Level	0–127	Output Level

## 10 Speaker Simulator

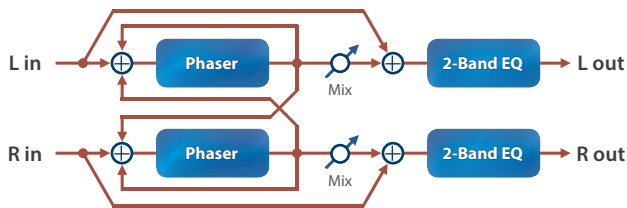
Simulates the speaker type and microphone settings used to record the speaker sound.



Parameter	Value	Explanation																																																																			
Speaker Type		<table border="1"> <thead> <tr> <th>Cabinet</th> <th>Diameter (in inches) and number of the speaker</th> <th>Microphone</th> </tr> </thead> <tbody> <tr> <td>SMALL 1</td> <td>Small open-back enclosure</td> <td>10</td> <td>Dynamic</td> </tr> <tr> <td>SMALL 2</td> <td>Small open-back enclosure</td> <td>10</td> <td>Dynamic</td> </tr> <tr> <td>MIDDLE</td> <td>Open back enclosure</td> <td>12 x 1</td> <td>Dynamic</td> </tr> <tr> <td>JC-120</td> <td>Open back enclosure</td> <td>12 x 2</td> <td>Dynamic</td> </tr> <tr> <td>BUILT-IN 1</td> <td>Open back enclosure</td> <td>12 x 2</td> <td>Dynamic</td> </tr> <tr> <td>BUILT-IN 2</td> <td>Open back enclosure</td> <td>12 x 2</td> <td>Condenser</td> </tr> <tr> <td>BUILT-IN 3</td> <td>Open back enclosure</td> <td>12 x 2</td> <td>Condenser</td> </tr> <tr> <td>BUILT-IN 4</td> <td>Open back enclosure</td> <td>12 x 2</td> <td>Condenser</td> </tr> <tr> <td>BUILT-IN 5</td> <td>Open back enclosure</td> <td>12 x 2</td> <td>Condenser</td> </tr> <tr> <td>BG STACK 1</td> <td>Sealed enclosure</td> <td>12 x 2</td> <td>Condenser</td> </tr> <tr> <td>BG STACK 2</td> <td>Large sealed enclosure</td> <td>12 x 2</td> <td>Condenser</td> </tr> <tr> <td>MS STACK 1</td> <td>Large sealed enclosure</td> <td>12 x 4</td> <td>Condenser</td> </tr> <tr> <td>MS STACK 2</td> <td>Large sealed enclosure</td> <td>12 x 4</td> <td>Condenser</td> </tr> <tr> <td>METAL STACK</td> <td>Large double stack</td> <td>12 x 4</td> <td>Condenser</td> </tr> <tr> <td>2-STACK</td> <td>Large double stack</td> <td>12 x 4</td> <td>Condenser</td> </tr> <tr> <td>3-STACK</td> <td>Large triple stack</td> <td>12 x 4</td> <td>Condenser</td> </tr> </tbody> </table>	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
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3-STACK	Large triple stack	12 x 4	Condenser																																																																		
Mic Setting	1, 2, 3	Adjusts the location of the microphone that is recording the sound of the speaker.  This can be adjusted in three steps, with the microphone becoming more distant in the order of 1, 2, and 3.																																																																			
Mic Level	0–127	Volume of the microphone																																																																			
Direct Level	0–127	Volume of the direct sound																																																																			
Level	0–127	Output Level																																																																			

## 11 Phaser 1

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



Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual	0–127	Center frequency at which the sound is modulated
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	
Rate (note)	Note → "Note" (p. 120)	Modulation rate
Depth	0–127	Depth of modulation
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation will be the same or the opposite. <b>INVERSE:</b> The left and right phase will be opposite. When using a mono source, this spreads the sound. <b>SYNCHRO:</b> The left and right phase will be the same. Select this when inputting a stereo source.
Resonance	0–127	Amount of feedback
Cross Feedback	-98–+98 [%]	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
Mix	0–127	Level of the phase-shifted sound
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

## 12 Phaser 2

This simulates an analog phaser of the past.

It is particularly suitable for electric piano.

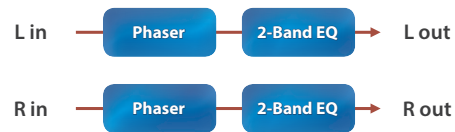


Parameter	Value	Explanation
Rate	0–100	Modulation rate
Color	1, 2	Modulation character
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

## 13 Phaser 3

This simulates a different analog phaser than Phaser 2.

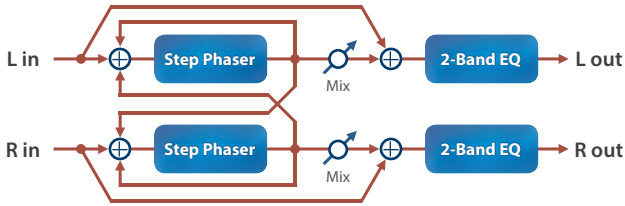
It is particularly suitable for electric piano.



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

## 14 Step Phaser

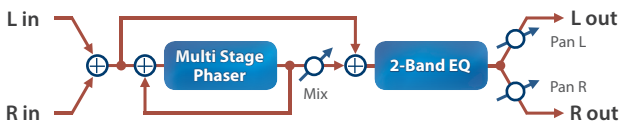
This is a stereo phaser. The phaser effect will be varied gradually.



Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual	0–127	Center frequency at which the sound is modulated
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	
Rate (note)	Note → "Note" (p. 120)	Modulation rate
Depth	0–127	Depth of modulation
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation will be the same or the opposite. <b>INVERSE:</b> The left and right phase will be opposite. When using a mono source, this spreads the sound. <b>SYNCHRO:</b> The left and right phase will be the same. Select this when inputting a stereo source.
Resonance	0–127	Amount of feedback
Cross Feedback	-98–+98 [%]	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Step Rate (Hz)	0.10–20.00 [Hz]	
Step Rate (note)	Note → "Note" (p. 120)	Rate of the step-wise change in the phaser effect
Mix	0–127	Level of the phase-shifted sound
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

## 15 Multi Stage Phaser

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

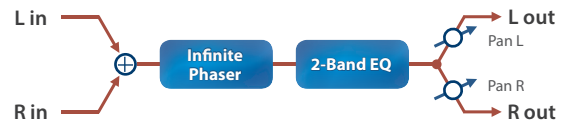


Parameter	Value	Explanation
Mode	4-STAGE, 8-STAGE, 12-STAGE, 16-STAGE, 20-STAGE, 24-STAGE	Number of stages in the phaser
Manual	0–127	Center frequency at which the sound is modulated
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)

Parameter	Value	Explanation
Rate (Hz)	0.05–10.00 [Hz]	
Rate (note)	Note → "Note" (p. 120)	Modulation rate
Depth	0–127	Depth of modulation
Resonance	0–127	Amount of feedback
Mix	0–127	Level of the phase-shifted sound
Pan	L64–63R	Stereo location of the output sound
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

## 16 Infinite Phaser

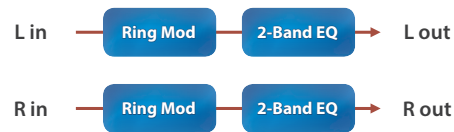
A phaser that continues raising/lowering the frequency at which the sound is modulated.



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

## 17 Ring Modulator

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



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

## 18 Tremolo

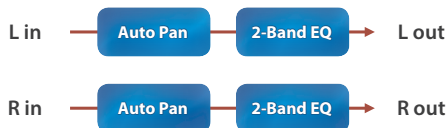
Cyclically changes the volume.



Parameter	Value	Explanation
Mod Wave	TRI, SQR, SIN, SAW1, SAW2, TRP	Modulation wave <b>TRI:</b> Triangle wave <b>SQR:</b> Square wave <b>SIN:</b> Sine wave <b>SAW1/2:</b> Sawtooth wave <b>TRP:</b> Trapezoidal wave
	SAW1 SAW2	
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➔ "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of the change
Rate (note)	Note ➔ "Note" (p. 120)	
Depth	0–127	Depth to which the effect is applied
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

## 19 Auto Pan

Cyclically modulates the stereo location of the sound.



Parameter	Value	Explanation
Mod Wave	TRI, SQR, SIN, SAW1, SAW2, TRP	How the pan changes <b>TRI:</b> Triangle wave <b>SQR:</b> Square wave <b>SIN:</b> Sine wave <b>SAW1/2:</b> Sawtooth wave <b>TRP:</b> Trapezoidal wave
	SAW1 SAW2	
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➔ "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of the change
Rate (note)	Note ➔ "Note" (p. 120)	
Depth	0–127	Depth to which the effect is applied
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

## 20 Slicer

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

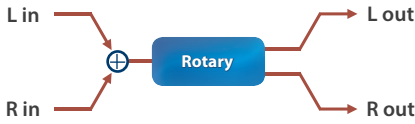


Parameter	Value	Explanation
Step 01–16	0–127	Level at each step
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➔ "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	
Rate (note)	Note ➔ "Note" (p. 120)	Rate at which the 16-step sequence will cycle
Attack	0–127	Speed at which the level changes between steps
Input Sync Sw	OFF, ON	Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF)
Input Sync Threshold	0–127	Volume at which an input note will be detected
Mode	LEGATO, SLASH	Sets the manner in which the volume changes as one step progresses to the next. <b>LEGATO:</b> The change in volume from one step's level to the next remains unaltered. If the level of a following step is the same as the one preceding it, there is no change in volume. <b>SLASH:</b> The level is momentarily set to 0 before progressing to the level of the next step. This change in volume occurs even if the level of the following step is the same as the preceding step.
Shuffle	0–127	Timing of volume changes in levels for even-numbered steps (step 2, step 4, step 6...). The higher the value, the later the beat progresses.
Level	0–127	Output Level

## 21 Rotary

This simulates a classic rotary speaker of the past.

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

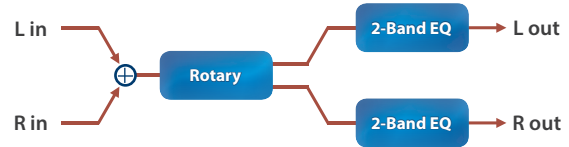


Parameter	Value	Explanation
Speed	SLOW, FAST	Simultaneously switch the rotational speed of the low frequency rotor and high frequency rotor. <b>SLOW:</b> Slows down the rotation to the Slow Rate. <b>FAST:</b> Speeds up the rotation to the Fast Rate.
Woofer Slow Speed	0.05–10.00 [Hz]	Slow speed (SLOW)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

## 22 VK Rotary

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

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

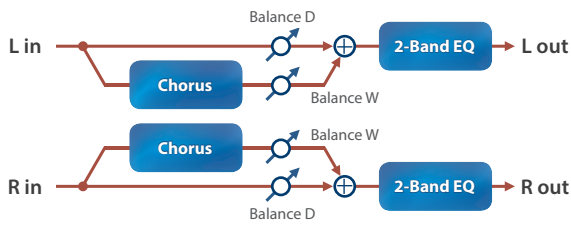


Parameter	Value	Explanation
Speed	SLOW, FAST	Rotational speed of the rotating speaker <b>SLOW:</b> Slow <b>FAST:</b> Fast
Brake	OFF, ON	Switches the rotation of the rotary speaker. When this is turned on, the rotation will gradually stop. When it is turned off, the rotation will gradually resume.
Woofer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



## 23 Chorus

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

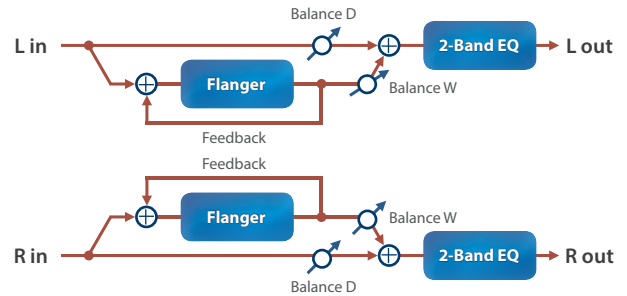


Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter <b>OFF:</b> No filter is used. <b>LPF:</b> Cuts the frequency range above the Cutoff Freq <b>HPF:</b> Cuts the frequency range below the Cutoff Freq
Cutoff Freq	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Basic frequency of the filter
Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	
Rate (note)	Note ⇒ "Note" (p. 120)	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

## 24 Flanger

This is a stereo flanger (The LFO has the same phase for left and right.). It produces a metallic resonance that rises and falls like a jet airplane taking off or landing.

