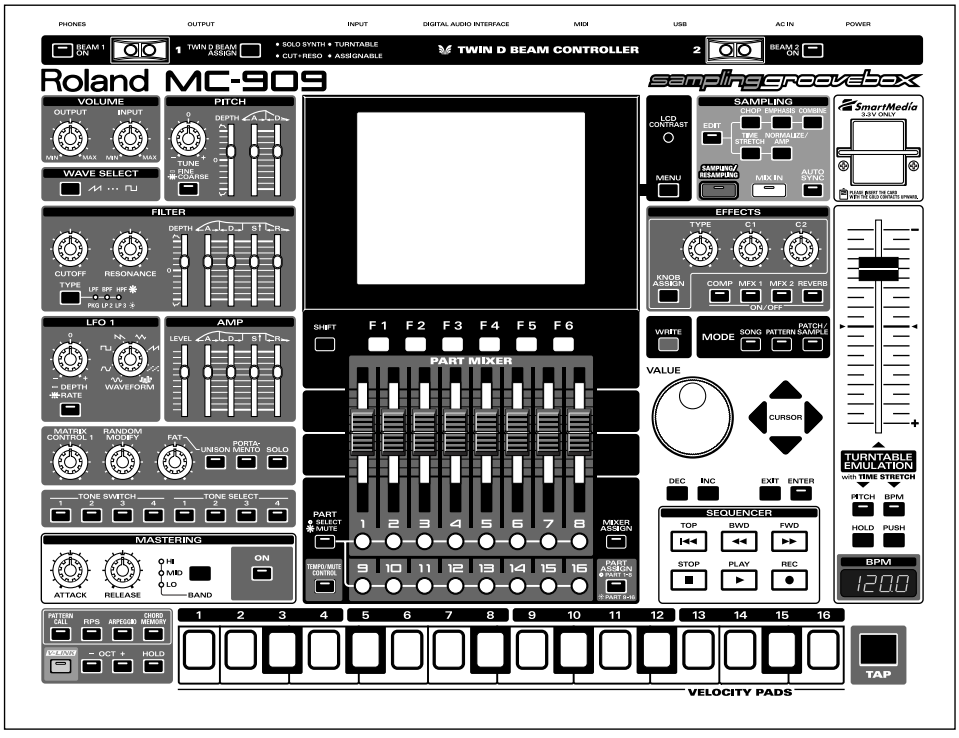
Roland®

sampling groovebox MC-909

Owner's Manual

Thank you, and congratulations on your choice of the Roland MC-909 Sampling Groovebox.

Before using this unit, carefully read the sections entitled: "IMPORTANT SAFETY INSTRUCTIONS" (Owner's Manual p. 2), "USING THE UNIT SAFELY" (Owner's Manual pp. 3–4), and "IMPORTANT NOTES" (Owner's Manual p. 5). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Quick Start and Owner's Manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.



Convention Used in This Manual

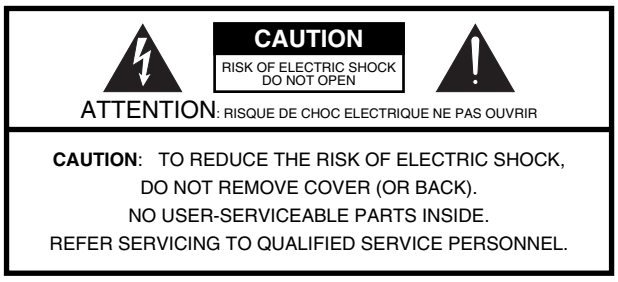
- Words enclosed in square brackets indicate buttons or a dial or a knob or a slider on the panel.
- (p. **) indicates a reference page.

* The explanations in this manual include illustrations that depict what should typically be shown by the display. Note, however, that your unit may incorporate a newer, enhanced version of the system (e.g., includes newer sounds), so what you actually see in the display may not always match what appears in the manual.

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WARNING: To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.





The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

INSTRUCTIONS PERTAINING TO A RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS.

IMPORTANT SAFETY INSTRUCTIONS
SAVE THESE INSTRUCTIONS

WARNING - When using electric products, basic precautions should always be followed, including the following:

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

For the U.K.

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.
Under no circumstances must either of the above wires be connected to the earth terminal of a three pin plug.

USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠WARNING and ⚠CAUTION Notices

⚠WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols

⚠	The △ symbol alerts the user to important instructions or warnings.The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The ⃠ symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The ● symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING

⚠WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual.

- Do not open or perform any internal modifications on the unit. (The only exception would be where this manual provides specific instructions which should be followed in order to put in place user-installable options; see p. 142, p. 144, p. 146, and p. 148.)

- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

- Never use or store the unit in places that are:
  - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are
  - Damp (e.g., baths, washrooms, on wet floors); or are
  - Humid; or are
  - Exposed to rain; or are
  - Dusty; or are
  - Subject to high levels of vibration.

- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.