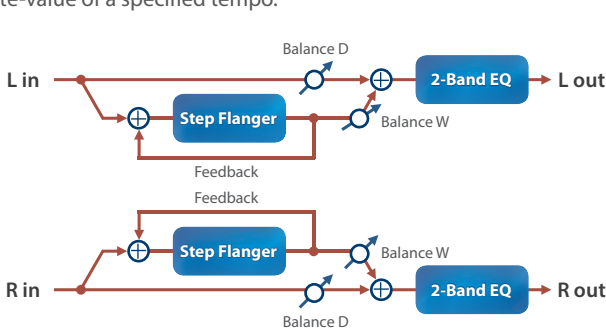
A filter is provided so that you can adjust the timbre of the flanged sound.



Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter <b>OFF:</b> No filter is used. <b>LPF:</b> Cuts the frequency range above the Cutoff Freq <b>HPF:</b> Cuts the frequency range below the Cutoff Freq
Cutoff Freq	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Basic frequency of the filter
Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	
Rate (note)	Note ⇒ "Note" (p. 120)	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

## 25 Step Flanger

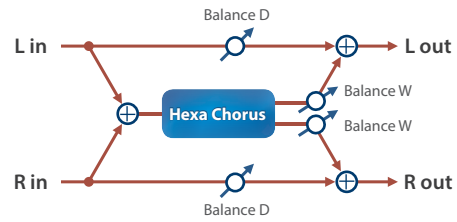
This is a flanger in which the flanger pitch changes in steps. The speed at which the pitch changes can also be specified in terms of a note-value of a specified tempo.



Parameter	Value	Explanation
Filter Type	OFF, LPF, HPF	Type of filter <b>OFF:</b> No filter is used. <b>LPF:</b> Cuts the frequency range above the Cutoff Freq <b>HPF:</b> Cuts the frequency range below the Cutoff Freq
Cutoff Freq	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Basic frequency of the filter
Pre Delay	0.0–100.0 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Rate (note)	Note → "Note" (p. 120)	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Step Rate (Hz)	0.10–20.00 [Hz]	Rate (period) of pitch change
Step Rate (note)	Note → "Note" (p. 120)	Rate (period) of pitch change
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

## 26 Hexa-Chorus

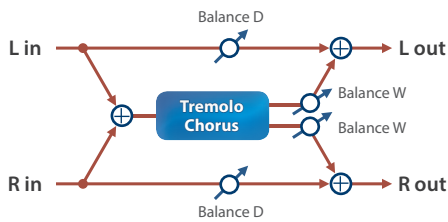
Uses a six-phase chorus (six layers of chorused sound) to give richness and spatial spread to the sound.



Parameter	Value	Explanation
Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Rate (note)	Note → "Note" (p. 120)	Frequency of modulation
Depth	0–127	Depth of modulation
Pre Delay Deviation	0–20	Adjusts the differences in Pre Delay between each chorus sound.
Depth Deviation	-20–20	Adjusts the difference in modulation depth between each chorus sound.
Pan Deviation	0–20	Adjusts the difference in stereo location between each chorus sound. <b>0:</b> All chorus sounds will be in the center. <b>20:</b> Each chorus sound will be spaced at 60 degree intervals relative to the center.
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

## 27 Tremolo Chorus

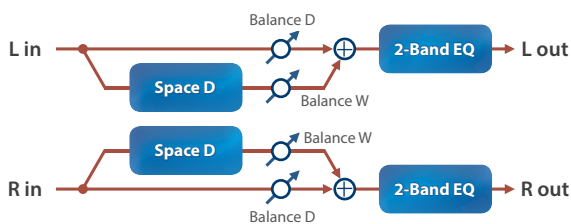
This is a chorus effect with added Tremolo (cyclic modulation of volume).



Parameter	Value	Explanation
Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Chorus Rate (Hz)	0.05–10.00 [Hz]	
Cho Note (Chorus Rate (note))	Note ⇒ "Note" (p. 120)	Modulation frequency of the chorus effect
Chorus Depth	0–127	Modulation depth of the chorus effect
Tremolo Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Tremolo Rate (Hz)	0.05–10.00 [Hz]	
Tremolo Rate (note)	Note ⇒ "Note" (p. 120)	Modulation frequency of the tremolo effect
Tremolo Separation	0–127	Depth of the tremolo effect
Tremolo Phase	0–180 [deg]	Spread of the tremolo effect
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the tremolo chorus sound (W)
Level	0–127	Output Level

## 28 Space-D

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



Parameter	Value	Explanation
Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	
Rate (note)	Note ⇒ "Note" (p. 120)	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

## 29 Overdrive

This is an overdrive that provides heavy distortion.



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

## 30 Distortion

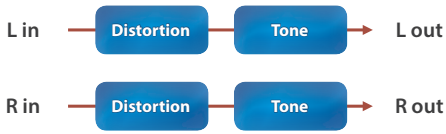
This is a distortion effect that provides heavy distortion.



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

## 31 T-Scream

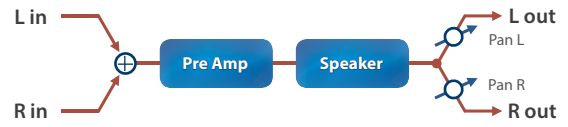
This models a classic analog overdrive. It is distinctive in adding an appropriate amount of overtones without muddying the sound.



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

## 32 Guitar Amp Simulator

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

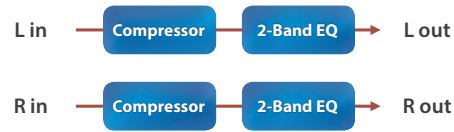


Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
Pre Amp Type		Type of guitar amp
	JC-120	This models the sound of the Roland JC-120.
	CLEAN TWIN	This models a Fender Twin Reverb.
	MATCH DRIVE	This models the sound input to left input on a Matchless D/C-30. A simulation of the latest tube amp widely used in styles from blues and rock.
	BG LEAD	This models the lead sound of the MESA/Boogie combo amp. The sound of a tube amp typical of the late '70s to '80s.
	MS1959I	This models the sound input to Input I on a Marshall 1959. This is a trebly sound suited to hard rock.
	MS1959II	This models the sound input to Input II on a Marshall 1959.
	MS1959+II	This models the sound of connecting inputs I and II on a Marshall 1959 in parallel. It creates a sound with a stronger low end than I.
	SLDN LEAD	This models a Soldano SLO-100. This is the typical sound of the eighties.
	METAL 5150	This models the lead channel of a Peavey EVH5150.
	METAL LEAD	This is distortion sound that is ideal for performances of heavy riffs.
	OD-1	This models the sound of the BOSS OD-1. This produces sweet, mild distortion.
	OD-2 TURBO	This is the high-gain overdrive sound of the BOSS OD-2.
	DISTORTION	This gives a basic, traditional distortion sound.
	FUZZ	A fuzz sound with rich harmonic content.
Pre Amp Volume	0–127	Volume and amount of distortion of the amp
Pre Amp Master	0–127	Volume of the entire pre-amp
Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass		
Pre Amp Middle	0–127	Tone of the bass/mid/treble frequency range
Pre Amp Treble		
Pre Amp Presence	0–127	Tone for the ultra-high frequency range
Pre Amp Bright	OFF, ON	Turning this "On" produces a sharper and brighter sound. * This parameter applies to the "JC-120," "CLEAN TWIN," "MATCH DRIVE," and "BG LEAD" Pre Amp Types.

Parameter	Value	Explanation																																																			
Speaker Sw	OFF, ON	Determines whether the signal passes through the speaker (ON), or not (OFF).																																																			
Speaker Type		<table border="1"> <thead> <tr> <th>Cabinet</th> <th>Diameter (in inches) and number of the speaker</th> <th>Microphone</th> </tr> </thead> <tbody> <tr> <td>SMALL 1</td> <td>Small open-back enclosure</td> <td>10 Dynamic</td> </tr> <tr> <td>SMALL 2</td> <td>Small open-back enclosure</td> <td>10 Dynamic</td> </tr> <tr> <td>MIDDLE</td> <td>Open back enclosure</td> <td>12 x 1 Dynamic</td> </tr> <tr> <td>JC-120</td> <td>Open back enclosure</td> <td>12 x 2 Dynamic</td> </tr> <tr> <td>BUILT-IN 1</td> <td>Open back enclosure</td> <td>12 x 2 Dynamic</td> </tr> <tr> <td>BUILT-IN 2</td> <td>Open back enclosure</td> <td>12 x 2 Condenser</td> </tr> <tr> <td>BUILT-IN 3</td> <td>Open back enclosure</td> <td>12 x 2 Condenser</td> </tr> <tr> <td>BUILT-IN 4</td> <td>Open back enclosure</td> <td>12 x 2 Condenser</td> </tr> <tr> <td>BUILT-IN 5</td> <td>Open back enclosure</td> <td>12 x 2 Condenser</td> </tr> <tr> <td>BG STACK1</td> <td>Sealed enclosure</td> <td>12 x 2 Condenser</td> </tr> <tr> <td>BG STACK2</td> <td>Large sealed enclosure</td> <td>12 x 2 Condenser</td> </tr> <tr> <td>MS STACK1</td> <td>Large sealed enclosure</td> <td>12 x 4 Condenser</td> </tr> <tr> <td>MS STACK2</td> <td>Large sealed enclosure</td> <td>12 x 4 Condenser</td> </tr> <tr> <td>MTL STACK</td> <td>Large double stack</td> <td>12 x 4 Condenser</td> </tr> <tr> <td>2-STACK</td> <td>Large double stack</td> <td>12 x 4 Condenser</td> </tr> <tr> <td>3-STACK</td> <td>Large triple stack</td> <td>12 x 4 Condenser</td> </tr> </tbody> </table>	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
	Cabinet	Diameter (in inches) and number of the speaker	Microphone																																																		
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2-STACK	Large double stack	12 x 4 Condenser																																																			
3-STACK	Large triple stack	12 x 4 Condenser																																																			
Mic Setting	1, 2, 3	Adjusts the location of the microphone that is recording the sound of the speaker. This can be adjusted in three steps, with the microphone becoming more distant in the order of 1, 2, and 3.																																																			
Mic Level	0–127	Volume of the microphone																																																			
Direct Level	0–127	Volume of the direct sound																																																			
Pan	L64–63R	Stereo location of the output sound																																																			
Level	0–127	Output Level																																																			

### 33 Compressor

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



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

### 34 Limiter

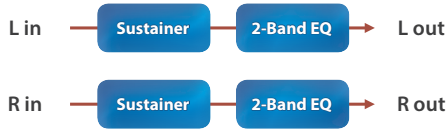
Compresses signals that exceed a specified volume level, preventing distortion from occurring.



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

## 35 Sustainer

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



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

## 36 Gate

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

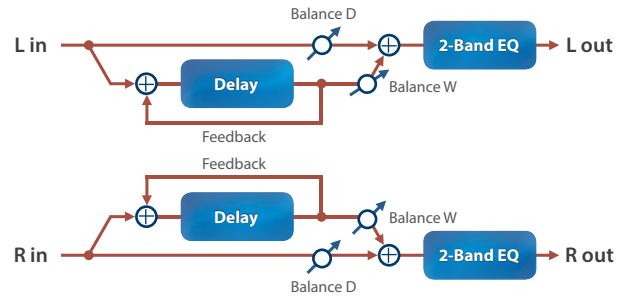


Parameter	Value	Explanation
Threshold	0–127	Volume level at which the gate begins to close
Mode	GATE, DUCK	Type of gate <b>GATE:</b> The gate will close when the volume of the original sound decreases, cutting the original sound. <b>DUCK (Duking):</b> The gate will close when the volume of the original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

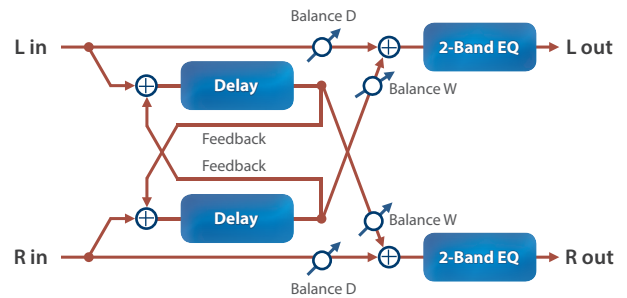
## 37 Delay

This is a stereo delay.

When Feedback Mode is NORMAL:



When Feedback Mode is CROSS:

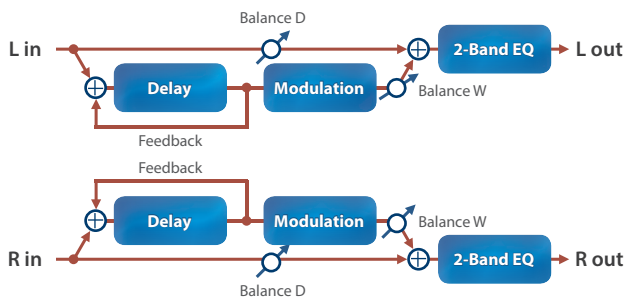


Parameter	Value	Explanation
Delay Left (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Left (msec)	1–1300 [msec]	Adjusts the time until the left delay sound is heard.
Delay Left (note)	Note ⇒ "Note" (p. 120)	
Delay Right (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Right (msec)	1–1300 [msec]	Adjusts the time until the right delay sound is heard.
Delay Right (note)	Note ⇒ "Note" (p. 120)	
Phase Left	NORMAL, INVERSE	Phase of left and right delay sound <b>NORMAL:</b> Non-inverted <b>INVERT:</b> Inverted
Phase Right	NORMAL, INVERSE	Phase of left and right delay sound <b>NORMAL:</b> Non-inverted <b>INVERT:</b> Inverted
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect. (See the figures above.)
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out ( <b>BYPASS:</b> no cut).
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

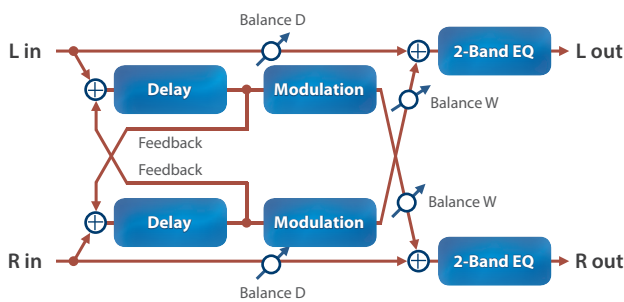
### 38 Modulation Delay

Adds modulation to the delayed sound.

When Feedback Mode is NORMAL:



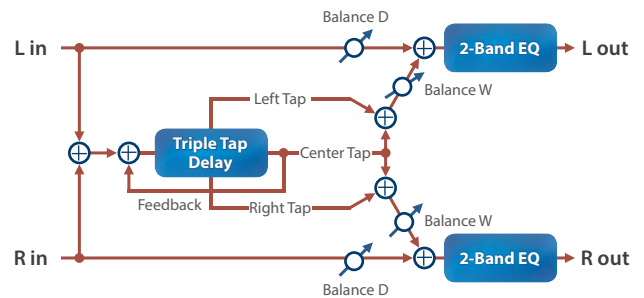
When Feedback Mode is CROSS:



Parameter	Value	Explanation
Delay Left (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Left (msec)	1–1300 [msec]	Adjusts the time until the left delay sound is heard.
Delay Left (note)	Note ⇒ "Note" (p. 120)	
Delay Right (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Right (msec)	1–1300 [msec]	Adjusts the time until the right delay sound is heard.
Delay Right (note)	Note ⇒ "Note" (p. 120)	
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect. (See the figures above.)
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out ( <b>BYPASS</b> : no cut).
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Rate (Hz)	0.05–10.00 [Hz]	
Rate (note)	Note ⇒ "Note" (p. 120)	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 [deg]	Spatial spread of the sound
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

### 39 3Tap Pan Delay

Produces three delay sounds; center, left and right.

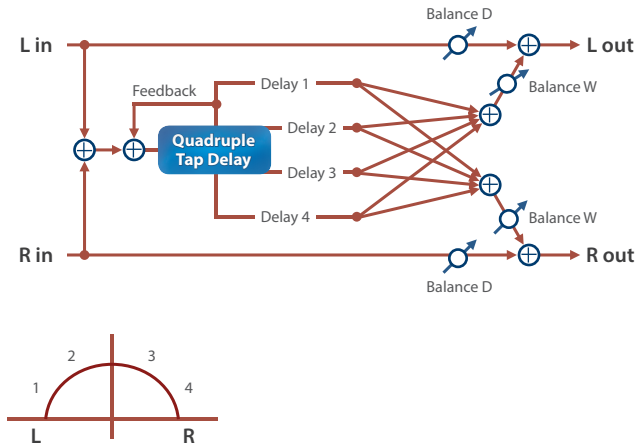


Parameter	Value	Explanation
Delay Left (sync switch)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Left (msec)	1–2600 [msec]	Adjusts the time until the left delay sound is heard.
Delay Left (note)	Note ⇒ "Note" (p. 120)	
Delay Right (sync switch)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Right (msec)	1–2600 [msec]	Adjusts the time until the right delay sound is heard.
Delay Right (note)	Note ⇒ "Note" (p. 120)	
Delay Center (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Center (msec)	1–2600 [msec]	Adjusts the time until the center delay sound is heard.
Delay Center (note)	Note ⇒ "Note" (p. 120)	
Center Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out ( <b>BYPASS</b> : no cut).
Left Level	0–127	
Right Level	0–127	Volume of each delay sound
Center Level	0–127	
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level



## 40 4Tap Pan Delay

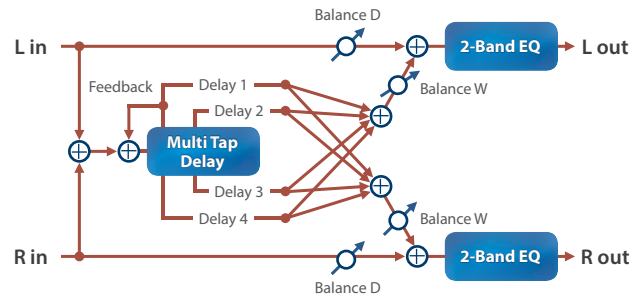
This effect has four delays.



Parameter	Value	Explanation
Delay 1 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay 1 Time (msec)	1–2600 [msec]	Adjusts the time until Delay 1 is heard.
Delay 1 Time (note)	Note ⇒ "Note" (p. 120)	
Delay 2 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay 2 Time (msec)	1–2600 [msec]	Adjusts the time until Delay 2 is heard.
Delay 2 Time (note)	Note ⇒ "Note" (p. 120)	
Delay 3 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay 3 Time (msec)	1–2600 [msec]	Adjusts the time until Delay 3 is heard.
Delay 3 Time (note)	Note ⇒ "Note" (p. 120)	
Delay 4 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay 4 Time (msec)	1–2600 [msec]	Adjusts the time from the original sound until Delay 4 is heard.
Delay 4 Time (note)	Note ⇒ "Note" (p. 120)	
Delay 1 Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out (BYPASS: no cut).
Delay 1 Level	0–127	Output level of Delays 1–4
Delay 2 Level		
Delay 3 Level		
Delay 4 Level		
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

## 41 Multi Tap Delay

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



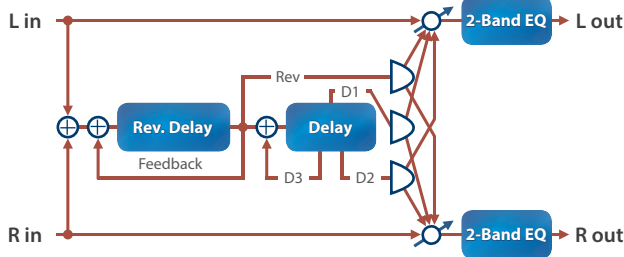
Parameter	Value	Explanation
Delay 1 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay 1 Time (msec)	1–2600 [msec]	Adjusts the time from the original sound until Delay 1 is heard.
Delay 1 Time (note)	Note ⇒ "Note" (p. 120)	
Delay 2 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay 2 Time (msec)	1–2600 [msec]	Adjusts the time from the original sound until Delay 2 is heard.
Delay 2 Time (note)	Note ⇒ "Note" (p. 120)	
Delay 3 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay 3 Time (msec)	1–2600 [msec]	Adjusts the time from the original sound until Delay 3 is heard.
Delay 3 Time (note)	Note ⇒ "Note" (p. 120)	
Delay 4 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay 4 Time (msec)	1–2600 [msec]	Adjusts the time from the original sound until Delay 4 is heard.
Delay 4 Time (note)	Note ⇒ "Note" (p. 120)	
Delay 1 Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out (BYPASS: no cut).
Delay 1 Pan	L64–63R	Stereo location of Delays 1–4
Delay 2 Pan		
Delay 3 Pan		
Delay 4 Pan		
Delay 1 Level	0–127	Output level of Delays 1–4
Delay 2 Level		
Delay 3 Level		
Delay 4 Level		
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output Level



## 42 Reverse Delay

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

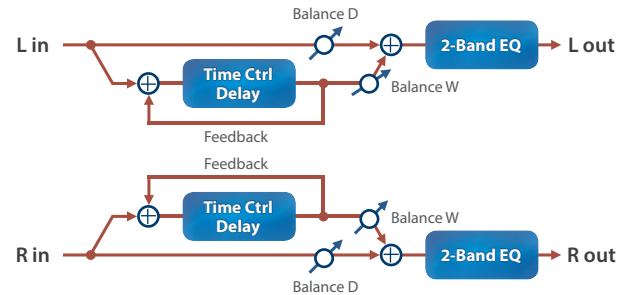
A tap delay is connected immediately after the reverse delay.