- The unit should be connected to a power source only of the type described in the operating instructions, or as marked on the bottom of the unit.

⚠WARNING

- Use only the attached power-supply cord.

- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards!

- This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist.

- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit.

- Immediately turn the power off, remove the power cord from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:
  - The power-supply cord, or the plug has been damaged; or
  - If smoke or unusual odor occurs
  - Objects have fallen into, or liquid has been spilled onto the unit; or
  - The unit has been exposed to rain (or otherwise has become wet); or
  - The unit does not appear to operate normally or exhibits a marked change in performance.

⚠WARNING

- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.

- Protect the unit from strong impact.
(Do not drop it!)

- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.

- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

- Always turn the unit off and unplug the power cord before attempting installation of the circuit board (SRX series/DIMM; p. 16).

- Do not put anything that contains water (e.g., flower vases) on this unit. Also, avoid the use of insecticides, perfumes, alcohol, nail polish, spray cans, etc., near the unit. Swiftly wipe away any liquid that spills on the unit using a dry, soft cloth.

⚠ CAUTION

- The unit should be located so that its location or position does not interfere with its proper ventilation.

- Always grasp only the plug on the power-supply cord when plugging into, or unplugging from, an outlet or this unit.

- At regular intervals, you should unplug the power plug and clean it by using a dry cloth to wipe all dust and other accumulations away from its prongs. Also, disconnect the power plug from the power outlet whenever the unit is to remain unused for an extended period of time. Any accumulation of dust between the power plug and the power outlet can result in poor insulation and lead to fire.

- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.

- Never climb on top of, nor place heavy objects on the unit.

- Never handle the power cord or its plugs with wet hands when plugging into, or unplugging from, an outlet or this unit.

- Before moving the unit, disconnect the power plug from the outlet, and pull out all cords from external devices.

- Before cleaning the unit, turn off the power and unplug the power cord from the outlet (p. 16).

- Whenever you suspect the possibility of lightning in your area, pull the plug on the power cord out of the outlet.

- Install only the specified circuit board (SRX series). Remove only the specified screws (p. 142, p. 144, p. 146, and p. 148).

- Should you remove screws, make sure to put them in a safe place out of children's reach, so there is no chance of them being swallowed accidentally.

IMPORTANT NOTES

In addition to the items listed under "IMPORTANT SAFETY INSTRUCTIONS" and "USING THE UNIT SAFELY" on pages 2 and 3, please read and observe the following:

Power Supply

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.
- Although the LCD and LEDs are switched off when the POWER switch is switched off, this does not mean that the unit has been completely disconnected from the source of power. If you need to turn off the power completely, first turn off the POWER switch, then unplug the power cord from the power outlet. For this reason, the outlet into which you choose to connect the power cord's plug should be one that is within easy reach and readily accessible.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.
- To avoid possible breakdown, do not use the unit in a wet area, such as an area exposed to rain or other moisture.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

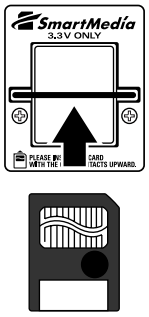
Additional Precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of loosing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory on a memory card, or in another MIDI device (e.g., a sequencer).
- Unfortunately, it may be impossible to restore the contents of data that was stored in the unit's memory, a memory card, or another MIDI device (e.g., a sequencer) once it has been lost. Roland Corporation assumes no liability concerning such loss of data.
- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.
- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable's internal elements.
- A small amount of heat will radiate from the unit during normal operation.
- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.
- Use a cable from Roland to make the connection. If using some other make of connection cable, please note the following precautions.
  - Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.

Before Using Memory Cards

Using Memory Cards

- Carefully insert the Memory card all the way in—until it is firmly in place.

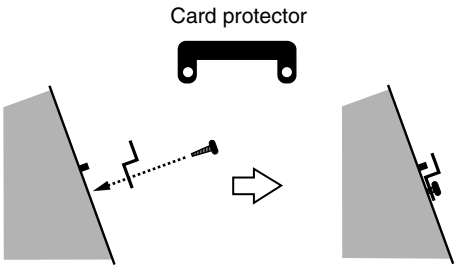


- Never touch the terminals of the Memory card. Also, avoid getting the terminals dirty.

Installing the card protector

The MC-909 provides a card protector to prevent theft of the memory card. To install the card protector, use the following procedure.

1. Use a screwdriver to remove both screws that are at either side of the memory card slot.
2. Insert the memory card into the memory card slot.
3. Use the screws to fasten the card protector as shown below.



Side view

Copyright

- Unauthorized recording, distribution, sale, lending, public performance, broadcasting, or the like, in whole or in part, of a work (musical composition, video, broadcast, public performance, or the like) whose copyright is held by a third party is prohibited by law.
- When exchanging audio signals through a digital connection with an external instrument, this unit can perform recording without being subjected to some of the restrictions of the Serial Copy Management System (SCMS). This is because the unit is intended solely for musical production, and is designed not to be subject to restrictions as long as it is used to record works (such as your own compositions) that do not infringe on the copyrights of others. (SCMS is a feature that prohibits second-generation and later copying through a digital connection. It is built into MD recorders and other consumer digital-audio equipment as a copyright-protection feature.)
- Do not use this unit for purposes that could infringe on a copyright held by a third party. We assume no responsibility whatsoever with regard to any infringements of third-party copyrights arising through your use of this unit.