Parameter	Value	Explanation
Threshold	0–127	Volume at which the reverse delay will begin to be applied
Rev Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Rev Delay Time (msec)	1–1300 [msec]	Delay time from when sound is input into the reverse delay until the delay sound is heard
Rev Delay Time (note)	Note ⇒ "Note" (p. 120)	
Rev Delay Feedback	-98–+98 [%]	Proportion of the delay sound that is to be returned to the input of the reverse delay (negative (-) values invert the phase)
Rev Delay HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Frequency at which the high-frequency content of the reverse-delayed sound will be cut (BYPASS: no cut)
Rev Delay Pan	L64–63R	Panning of the reverse delay sound
Rev Delay Level	0–127	Volume of the reverse delay sound
Delay 1 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay 1 Time (msec)	1–1300 [msec]	Delay time from when sound is input into the tap delay until the delay sound is heard
Delay 1 Time (note)	Note ⇒ "Note" (p. 120)	
Delay 2 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay 2 Time (msec)	1–1300 [msec]	Delay time from when sound is input into the tap delay until the delay sound is heard
Delay 2 Time (note)	Note ⇒ "Note" (p. 120)	
Delay 3 Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay 3 Time (msec)	1–1300 [msec]	Delay time from when sound is input into the tap delay until the delay sound is heard
Delay 3 Time (note)	Note ⇒ "Note" (p. 120)	
Delay 3 Feedback	-98–+98 [%]	Proportion of the delay sound that is to be returned to the input of the tap delay (negative (-) values invert the phase)
Delay HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Frequency at which the hi-frequency content of the tap delay sound will be cut (BYPASS: no cut)
Delay 1 Pan	L64–63R	Panning of the tap delay sounds
Delay 2 Pan	L64–63R	Panning of the tap delay sounds
Delay 1 Level	0–127	Volume of the tap delay sounds
Delay 2 Level	0–127	Volume of the tap delay sounds
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

## 43 Time Ctrl Delay

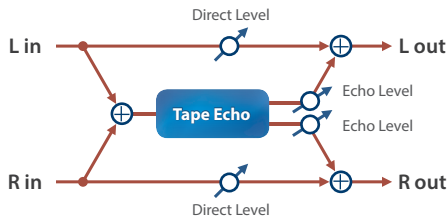
A stereo delay in which the delay time can be varied smoothly.



Parameter	Value	Explanation
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Time (msec)	1–1300 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Time (note)	Note ⇒ "Note" (p. 120)	
Acceleration	0–15	Speed at which the current delay time changes to the specified delay time when you change the delay time. This affects the speed of pitch change as well as the delay time.
Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out (BYPASS: no cut).
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output Level

## 44 Tape Echo

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



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

## 45 LOFI Compress

Degrades the sound quality.



Parameter	Value	Explanation
Pre Filter Type	1, 2, 3, 4, 5, 6	Selects the type of filter applied to the sound before it passes through the Lo-Fi effect. <b>1:</b> Compressor off <b>2–6:</b> Compressor on
LoFi Type	1, 2, 3, 4, 5, 6, 7, 8, 9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	OFF, LPF, HPF	Selects the type of filter applied to the sound after it passes through the Lo-Fi effect. <b>OFF:</b> No filter is used. <b>LPF:</b> Cuts the frequency range above the Cutoff Freq <b>HPF:</b> Cuts the frequency range below the Cutoff Freq

Parameter	Value	Explanation
Post Filter Cutoff	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 [Hz]	Basic frequency of the Post Filter
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output Level

## 46 Bit Crusher

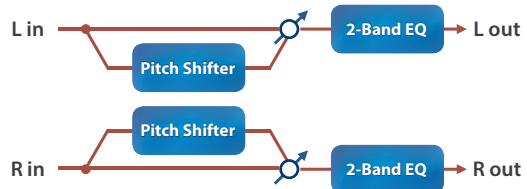
This creates a lo-fi sound.



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

## 47 Pitch Shifter

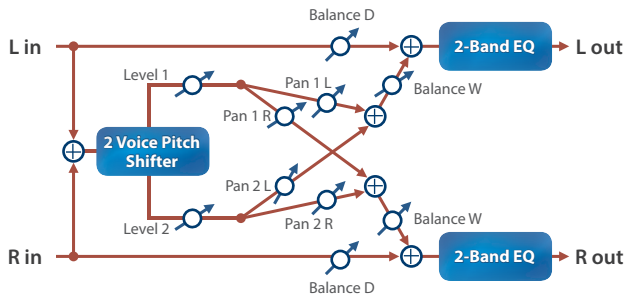
A stereo pitch shifter.



Parameter	Value	Explanation
Coarse	-24–+12 [semi]	Adjusts the pitch of the pitch shifted sound in semitone steps.
Fine	-100–+100 [cent]	Adjusts the pitch of the pitch shifted sound in 2-cent steps.
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Time (msec)	1–1300 [msec]	Adjusts the delay time from the direct sound until the pitch shifted sound is heard.
Delay Time (note)	Note ⇒ "Note" (p. 120)	
Feedback	-98–+98 [%]	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0–127	Output Level

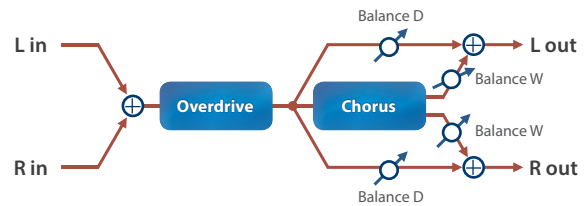
## 48 2Voice Pitch Shifter

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



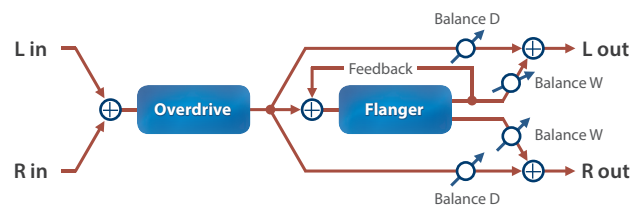
Parameter	Value	Explanation
Pitch1 Coarse	-24+12 [semi]	Adjusts the pitch of Pitch Shift 1 in semitone steps.
Pitch1 Fine	-100+100 [cent]	Adjusts the pitch of Pitch Shift Pitch 1 in 2-cent steps.
Pitch1 Delay (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Pitch1 Delay (msec)	1-1300 [msec]	Adjusts the delay time from the direct sound until the Pitch Shift 1 sound is heard.
Pitch1 Delay (note)	Note ⇒ "Note" (p. 120)	
Pitch1 Feedback	-98+98 [%]	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
Pitch1 Pan	L64-63R	Stereo location of the Pitch Shift 1 sound
Pitch1 Level	0-127	Volume of the Pitch Shift 1 sound
Pitch2 Coarse	-24+12 [semi]	
Pitch2 Fine	-100+100 [cent]	
Pitch2 Delay (sync sw)	OFF, ON	
Pitch2 Delay (msec)	1-1300 [msec]	Settings of the Pitch Shift 2 sound.
Pitch2 Delay (note)	Note ⇒ "Note" (p. 120)	The parameters are the same as for the Pitch Shift 1 sound.
Pitch2 Feedback	-98+98 [%]	
Pitch2 Pan	L64-63R	
Pitch2 Level	0-127	
Low Gain	-15+15 [dB]	Gain of the low range
High Gain	-15+15 [dB]	Gain of the high range
Balance	D100:0W-D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0-127	Output Level

## 49 Overdrive → Chorus



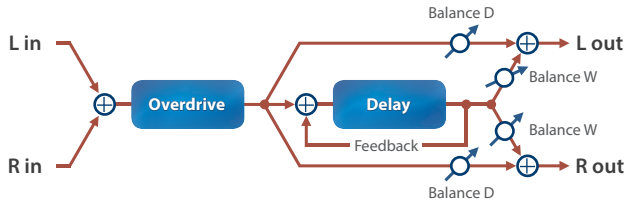
Parameter	Value	Explanation
Overdrive Drive	0-127	Degree of distortion Also changes the volume.
Overdrive Pan	L64-63R	Stereo location of the overdrive sound
Chorus Pre Delay	0.0-100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Chorus Rate (Hz)	0.05-10.00 [Hz]	
Chorus Rate (note)	Note ⇒ "Note" (p. 120)	Frequency of modulation
Chorus Depth	0-127	Depth of modulation
Chorus Balance	D100:0W-D0:100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0-127	Output Level

## 50 Overdrive → Flanger



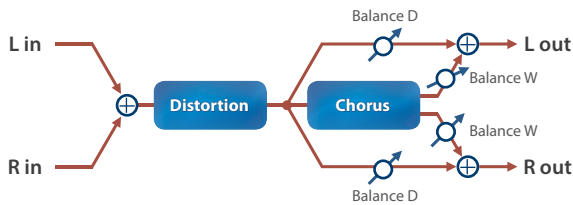
Parameter	Value	Explanation
Overdrive Drive	0-127	Degree of distortion Also changes the volume.
Overdrive Pan	L64-63R	Stereo location of the overdrive sound
Flanger Pre Delay	0.0-100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Flanger Rate (Hz)	0.05-10.00 [Hz]	
Flanger Rate (note)	Note ⇒ "Note" (p. 120)	Frequency of modulation
Flanger Depth	0-127	Depth of modulation
Flanger Feedback	-98+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	D100:0W-D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0-127	Output Level

## 51 Overdrive → Delay



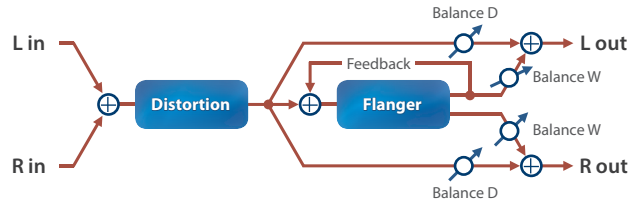
Parameter	Value	Explanation
Overdrive Drive	0–127	Degree of distortion Also changes the volume.
Overdrive Pan	L64–63R	Stereo location of the overdrive sound
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Time (msec)	1–2600 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Time (note)	Note ⇒ "Note" (p. 120)	
Delay Feedback	-98+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out (BYPASS: no cut).
Delay Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

## 52 Distortion → Chorus



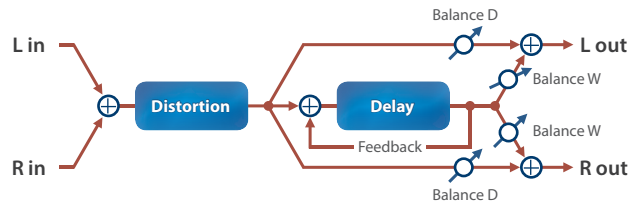
Parameter	Value	Explanation
Distortion Drive	0–127	Degree of distortion Also changes the volume.
Distortion Pan	L64–63R	Stereo location of the overdrive sound
Chorus Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Chorus Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Chorus Rate (note)	Note ⇒ "Note" (p. 120)	
Chorus Depth	0–127	Depth of modulation
Chorus Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0–127	Output Level

## 53 Distortion → Flanger



Parameter	Value	Explanation
Distortion Drive	0–127	Degree of distortion Also changes the volume.
Distortion Pan	L64–63R	Stereo location of the overdrive sound
Flanger Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Flanger Rate (Hz)	0.05–10.00 [Hz]	Frequency of modulation
Flanger Rate (note)	Note ⇒ "Note" (p. 120)	
Flanger Depth	0–127	Depth of modulation
Flanger Feedback	-98+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

## 54 Distortion → Delay



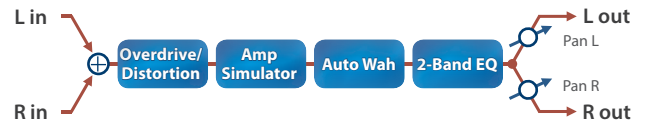
Parameter	Value	Explanation
Distortion Drive	0–127	Degree of distortion Also changes the volume.
Distortion Pan	L64–63R	Stereo location of the overdrive sound
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Time (msec)	1–2600 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Time (note)	Note ⇒ "Note" (p. 120)	
Delay Feedback	-98+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out (BYPASS: no cut).
Delay Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

55 OD/DS → TouchWah



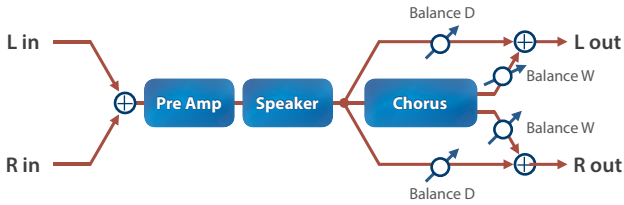
Parameter	Value	Explanation
Drive Switch	OFF, ON	Turns overdrive/distortion on/off
Drive Type	OVERDRIVE, DISTORTION	Type of distortion
Drive	0–127	Degree of distortion Also changes the volume.
Tone	0–127	Sound quality of the Overdrive effect
Amp Switch	OFF, ON	Turns the Amp Simulator on/off.
Amp Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp <b>SMALL:</b> Small amp <b>BUILT-IN:</b> Single-unit type amp <b>2-STACK:</b> Large double stack amp <b>3-STACK:</b> Large triple stack amp
TWah Switch	OFF, ON	Wah on/off
TWah Mode	LPF, BPF	Type of filter <b>LPF:</b> Produces a wah effect in a broad frequency range. <b>BPF:</b> Produces a wah effect in a narrow frequency range.
TWah Polarity	DOWN, UP	Direction in which the filter will move <b>UP:</b> The filter will change toward a higher frequency. <b>DOWN:</b> The filter will change toward a lower frequency.
TWah Sens	0–127	Adjusts the sensitivity with which the filter is controlled.
TWah Manual	0–127	Center frequency at which the wah effect is applied
TWah Peak	0–127	Width of the frequency region at which the wah effect is applied Increasing this value will make the frequency region narrower.
TWah Balance	D100:0W–D0:100W	Volume balance of the sound that passes through the wah (W) and the unprocessed sound (D)
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

56 OD/DS → AutoWah



Parameter	Value	Explanation
Drive Switch	OFF, ON	Turns overdrive/distortion on/off
Drive Type	OVERDRIVE, DISTORTION	Type of distortion
Drive	0–127	Degree of distortion Also changes the volume.
Tone	0–127	Sound quality of the Overdrive effect
Amp Switch	OFF, ON	Turns the Amp Simulator on/off.
Amp Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp <b>SMALL:</b> Small amp <b>BUILT-IN:</b> Single-unit type amp <b>2-STACK:</b> Large double stack amp <b>3-STACK:</b> Large triple stack amp
AutoWah Switch	OFF, ON	Wah on/off
AutoWah Mode	LPF, BPF	Type of filter <b>LPF:</b> Produces a wah effect in a broad frequency range. <b>BPF:</b> Produces a wah effect in a narrow frequency range.
AutoWah Manual	0–127	Center frequency at which the wah effect is applied
AutoWah Peak	0–127	Width of the frequency region at which the wah effect is applied Increasing this value will make the frequency region narrower.
AutoWah Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➔ "TEMPO" (p. 52)
AutoWah Rate (Hz)	0.05–10.00 [Hz]	
AutoWah Rate (note)	Note ➔ "Note" (p. 120)	Modulation frequency of the wah effect
AutoWah Depth	0–127	Depth of modulation
AutoWah Balance	D100:0W–D0:100W	Volume balance of the sound that passes through the wah (W) and the unprocessed sound (D)
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Level	0–127	Output Level

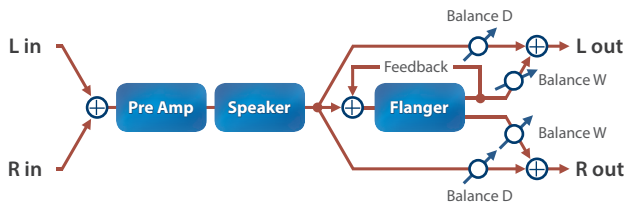
57 GtAmpSim → Chorus



Parameter	Value	Explanation	
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.	
Pre Amp Type		Type of guitar amp	
	JC-120	This models the sound of the Roland JC-120.	
	CLEAN TWIN	This models a Fender Twin Reverb.	
	MATCH DRIVE	This models the sound input to left input on a Matchless D/C-30. A simulation of the latest tube amp widely used in styles from blues and rock.	
	BG LEAD	This models the lead sound of the MESA/Boogie combo amp. The sound of a tube amp typical of the late '70s to '80s.	
	MS1959I	This models the sound input to Input I on a Marshall 1959. This is a trebly sound suited to hard rock.	
	MS1959II	This models the sound input to Input II on a Marshall 1959.	
	MS1959+II	This models the sound of connecting inputs I and II on a Marshall 1959 in parallel. It creates a sound with a stronger low end than I.	
	SLDN LEAD	This models a Soldano SLO-100. This is the typical sound of the eighties.	
	METAL 5150	This models the lead channel of a Peavey EVH 5150.	
	METAL LEAD	This is distortion sound that is ideal for performances of heavy riffs.	
	OD-1	This models the sound of the BOSS OD-1. This produces sweet, mild distortion.	
	OD-2 TURBO	This is the high-gain overdrive sound of the BOSS OD-2.	
	DISTORTION	This gives a basic, traditional distortion sound.	
	FUZZ	A fuzz sound with rich harmonic content.	
	Pre Amp Volume	0-127	Volume and amount of distortion of the amp
	Pre Amp Master	0-127	Volume of the entire pre-amp
Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion	
Pre Amp Bass	0-127	Tone of the bass/mid/treble frequency range	
Pre Amp Middle	0-127		
Pre Amp Treble	0-127		

Parameter	Value	Explanation																																				
Speaker Sw	OFF, ON	Selects whether the sound will be sent through the speaker (ON) or not (OFF)																																				
Speaker Type		<table border="1"> <thead> <tr> <th>Cabinet</th> <th>Diameter (in inches) and number of the speaker</th> <th>Microphone</th> </tr> </thead> <tbody> <tr> <td>SMALL 1</td> <td>Small open-back enclosure</td> <td>10 Dynamic</td> </tr> <tr> <td>SMALL 2</td> <td>Small open-back enclosure</td> <td>10 Dynamic</td> </tr> <tr> <td>MIDDLE</td> <td>Open back enclosure</td> <td>12 x 1 Dynamic</td> </tr> <tr> <td>JC-120</td> <td>Open back enclosure</td> <td>12 x 2 Dynamic</td> </tr> <tr> <td>BUILT-IN1</td> <td>Open back enclosure</td> <td>12 x 2 Dynamic</td> </tr> <tr> <td>BUILT-IN2</td> <td>Open back enclosure</td> <td>12 x 2 Condenser</td> </tr> <tr> <td>BUILT-IN3</td> <td>Open back enclosure</td> <td>12 x 2 Condenser</td> </tr> <tr> <td>BUILT-IN4</td> <td>Open back enclosure</td> <td>12 x 2 Condenser</td> </tr> <tr> <td>BUILT-IN5</td> <td>Open back enclosure</td> <td>12 x 2 Condenser</td> </tr> <tr> <td>BG STACK1</td> <td>Sealed enclosure</td> <td>12 x 2 Condenser</td> </tr> <tr> <td>BG STACK2</td> <td>Large sealed enclosure</td> <td>12 x 2 Condenser</td> </tr> </tbody> </table>	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
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Level	0-127	Output Level																																				

58 GtAmpSim → Flanger

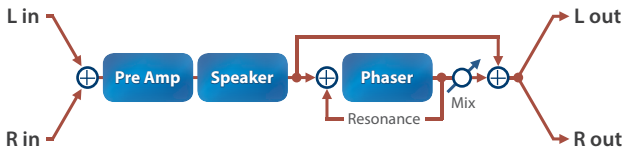


Parameter	Value	Explanation	
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.	
Pre Amp Type		Type of guitar amp	
	JC-120	This models the sound of the Roland JC-120.	
	CLEAN TWIN	This models a Fender Twin Reverb.	
	MATCH DRIVE	This models the sound input to left input on a Matchless D/C-30. A simulation of the latest tube amp widely used in styles from blues and rock.	
	BG LEAD	This models the lead sound of the MESA/Boogie combo amp. The sound of a tube amp typical of the late '70s to '80s.	
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	MS1959II	This models the sound input to Input II on a Marshall 1959.	
	MS1959I+II	This models the sound of connecting inputs I and II on a Marshall 1959 in parallel. It creates a sound with a stronger low end than I.	
	SLDN LEAD	This models a Soldano SLO-100. This is the typical sound of the eighties.	
	METAL 5150	This models the lead channel of a Peavey EVH5150.	
	METAL LEAD	This is distortion sound that is ideal for performances of heavy riffs.	
	OD-1	This models the sound of the BOSS OD-1. This produces sweet, mild distortion.	
	OD-2 TURBO	This is the high-gain overdrive sound of the BOSS OD-2.	
	DISTORTION	This gives a basic, traditional distortion sound.	
	FUZZ	A fuzz sound with rich harmonic content.	
	Pre Amp Volume	0-127	Volume and amount of distortion of the amp
	Pre Amp Master	0-127	Volume of the entire pre-amp
	Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass	0-127		
Pre Amp Middle	0-127	Tone of the bass/mid/treble frequency range	
Pre Amp Treble	0-127		

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Flanger Balance	D100:0W-D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).																																																			
Level	0-127	Output Level																																																			