* Microsoft and Windows are registered trademarks of Microsoft Corporation.

* Windows® is known officially as: "Microsoft® Windows® operating system."

* Apple and Macintosh are registered trademarks of Apple Computer, Inc.

* Mac OS is a trademark of Apple Computer, Inc.

* SmartMedia is a trademark of Toshiba Corp.

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Features of the MC-909

Cutting-edge groovebox that unifies MIDI and sampling

In a single unit, the MC-909 delivers the power of a conventional groovebox (an all-in-one synthesizer and sequencer) plus a full-fledged sampler. It's a new generation of workstation that gives you everything you need to perfect your music.

Built-in mastering functionality

A three-band compressor is built-in, letting you apply the mastering operations that are the indispensable final step in music production. The output of the MC-909 can be recorded directly to CD or MD.

Sample synthesis

Waveforms sampled by the MC-909 or loaded from an external source can be freely manipulated using the filter, LFO, and effects in the same way as the internal preset waveforms.

Full-fledged sampler

The high-performance 44.1 kHz sampler provides five sampling modes for various situations. You can sample external analog or digital input sources, or resample the internal sounds. The full range of editing functions includes Time Stretch and Chop.

Memory can be expanded to a maximum of 256 MB by adding DIMM modules. When added to the internal 16 MB of RAM (approximately 3 minutes of monaural sampling), this gives you up to 272 MB (approximately 51 minutes of monaural sampling).

High-performance synthesizer sound generator

Features Roland's latest high-performance synthesizer sound generator, with 800 patches and 64 rhythm sets that are based on new waveforms created especially for the MC-909.

You can also install one wave expansion board (SRX series) to increase the waveforms available to you when the need arises. In particular, installing the SRX-05 "Supreme Dance" board will let you use special patches and rhythm sets created specifically for the MC-909.

The latest patterns for creative use and immediate performance

For immediate playing or for use in your own compositions, the MC-909 provides 215 preset patterns and 440 different RPS patterns, covering a broad range of current dance styles, including techno, trance, house, hiphop, and R&B.

Plenty of external interfaces

The MC-909 provides a USB connector for file transfer with your computer. Waveform data files in .WAV or .AIFF formats and SMF-format sequence data can be imported or exported between the MC-909 and your computer with the click of a mouse, as easily as if you were using an external drive.

Highly evolved turntable emulation, and dual D Beam controllers

By automatically time-stretching a sample according to the sequencer playback tempo, you can maintain playback synchronization between the sequencer and samples. This lets you use the turntable emulation slider to control the sequencer and sample BPM in real time. You can also specify the variable range of the slider.

In addition, the MC-909 features dual D Beam controllers, located at the left and right of the panel. This gives you the capability for special effects that have never been possible until now.

Easy creation of original patterns

With a large LCD, knobs and a mixer section that can be operated at any time to modify the sound directly, and newly developed velocity pads, the MC-909 is an ideal recording environment. You can use realtime, TR-REC, and step recording methods, and manipulate your music with editing functionality that goes well beyond previous grooveboxes.

The sequencer has also been upgraded, letting you create 16-part patterns that are up to 998 measures long. SMF Convert Load/Save functions ensure easy data exchange with other sequencers.

Two multi-effects, a compressor, and reverb

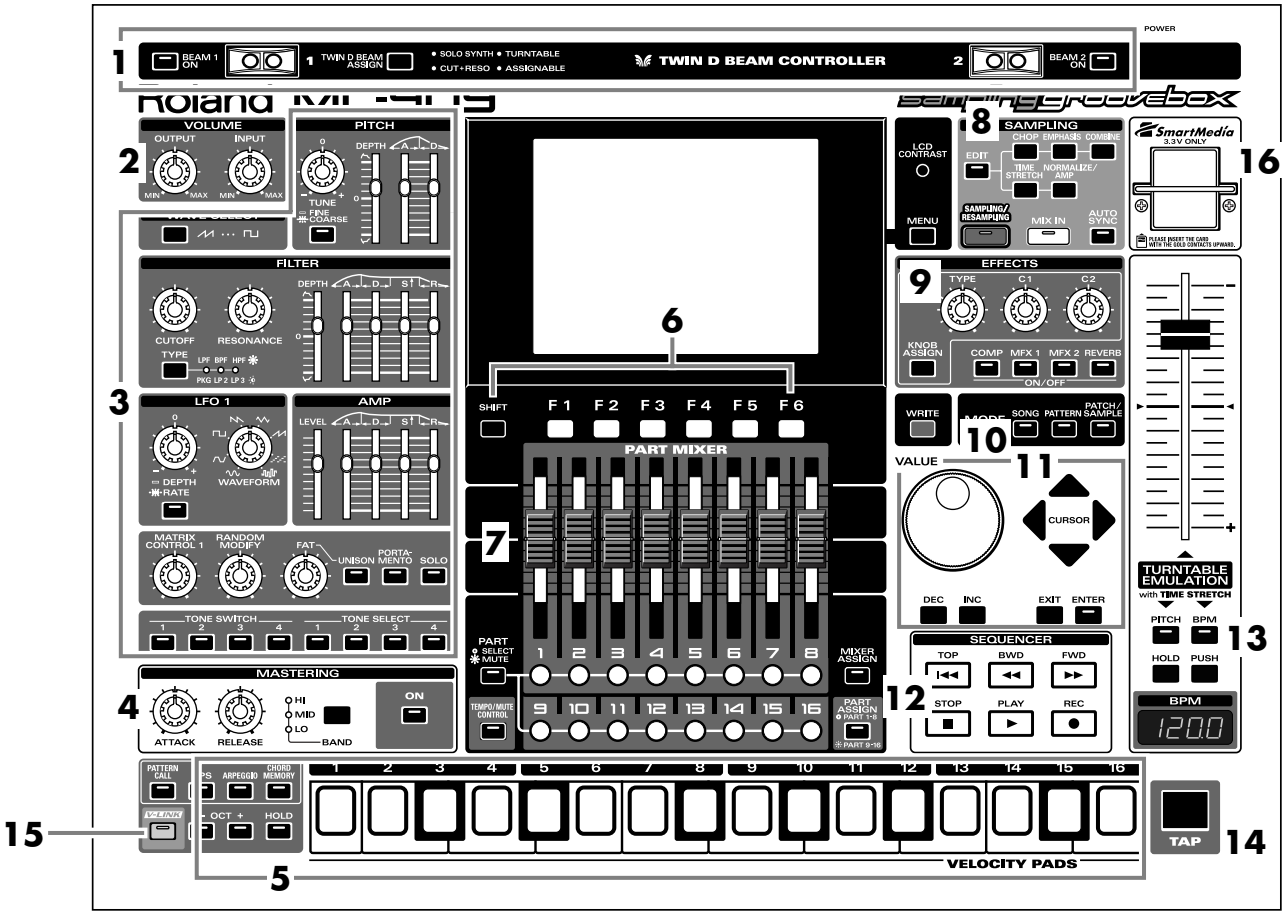
The two independent MFX units (multi-effects: MFX1 provides 38 types, MFX2 provides 47 types) provide a complete array of effects that are ready to go whenever you need them. In particular, MFX2 can produce long delays of up to four seconds. The two-band compressor is a great way to power-up rhythm instruments such kick drum. The acclaimed reverb from the XV series is also provided.

V-LINK function

V-LINK (V-LINK) is a function that provides for the play of music and visual material. By using V-LINK-compatible video equipment, visual effects can be easily linked to, and made part of the expressive elements of a performance. By connecting the MC-909 to the Edirol DV-7PR, you can switch images in synchronization with music, or use the MC-909's knobs to control the brightness, color, or playback speed of the images.

Panel Descriptions

Top Panel



1. D Beam Controllers

You can modify the patterns or sounds by passing your hand over these (p. 35).

2. Volume Section

Adjusts the output volume of the entire MC-909, and the input volume to the MC-909.

3. Realtime Modify Section

Modifies the tone (p. 33).

4. Mastering Section

Applies a mastering effect (compressor) (p. 108).

5. Velocity Pads

Used as a keyboard to play sounds or trigger phrases (p. 27).

6. Function Buttons

Access the screens for the functions shown in the bottom line of the screen.

7. Part Mixer Section

Adjusts the volume and pan for each part in the pattern (p. 33).

8. Sampling Section

Records external sounds into the MC-909 as waveforms, and processes them (p. 109).

9. Effect Section

Applies special effects to the sound (p. 88).

10. Mode Section

Selects Song mode (p. 79), Pattern mode (p. 21), or Patch/Sample mode (p. 51).

The button of the currently selected mode will light.

11. Cursor/Value Section

Used to select patterns or patches, and to input values (p. 18).

12. Sequencer Section

Used to play/record patterns or songs (p. 24, p. 82).

13. Turntable Emulation

Simulates the effect of changing the rotational speed of a turntable (p. 36).

14. TAP Button

Adjusts the BPM (tempo) according to the timing at which you tap this button (p. 25).