59 GtAmpSim → Phaser

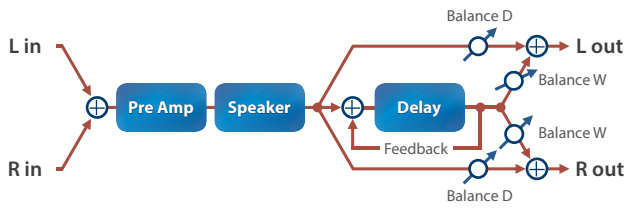


Parameter	Value	Explanation	
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.	
Pre Amp Type		Type of guitar amp	
	JC-120	This models the sound of the Roland JC-120.	
	CLEAN TWIN	This models a Fender Twin Reverb.	
	MATCH DRIVE	This models the sound input to left input on a Matchless D/C-30. A simulation of the latest tube amp widely used in styles from blues and rock.	
	BG LEAD	This models the lead sound of the MESA/Boogie combo amp. The sound of a tube amp typical of the late '70s to '80s.	
	MS1959I	This models the sound input to Input I on a Marshall 1959. This is a trebly sound suited to hard rock.	
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	SLDN LEAD	This models a Soldano SLO-100. This is the typical sound of the eighties.	
	METAL 5150	This models the lead channel of a Peavey EVH5150.	
	METAL LEAD	This is distortion sound that is ideal for performances of heavy riffs.	
	OD-1	This models the sound of the BOSS OD-1. This produces sweet, mild distortion.	
	OD-2 TURBO	This is the high-gain overdrive sound of the BOSS OD-2.	
	DISTORTION	This gives a basic, traditional distortion sound.	
	FUZZ	A fuzz sound with rich harmonic content.	
	Pre Amp Volume	0–127	Volume and amount of distortion of the amp
	Pre Amp Master	0–127	Volume of the entire pre-amp
	Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass	0–127		
Pre Amp Middle	0–127	Tone of the bass/mid/treble frequency range	
Pre Amp Treble	0–127		

Parameter	Value	Explanation																																																			
Speaker Sw	OFF, ON	Determines whether the signal passes through the speaker (ON), or not (OFF).																																																			
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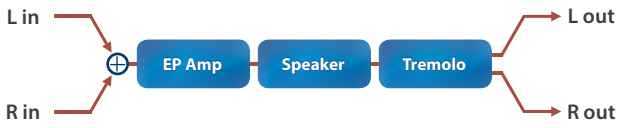
60 GtAmpSim → Delay



Parameter	Value	Explanation
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
Pre Amp Type		Type of guitar amp
	JC-120	This models the sound of the Roland JC-120.
	CLEAN TWIN	This models a Fender Twin Reverb.
	MATCH DRIVE	This models the sound input to left input on a Matchless D/C-30. A simulation of the latest tube amp widely used in styles from blues and rock.
	BG LEAD	This models the lead sound of the MESA/Boogie combo amp. The sound of a tube amp typical of the late '70s to '80s.
	MS1959I	This models the sound input to Input I on a Marshall 1959. This is a trebly sound suited to hard rock.
	MS1959II	This models the sound input to Input II on a Marshall 1959.
	MS1959I+II	This models the sound of connecting inputs I and II on a Marshall 1959 in parallel. It creates a sound with a stronger low end than I.
	SLDN LEAD	This models a Soldano SLO-100. This is the typical sound of the eighties.
	METAL 5150	This models the lead channel of a Peavey EVH5150.
	METAL LEAD	This is distortion sound that is ideal for performances of heavy riffs.
	OD-1	This models the sound of the BOSS OD-1. This produces sweet, mild distortion.
	OD-2 TURBO	This is the high-gain overdrive sound of the BOSS OD-2.
	DISTORTION	This gives a basic, traditional distortion sound.
	FUZZ	A fuzz sound with rich harmonic content.
	Pre Amp Volume	0–127
Pre Amp Master	0–127	Volume of the entire pre-amp
Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass	0–127	
Pre Amp Middle	0–127	Tone of the bass/mid/treble frequency range
Pre Amp Treble	0–127	

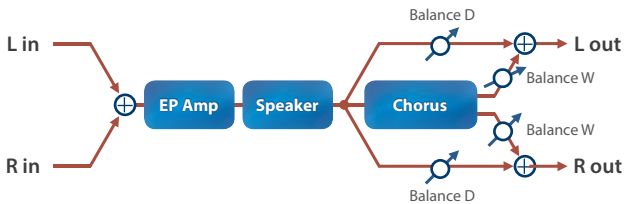
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Delay Time	1–1300 [msec]	Delay time from when the original sound is heard to when the delay sound is heard																																																			
Delay Feedback	-98→+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.																																																			
Delay HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Frequency at which the high-frequency portion of the delay sound will be cut ( <b>BYPASS</b> : no cut)																																																			
Delay Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).																																																			
Level	0–127	Output Level																																																			

## 61 EPampSim → Tremolo



Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
	WURLY	A standard electric piano sound of the 60s
Bass	-50+50	Amount of low-frequency boost/cut
Treble	-50+50	Amount of high-frequency boost/cut
Tremolo Switch	OFF, ON	Tremolo on/off
Tremolo Speed (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Tremolo Speed (Hz)	0.05–10.00 [Hz]	
Tremolo Speed (note)	Note → "Note" (p. 120)	Rate of the tremolo effect
Tremolo Depth	0–127	Depth of the tremolo effect
Tremolo Duty	-10+10	Adjusts the duty cycle of the LFO waveform used to apply tremolo.
Speaker Type	LINE, OLD, NEW, WURLY, TWIN	Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation.
OD Switch	OFF, ON	Overdrive on/off
OD Gain	0–127	Overdrive input level
OD Drive	0–127	Degree of distortion Also changes the volume.
Level	0–127	Output Level

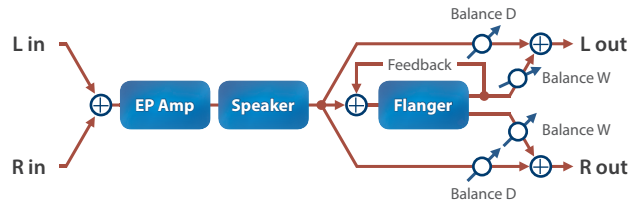
## 62 EPampSim → Chorus



Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
	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
Chorus Switch	OFF, ON	Chorus on/off
Chorus Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Chorus Rate (Hz)	0.05–10.00 [Hz]	
Chorus Rate (note)	Note → "Note" (p. 120)	Frequency of modulation
Chorus Depth	0–127	Depth of modulation

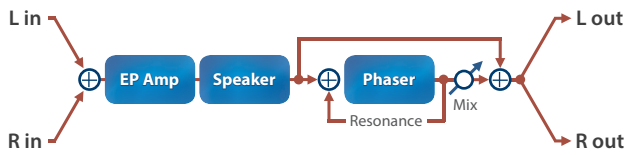
Parameter	Value	Explanation
Chorus Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Speaker Type	LINE, OLD, NEW, WURLY, TWIN	Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation.
OD Switch	OFF, ON	Overdrive on/off
OD Gain	0–127	Overdrive input level
OD Drive	0–127	Degree of distortion Also changes the volume.
Level	0–127	Output Level

## 63 EPampSim → Flanger



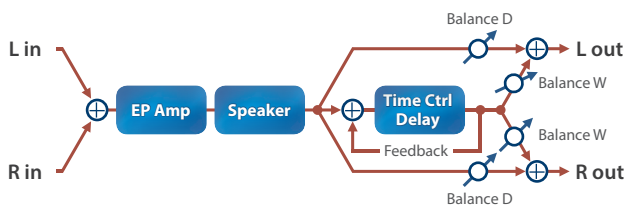
Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
	WURLY	A standard electric piano sound of the 60s
Bass	-50+50	Amount of low-frequency boost/cut
Treble	-50+50	Amount of high-frequency boost/cut
Flanger Switch	OFF, ON	Flanger on/off
Flanger Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Flanger Rate (Hz)	0.05–10.00 [Hz]	
Flanger Rate (note)	Note → "Note" (p. 120)	Frequency of modulation
Flanger Depth	0–127	Depth of modulation
Flanger Feedback	-98+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Speaker Type	LINE, OLD, NEW, WURLY, TWIN	Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation.
OD Switch	OFF, ON	Overdrive on/off
OD Gain	0–127	Overdrive input level
OD Drive	0–127	Degree of distortion Also changes the volume.
Level	0–127	Output Level

## 64 EPampSim → Phaser



Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
Bass	-50+50	Amount of low-frequency boost/cut
Treble	-50+50	Amount of high-frequency boost/cut
Phaser Switch	OFF, ON	Phaser on/off
Phaser Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Phaser Rate (Hz)	0.05–10.00 [Hz]	
Phaser Rate (note)	Note → "Note" (p. 120)	Modulation rate
Phaser Manual	0–127	Center frequency at which the sound is modulated
Phaser Depth	0–127	Depth of modulation
Phaser Resonance	0–127	Amount of feedback
Phaser Mix	0–127	Level of the phase-shifted sound
Speaker Type	LINE, OLD, NEW, WURLY, TWIN	Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation.
OD Switch	OFF, ON	Overdrive on/off
OD Gain	0–127	Overdrive input level
OD Drive	0–127	Degree of distortion Also changes the volume.
Level	0–127	Output Level

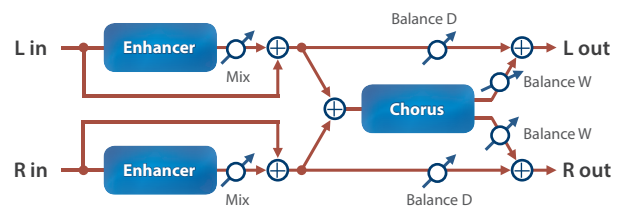
## 65 EPampSim → Delay



Parameter	Value	Explanation
Type		Type of amp
	OLDCASE	A standard electric piano sound of the early 70s
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
Bass	-50+50	Amount of low-frequency boost/cut
Treble	-50+50	Amount of high-frequency boost/cut
Delay Switch	OFF, ON	Delay on/off
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Delay Time (msec)	1–1300 [msec]	
Delay Time (note)	Note → "Note" (p. 120)	Delay time from when the original sound is heard to when the delay sound is heard

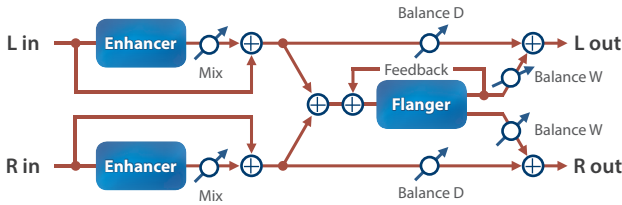
Parameter	Value	Explanation
Delay Accel	0–15	Speed at which the current delay time changes to the specified delay time when you change the delay time. This affects the speed of pitch change as well as the delay time.
Delay Feedback	-98+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Frequency at which the high-frequency portion of the delay sound will be cut ( <b>BYPASS</b> : no cut)
Delay Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Speaker Type	LINE, OLD, NEW, WURLY, TWIN	Type of speaker If LINE is selected, the sound will not be sent through the speaker simulation.
OD Switch	OFF, ON	Overdrive on/off
OD Gain	0–127	Overdrive input level
OD Drive	0–127	Degree of distortion Also changes the volume.
Level	0–127	Output Level

## 66 Enhancer → Chorus



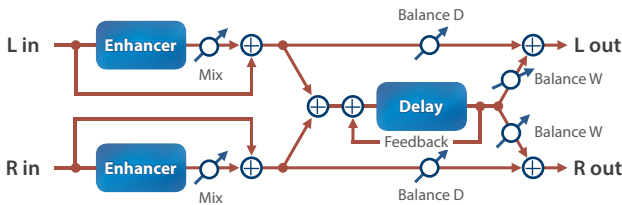
Parameter	Value	Explanation
Enhancer Sens	0–127	Sensitivity of the enhancer
Enhancer Mix	0–127	Level of the overtones generated by the enhancer
Chorus Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Chorus Rate (Hz)	0.05–10.00 [Hz]	
Chorus Rate (note)	Note → "Note" (p. 120)	Frequency of modulation
Chorus Depth	0–127	Depth of modulation
Chorus Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0–127	Output Level

## 67 Enhancer → Flanger



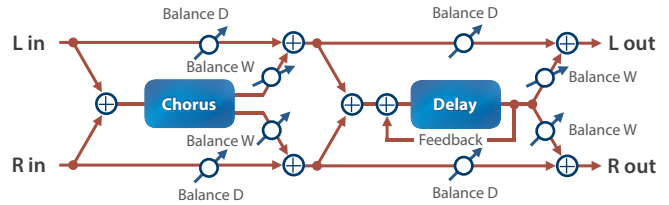
Parameter	Value	Explanation
Enhancer Sens	0–127	Sensitivity of the enhancer
Enhancer Mix	0–127	Level of the overtones generated by the enhancer
Flanger Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Flanger Rate (Hz)	0.05–10.00 [Hz]	
Flanger Rate (note)	Note ⇒ "Note" (p. 120)	Frequency of modulation
Flanger Depth	0–127	Depth of modulation
Flanger Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

## 68 Enhancer → Delay



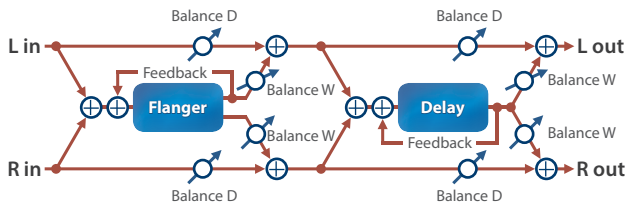
Parameter	Value	Explanation
Enhancer Sens	0–127	Sensitivity of the enhancer
Enhancer Mix	0–127	Level of the overtones generated by the enhancer
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Time (msec)	1–2600 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Time (note)	Note ⇒ "Note" (p. 120)	
Delay Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out ( <b>BYPASS</b> : no cut).
Delay Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

## 69 Chorus → Delay



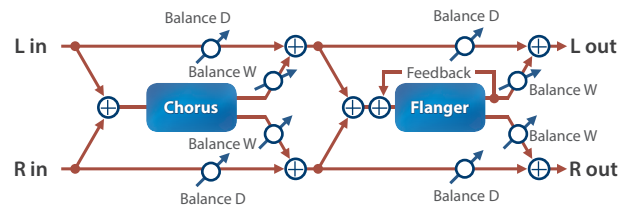
Parameter	Value	Explanation
Chorus Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Chorus Rate (Hz)	0.05–10.00 [Hz]	
Chorus Rate (note)	Note ⇒ "Note" (p. 120)	Frequency of modulation
Chorus Depth	0–127	Depth of modulation
Chorus Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)"TEMPO" (p. 52)
Delay Time (msec)	1–2600 [msec]	Delay time from when the original sound is heard to when the delay sound is heard
Delay Time (note)	Note ⇒ "Note" (p. 120)	
Delay Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out ( <b>BYPASS</b> : no cut).
Delay Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

## 70 Flanger → Delay



Parameter	Value	Explanation
Flanger Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Flanger Rate (Hz)	0.05–10.00 [Hz]	
Flanger Rate (note)	Note ⇒ "Note" (p. 120)	Frequency of modulation
Flanger Depth	0–127	Depth of modulation
Flanger Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Delay Time (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Delay Time (msec)	1–2600 [msec]	
Delay Time (note)	Note ⇒ "Note" (p. 120)	Delay time from when the original sound is heard to when the delay sound is heard
Delay Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out ( <b>BYPASS</b> : no cut).
Delay Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

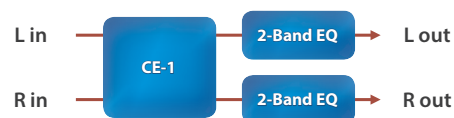
## 71 Chorus → Flanger



Parameter	Value	Explanation
Chorus Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Chorus Rate (Hz)	0.05–10.00 [Hz]	
Chorus Rate (note)	Note ⇒ "Note" (p. 120)	Modulation frequency of the chorus effect
Chorus Depth	0–127	Modulation depth of the chorus effect
Chorus Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Flanger Pre Delay	0.0–100 [msec]	Adjusts the delay time from the direct sound until the flanger sound is heard.
Flanger Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Flanger Rate (Hz)	0.05–10.00 [Hz]	
Flanger Rate (note)	Note ⇒ "Note" (p. 120)	Modulation frequency of the flanger effect
Flanger Depth	0–127	Modulation depth of the flanger effect
Flanger Feedback	-98–+98 [%]	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

## 72 CE-1

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



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

## 73 SBF-325

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



Parameter	Value	Explanation
Mode		Types of flanging effect
	FL1	A typical mono flanger
	FL2	A stereo flanger that preserves the stereo positioning of the original sound
	FL3	A cross-mix flanger that produces a more intense effect
	CHO	A chorus effect
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ⇒ "TEMPO" (p. 52)
Rate (Hz)	0.02–5.00 [Hz]	
Rate (note)	Note ⇒ "Note" (p. 120)	Modulation frequency of the flanger effect
Depth	0–127	Modulation depth of the flanger effect
Manual	0–127	Center frequency at which the flanger effect is applied
Feedback	0–127	Amount by which the flanging effect is boosted If Mode is CHO, this setting is ignored.
CH-R Mode Phase	NORM, INV	Phase of the right channel modulation: Normally, you will leave this at Normal (NORM). If you specify Inverted (INV), the modulation (upward/downward movement) of the right channel is inverted.
CH-L Phase		Phase when mixing the flanging sound with the original sound
CH-R Phase		<b>NORM:</b> normal phase <b>INV:</b> inverse phase
Level	0–127	Output Level

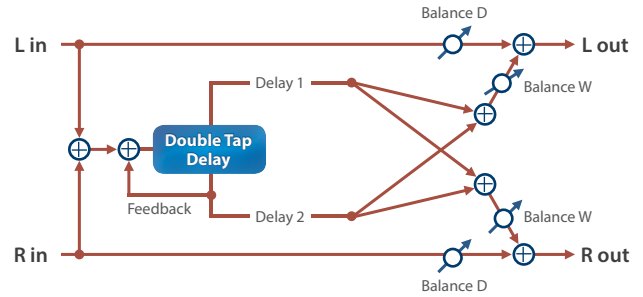
## 74 SDD-320

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



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

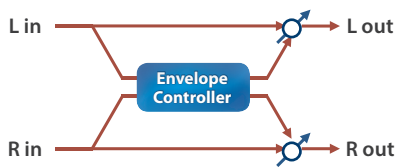
## 75 2Tap Pan Delay



Parameter	Value	Explanation
Delay Time (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
Delay Time (msec)	1–2600 [msec]	
Delay Time (note)	Note ⇒ "Note" (p. 120)	Adjusts the delay time from the direct sound until the second delay sound is heard.
Delay Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out ( <b>BYPASS:</b> no cut).
Delay 1 Pan	L64–63R	Stereo location of Delay 1
Delay 2 Pan	L64–63R	Stereo location of Delay 2
Delay 1 Level	0–127	Volume of delay 1
Delay 2 Level	0–127	Volume of delay 2
Low Gain	-15–+15 [dB]	Gain of the low range
High Gain	-15–+15 [dB]	Gain of the high range
Balance	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

## 76 Transient

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



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

## 77 Mid-Side EQ

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



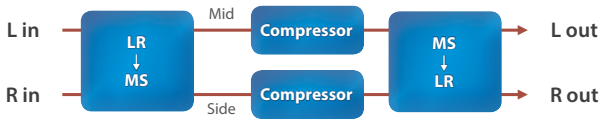
Parameter	Value	Explanation
M EQ Switch	OFF, ON	Switches whether to apply tonal adjustment to left/right input signals whose phase is similar (in phase).
M Input Gain	-12.00–+12.00 [dB]	Volume of left/right input signals whose phase is similar (in phase)
M Low Frequency	20, 25, 31, 40, 50, 63, 80, 100,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

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



## 78 Mid-Side Compressor

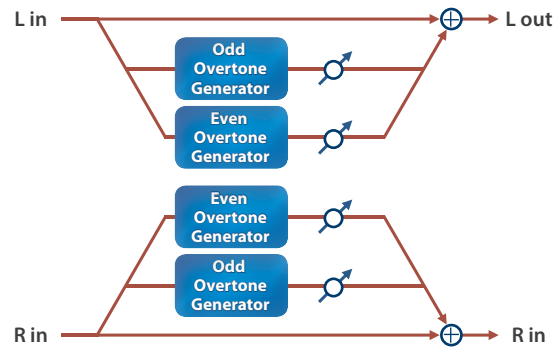
This effect allows the left/right signals that have similar phase to be adjusted to a different sense of volume than the left/right signals that have different phase.



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

## 79 Tone Fattener

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



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

## 80 Mid-Side Delay

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



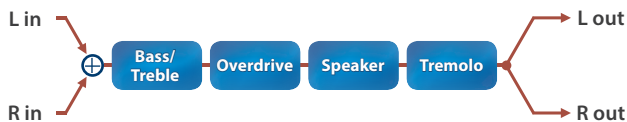
Parameter	Value	Explanation
M Delay Level	0–127	Delay volume of left/right input signals whose phase is similar (in phase)
M Delay Mode	2Tap, 3Tap, 4Tap	Delay divisions for the input signals whose left/right phase is similar (identical phase)
M Delay Time (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
M Delay Time (msec)	1–1300 [msec]	Adjusts the time from the original sound until the delay sound is heard.
M Delay Time (note)	Note ⇒ "Note" (p. 120)	
M Delay 1 Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
M HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out (BYPASS: no cut).
M Delay 1 Pan		Panning of the first delay sound
M Delay 2 Pan		Panning of the second delay sound
M Delay 3 Pan	L64–63R	Panning of the third delay sound
M Delay 4 Pan		Panning of the fourth delay sound
S Delay Level	0–127	Delay volume of left/right input signals whose phase is distant (opposite phase)
S Delay Mode	2Tap, 3Tap, 4Tap	Delay divisions for the input signals whose left/right phase is distant (reverse phase)
S Delay Time (sync sw)	OFF, ON	If this is ON, the delay synchronizes with the tempo.
S Delay Time (msec)	1–1300 [msec]	Adjusts the time from the original sound until the delay sound is heard.
S Delay Time (note)	Note ⇒ "Note" (p. 120)	



Parameter	Value	Explanation
S Delay 1 Feedback	-98–+98 [%]	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
S HF Damp	200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS [Hz]	Adjusts the frequency above which the delay sound fed back to the effect is filtered out ( <b>BYPASS</b> : no cut).
S Delay 1 Pan	L64–63R	Panning of the first delay sound
S Delay 2 Pan		Panning of the second delay sound
S Delay 3 Pan		Panning of the third delay sound
S Delay 4 Pan		Panning of the fourth delay sound
Level	0–127	Output Level

## 81 RD EPampSim

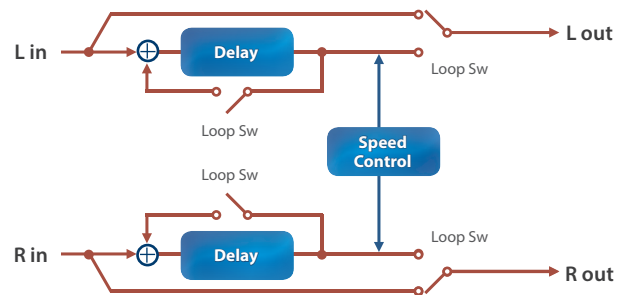
This is an effect that was developed for the RD series SuperNatural E.Piano.