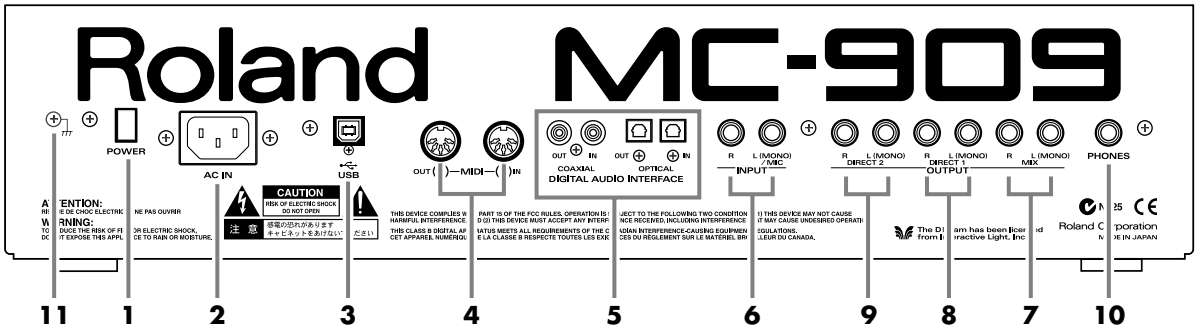
15. V-LINK Button

Switches V-LINK (p. 137) on/off.

16. SmartMedia card slot

Insert a SmartMedia card (3.3V, maximum 128 MB) here.

Rear Panel



1. POWER Switch

Turns the MC-909's power on and off (p. 16).

2. AC Inlet

Connect the included power cable here (p. 16).

The unit should be connected to a power source only of the type marked on the bottom of the unit.

3. USB Connector

This connector lets you use a USB cable to connect your computer to the MC-909 (p. 135).

4. MIDI Connectors (IN, OUT)

These connectors connect the MC-909 with other MIDI devices, enabling the sending and receiving of MIDI messages (p. 16).

- **IN:** This connector receives messages from another MIDI device.
- **OUT:** This connector transmits messages to another MIDI device.

5. Digital Audio Interface

These are optical-type and coaxial-type S/P DIF format digital in/out connectors.

S/P DIF: A digital interface format used in consumer digital audio devices.

The digital output connectors output the same audio signal as is output from the MIX OUTPUT jacks.

6. INPUT Jack

Accept input of audio signals in stereo (L/R) from external devices. If you want to use mono input, connect to the L jack.

MEMO

When recording from a mic, connect it to the L jack, and set Input Select (p. 34) to "MICROPHONE."

7. MIX OUTPUT Jacks

These jacks output stereo (L/R) audio signals to your amp or mixer. If you want to use mono output, connect to the L jack.

8. DIRECT 1 OUTPUT Jacks

The sound of the part/patch/rhythm set/tone/rhythm tone whose Output Assign (p. 88, p. 89, and p. 90) you set to "DIR1" is output in stereo (L/R) from these jacks to your amp or mixer. If you want to use mono output, connect to the L jack.

9. DIRECT 2 OUTPUT Jacks

The sound of the part/patch/rhythm set/tone/rhythm tone whose Output Assign (p. 88, p. 89, and p. 90) you set to "DIR2" is output in stereo (L/R) from these jacks to your amp or mixer. If you want to use mono output, connect to the L jack.

10. PHONES Jack

Headphones are plugged in here (p. 16).

11. Ground Terminal

Depending on the circumstances of a particular setup, you may experience a discomforting sensation, or perceive that the surface feels gritty to the touch when you touch this device, microphones connected to it, or the metal portions of other objects, such as guitars. This is due to an infinitesimal electrical charge, which is absolutely harmless. However, if you are concerned about this, connect the ground terminal (see figure) with an external ground. When the unit is grounded, a slight hum may occur, depending on the particulars of your installation. If you are unsure of the connection method, contact the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

Unsuitable places for connection

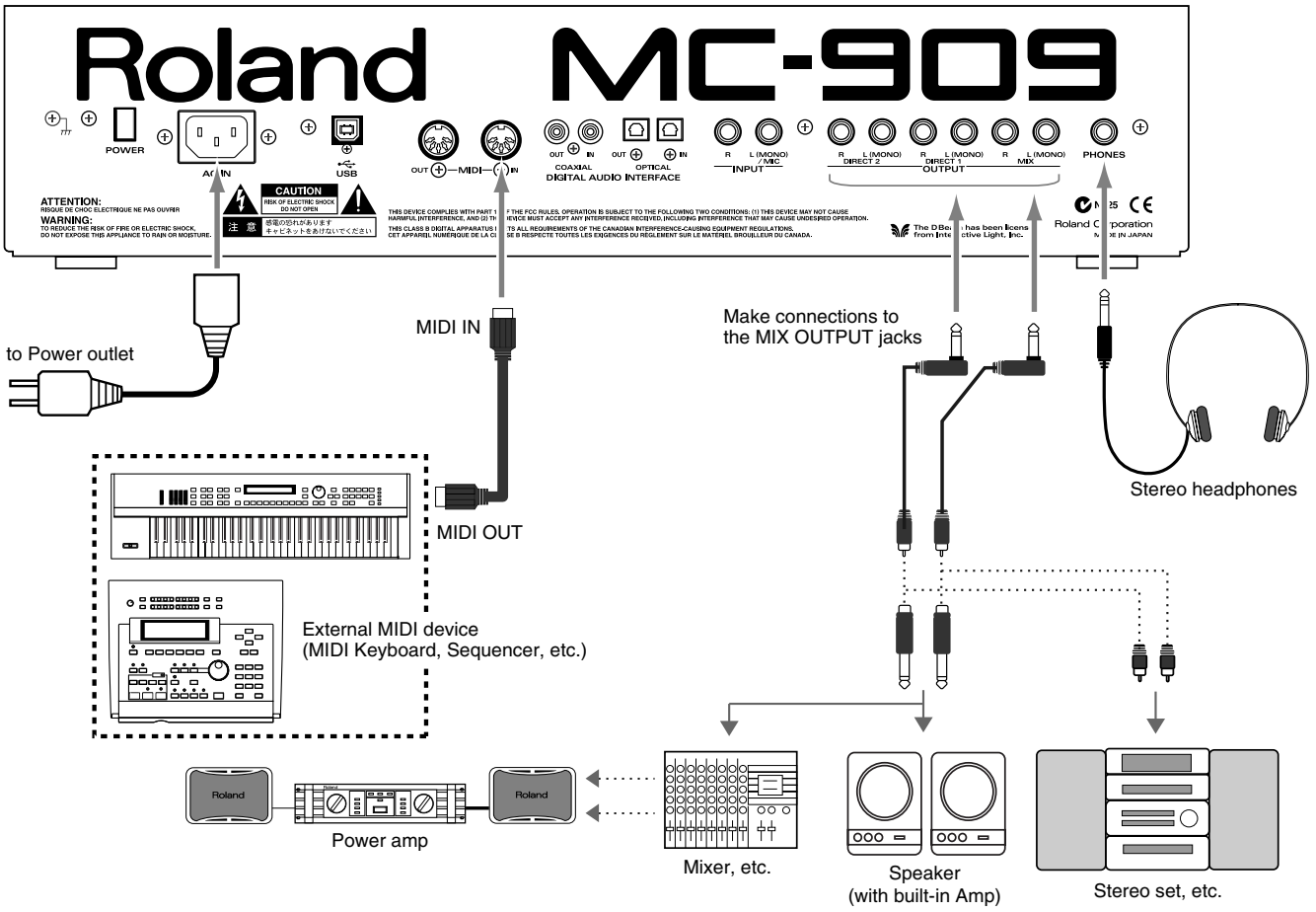
- Water pipes (may result in shock or electrocution)
- Gas pipes (may result in fire or explosion)
- Telephone-line ground or lightning rod (may be dangerous in the event of lightning)

Getting Ready

Making Connections

The MC-909 is not equipped with an internal amp or speakers. To hear sound, you will need to connect it to a keyboard amp or audio system, or connect headphones. Refer to the following figure when connecting the MC-909 with external devices.

* *To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.*



1. Before making any connections, confirm that power to all devices has been turned off.

2. Connect the AC power cord included with the MC-909 to the unit, then plug the other end into a power outlet.

3. Connect audio and MIDI cables as shown in the diagram. If connecting headphones, plug the headphones into the PHONES jack.

Turning On/Off the Power

* *Once the connections have been completed (p. 16), turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.*

1. Make sure that all volume controls on the MC-909 and connected devices are set to "0."

2. Turn on the device connected to the INPUT Jacks.

3. Turn on the MC-909's POWER switch.

4. Turn on the devices connected to the OUTPUT Jacks.

5. Adjust the volume levels for the devices.

* *This unit is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before the unit will operate normally.*

Turning Off the Power

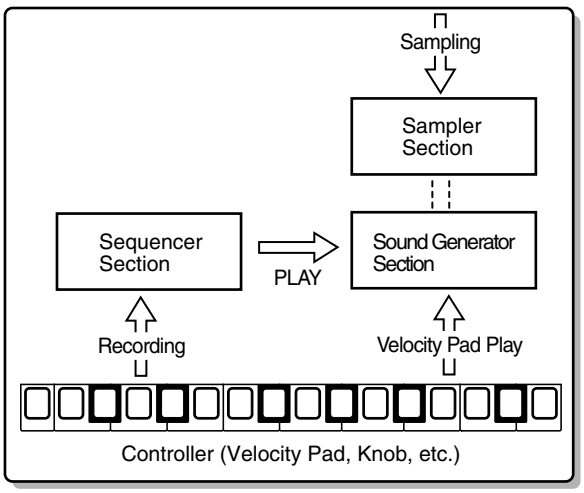
Before switching off the power, lower the volume on each of the devices in your system and then TURN OFF the devices in the reverse order to which they were switched on.

* *If you need to turn off the power completely, first turn off the POWER switch, then unplug the power cord from the power outlet. Refer to* ***Power Supply*** *(p. 5).*

An Overview of the MC-909

Basic structure of the MC-909

This section provides an overview of the sequencer section, sound generator section, controller section, and sampler section, which make up the main parts of the MC-909.