Parameter	Value	Explanation
Bass	-50–+50	Amount of low-frequency boost/cut
Treble	-50–+50	Amount of high-frequency boost/cut
Tremolo Switch	OFF, ON	Tremolo on/off
Tremolo Type		Type of tremolo effect
	OLDCASE MONO	A standard electric piano sound of the early 70s (mono)
	OLDCASE STEREO	A standard electric piano sound of the early 70s (stereo)
	NEWCASE	A standard electric piano sound of the late 70s and early 80s
	DYNO	A classic modified electric piano
	WURLY	A classic electric piano of the '60s
Tremolo Speed (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➔ "TEMPO" (p. 52)
Tremolo Speed (Hz)	0.05–10.00 [Hz]	Rate of the tremolo effect
Tremolo Speed (note)	Note ➔ "Note" (p. 120)	
Tremolo Depth	0–127	Depth of the tremolo effect
Tremolo Shape	0–20	Adjusts the waveform of the tremolo.
AMP Switch	OFF, ON	Turns the speaker and distortion on/off
Speaker Type	LINE, OLD, NEW, WURLY, TWIN	Type of speaker. If LINE is selected, the sound will not be sent through the speaker simulation.
OD Drive	0–127	Degree of distortion. Also changes the volume.
Level	0–127	Output Level

## 82 DJFX Looper

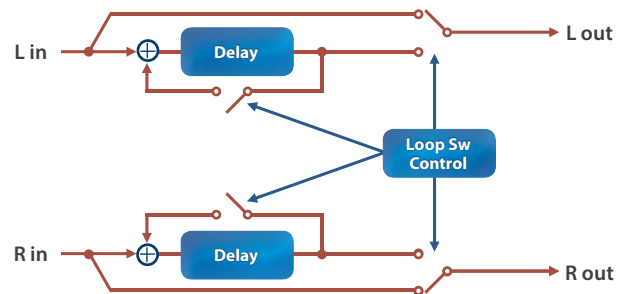
Loops a short portion of the input sound. You can vary the playback direction and playback speed of the input sound to add turntable-type effects.



Parameter	Value	Explanation
Length	0–127	Specifies the length of the loop.
Speed	-1.00–+1.00	Specifies the playback direction and playback speed.
		- <b>direction</b> : Reverse playback
		+ <b>direction</b> : Normal playback
	0: Stop playback	As the value moves away from 0, the playback speed becomes faster.
Loop Sw	OFF, ON	If you turn this on while the sound is heard, the sound at that point will be looped. Turn this off to cancel the loop. * If the effect is recalled with this ON, this parameter must be turned OFF and then turned ON again in order to make the loop operate.
Level	0–127	Output Level

## 83 BPM Looper

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

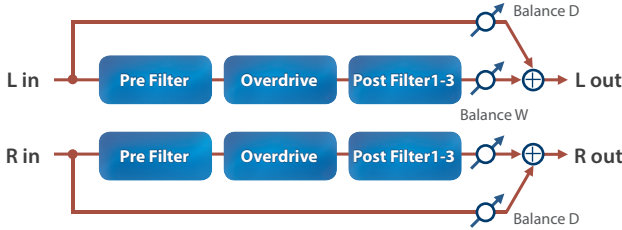


Parameter	Value	Explanation
Length	0–127	Specifies the length of the loop.
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. ➔ "TEMPO" (p. 52)
Rate Hz	0.05–10.00 [Hz]	
Rate Note	Note ➔ "Note" (p. 120)	Cycle at which the loop automatically turns on/off
On Timing	1–8	Specifies the timing within the cycle at which the loop automatically starts (which step of the eight timing divisions at which the sound is heard)
On Length	1–8	Specifies the length at which the loop automatically ends within the cycle (the number of times that the 1/8-length of sound is heard)
Loop Mode	OFF, AUTO, ON	If this is AUTO, the loop automatically turns on/off in synchronization with the rhythm. * If the effect is recalled with this ON, this parameter must first be set to something other than ON in order to make the loop operate.

Parameter	Value	Explanation
Level	0–127	Output Level

## 84 Saturator

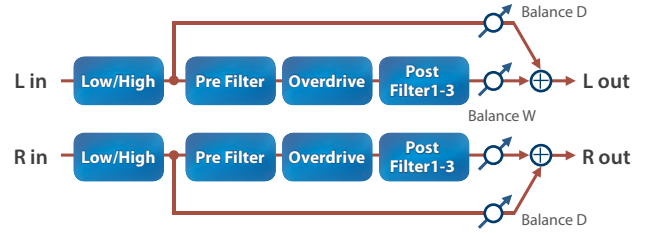
This effect combines overdrive and filter.



Parameter	Value	Explanation
DrvPre1 Type	THRU, LPF, HPF, LSV, HSV	Type of filter that precedes the distortion processing <b>THRU:</b> No filter is applied <b>LPF:</b> A filter that passes the sound below the specified frequency <b>HPF:</b> A filter that passes the sound above the specified frequency <b>LSV:</b> A filter that boosts/cuts the sound below the specified frequency <b>HSV:</b> A filter that boosts/cuts the sound above the specified frequency
DrvPre1 Frequency	20–16000 [Hz]	Frequency at which the pre-distortion filter operates
DrvPre1 Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
Drive	0.0–+48.0 [dB]	Strength of distortion
DrvPost1 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 1 which follows the distortion processing
DrvPost1 Frequency	20–16000 [Hz]	Frequency at which post-distortion filter 1 operates
DrvPost1 Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
DrvPost2 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 2 which follows the distortion processing
DrvPost2 Frequency	20–16000 [Hz]	Frequency at which post-distortion filter 2 operates
DrvPost2 Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
DrvPost3 Type	THRU, LPF, HPF, BPF, PKG	Type of filter 3 which follows the distortion processing <b>THRU:</b> No filter is applied <b>LPF:</b> A filter that passes the sound below the specified frequency <b>HPF:</b> A filter that passes the sound above the specified frequency <b>BPF:</b> A filter that passes only the specified frequency <b>PKG:</b> A filter that boosts/cuts the specified frequency
DrvPost3 Frequency	20–16000 [Hz]	Frequency at which post-distortion filter 3 operates
DrvPost3 Gain	-24.0–+24.0 [dB]	For the PKG type, the amount of boost/cut
DrvPost3 Q	0.5–16.0	Width of the frequency range affected by the filter
Makeup Sense	-60.0–0.0 [dB]	Adjust this value so that the sound is not made louder when distortion is applied.
DrvPost Gain	-48.0–+12.0 [dB]	Gain following distortion processing
Drive Balance	D100:0W–D0:100W	Volume balance between the dry sound (D) and effect sound (W)
Level	0–127	Output Level

## 85 Warm Saturator

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

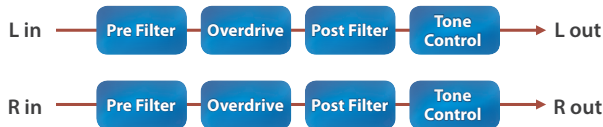


Parameter	Value	Explanation
EQ Low Frequency	20–16000 [Hz]	Input filter (low range) Boosts/cuts the sound below the specified frequency.
EQ Low Gain	-24–+24 [dB]	Amount of boost/cut
EQ High Slope	THRU, -12dB, -24dB	Input filter (high range) Boosts/cuts the sound above the specified frequency.
EQ High Frequency	20–16000 [Hz]	Amount of boost/cut
DrvPre1 Type	THRU, LPF, HPF, LSV, HSV	Types of filter that precedes the distortion processing <b>THRU:</b> No filter is applied <b>LPF:</b> A filter that passes the sound below the specified frequency <b>HPF:</b> A filter that passes the sound above the specified frequency <b>LSV:</b> A filter that boosts/cuts the sound below the specified frequency <b>HSV:</b> A filter that boosts/cuts the sound above the specified frequency
DrvPre1 Frequency	20–16000 [Hz]	Frequency at which the pre-distortion filter operates
DrvPre1 Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
Drive	0.0–+48.0 [dB]	Strength of distortion
DrvPost1 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 1 which follows the distortion processing
DrvPost1 Frequency	20–16000 [Hz]	Frequency at which post-distortion filter 1 operates
DrvPost1 Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
DrvPost2 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 2 which follows the distortion processing
DrvPost2 Frequency	20–16000 [Hz]	Frequency at which post-distortion filter 2 operates
DrvPost2 Gain	-24.0–+24.0 [dB]	For the LSV/HSV types, the amount of boost/cut
DrvPost3 Type	THRU, LPF, HPF, LSV, HSV	Type of filter 3 which follows the distortion processing <b>THRU:</b> No filter is applied <b>LPF:</b> A filter that passes the sound below the specified frequency <b>HPF:</b> A filter that passes the sound above the specified frequency <b>BPF:</b> A filter that passes only the specified frequency <b>PKG:</b> A filter that boosts/cuts the specified frequency
DrvPost3 Frequency	20–16000 [Hz]	Frequency at which post-distortion filter 3 operates
DrvPost3 Gain	-24.0–+24.0 [dB]	For the PKG type, the amount of boost/cut
DrvPost3 Q	0.5–16.0	Width of the frequency range affected by the filter
Makeup Sense	-60.0–0.0 [dB]	Adjust this value so that the sound is not made louder when distortion is applied.
DrvPost Gain	-48.0–+12.0 [dB]	Gain following distortion processing

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

## 86 Fuzz

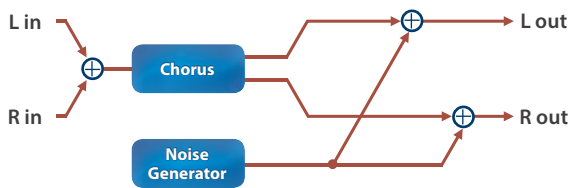
Adds overtones and intensely distorts the sound.



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

## 87 JUNO-106 Chorus

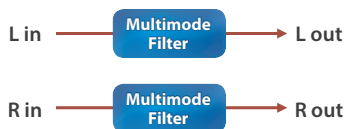
This models the chorus effects of the Roland JUNO-106.



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

## 88 Multi Mode Filter

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



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

## 89 HMS Distortion

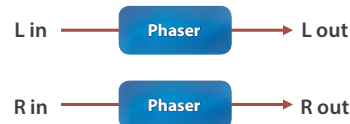
This is a distortion-type effect that models the vacuum tube amp section of a rotary speaker of the past.



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

## 90 Phaser 100

This simulates an analog phaser of the past.



Parameter	Value	Explanation
Rate (sync sw)	OFF, ON	If this is ON, the rate synchronizes with the tempo of the rhythm. → "TEMPO" (p. 52)
Rate (Hz)	0.05-10.00 [Hz]	
Rate (note)	Note → "Note" (p. 120)	Modulation rate
Duty	-50-50	Adjusts the ratio of speeds at which the modulation rises or falls.
Min	0-100	Lower limit reached by modulation
Max	0-100	Upper limit reached by modulation
Manual Sw	OFF, ON	Applies modulation according to the value of the Manual parameter, rather than modulating automatically.
Manual	0-100	Center frequency at which the sound is modulated
Resonance	0-66	Amount of feedback
Mix	0-127	Level of the phase-shifted sound
Level	0-127	Output Level

## Note

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

# Block Diagram