The sound generator section

This is the section that actually generates the sound. It produces sounds in response to data received from the MC-909's Controller or Sequencer sections. You can also play the sound generator by sending it performance data from an external MIDI device.

Since the sound generator section of the MC-909 is able to play up to 64 notes simultaneously, it can easily handle multiple parts.

Song

Two or more patterns connected in the order of playback are called a song.

In one song, you can register up to 50 patterns in the desired order of playback.

Pattern

A pattern is 1–998 measures of performance data consisting of sounds (patches or rhythm sets) for up to 16 parts.

The MC-909 provides 215 different preset patterns.

Part

A part corresponds to a single musician in a band or orchestra. Since the MC-909 has sixteen parts, you can use sixteen different patches or rhythm sets to play as many as sixteen performances simultaneously.

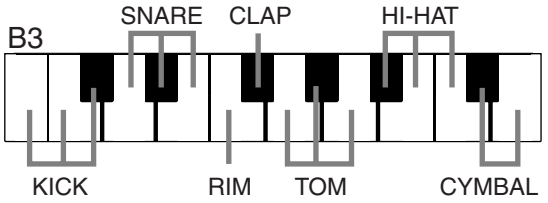
Patch

A patch corresponds to a single instrument such as a piano or guitar. A patch consists of up to four "tones." The MC-909 provides 800 different patches, and you can enjoy an enormous variety of sounds simply by choosing from these patches.

Rhythm set

A rhythm set assigns a separate instrumental sound to each note of the keyboard. These instrumental sounds are not played as a scale. The MC-909 provides 64 preset rhythm sets.

(Example)



Tones

Tones are the raw materials of sound that are combined to create a patch. The MC-909 provides 693 different waveforms, and two waveforms can be assigned to each tone. (Waveforms can be assigned in stereo; one for L and one for R.)

You can install separately sold wave expansion boards (SRX series) to add more waveforms, and sounds that you sample can also be used as waveforms.

Effects

Effects let you apply a variety of special effects to patches or rhythm sets. You can use four effects simultaneously: compressor (an effect that makes the sound more consistent), reverb (which adds reverberation), and two multi-effects (each selectable from 47 types such as equalizer, overdrive, and delay).

The sequencer section

A **sequencer** is a device that records musical performance data, and can play back the performance data that was recorded.

The MC-909 is a sequencer that plays back patterns and adds changes to the playback method. This type of sequencer is referred to as a **pattern sequencer**.

Recording/playing a performance

The MC-909 comes with 215 previously prepared patterns (**preset patterns**). These preset patterns can be played back easily.

You can also create your own original patterns, either by modifying preset patterns or by creating a pattern from scratch.

Simultaneous playback of multiple parts

The MC-909 is able to play multiple sounds (patches) simultaneously. For example, with the following part configuration, you can simultaneously play drums, bass, piano and guitar; and the resulting performance will sound like a band.

Part 1	Guitar
Part 2	Bass
Part 3	Piano
Part 10	Rhythm (Drum) Set

Editing performance data

Unlike a cassette tape or MD, a sequencer records a performance as musical data (not as sound). It's easy to edit the performance data to create your own original patterns.

The controller section

The "controllers" of the MC-909 are its velocity pads, D Beam controllers, and the panel knobs and sliders. By operating these controllers you can modify the performance and sound in various ways.

Velocity pads

These pads function just like a music keyboard. They are also used to trigger RPS (p. 28) and the arpeggiator (p. 30). Normally, pad number 2 will be C4. The force with which you strike a pad will control the velocity (dynamics) of the note.

D Beam controllers

By passing your hand over these controllers you can play or modify sounds (p. 35).

Turntable emulation

These buttons and slider allow realtime synchronized performance with sound sources such as a turntable, assisting you with DJ performance (p. 36).

Realtime modify knobs

These knobs and sliders give you realtime control over sound parameters such as filter cutoff frequency and resonance or LFO speed.

The sampler section

A sampler is a device that captures sounds from a wave file or an external source such as a CD.
On the MC-909, a sampled sound can be handled just like an internal waveform of the sound generation section; you can change the pitch of the sampled sound, apply a filter to it, or modify its envelope.

Adjusting the display contrast

Use the [LCD CONTRAST] knob located at the right of the display to adjust the contrast.
Turn the knob toward the right to darken the screen, or toward the left to lighten it.

Editing a value

Use the [VALUE] dial to make large changes in a value, or use the [INC]/[DEC] buttons to change a value in steps of one. Your changes will affect the value that is displayed in white characters within a black frame in the screen. This location is called the "cursor." If a screen contains more than one value that can be edited, use the [CURSOR] buttons to move the cursor to the value you want to edit.

Quickly changing a value

- If you hold down [SHIFT] while you turn the [VALUE] dial, the value will change more rapidly.

Key Repeat function

- The value will continue changing if you press and hold [INC] or [DEC].
- The cursor will continue moving if you press and hold a [CURSOR] key.

Turbo Repeat function

- The value will increase rapidly if you hold down [INC], then press and hold [DEC].
- The value will decrease rapidly if you hold down [DEC], then press and hold [INC].
- The cursor will move rapidly if you hold down a [CURSOR] button and then press the opposite [CURSOR] button.

Saving your data

After editing settings or recording a performance, you must save your data if you want to keep the results. If you turn off the power without saving, your settings or recorded performance will be lost.
For details on saving your data, refer to the following pages.

- **Saving a pattern** (p. 50)
- **Saving a Patch/Rhythm Set** (p. 77)
- **Saving a song** (p. 85)
- **Saving a sample** (p. 123)
- **Saving a Pattern Set** (p. 27)
- **Saving an RPS set** (p. 30)
- **Saving an arpeggio style** (p. 32)
- **Saving a chord form** (p. 33)

NOTE

Saving takes several seconds. Do not turn off the power until saving is completed. Doing so may cause the MC-909 to malfunction.

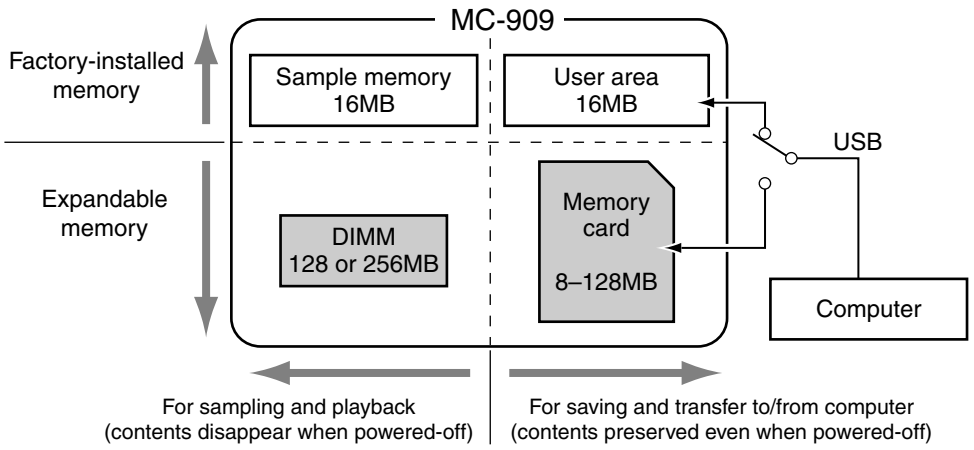
Regarding the locations where samples are stored

The MC-909 can use two types of memory; sample memory and DIMM whose contents are lost when you turn off the power, and user area and memory card whose contents are preserved even when the power is off.

When shipped from the factory, the MC-909 has 16 MB of sample memory and 16 MB of user area. By adding a DIMM module you can expand the sample memory to a maximum of 272 MB (if a 256 MB DIMM is used).
The user area can hold up to 16 MB, but by using a memory card you can store a maximum of 128 MB in addition to the user area.

When you record a sample on the MC-909 or play a patch that uses a sample, the sample is loaded into sample memory (including the DIMM). However when you turn off the power, the contents of the sample memory and DIMM will be lost. This means that if you want to keep the sample, you must use the Write operation to save it in the user area or on a memory card.

When managing data from your computer or from the MC-909's Utility menu, you can manage only the data located in the user area or the memory card. You cannot manage data that is located in sample memory or DIMM.



Be aware that because of this, the MC-909 can play samples larger than 128 MB, but **cannot save samples larger than 128 MB**.

Restoring the factory settings (Factory Reset)

Here's how to restore the settings of the MC-909 to their factory-set state.

NOTE

When you execute Factory Preset, **the data of the internal user memory will be lost**. If the internal memory of the MC-909 contains data that you want to keep, you must save it on SmartMedia or via USB to your computer.

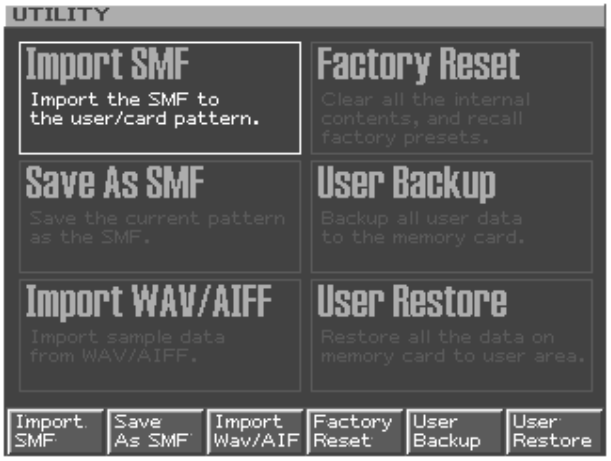
NOTE

Never turn off the power while Factory Reset is being executed. Doing so may destroy the contents of memory.

1. Press [MENU].
2. Use [CURSOR] to select "Utility."

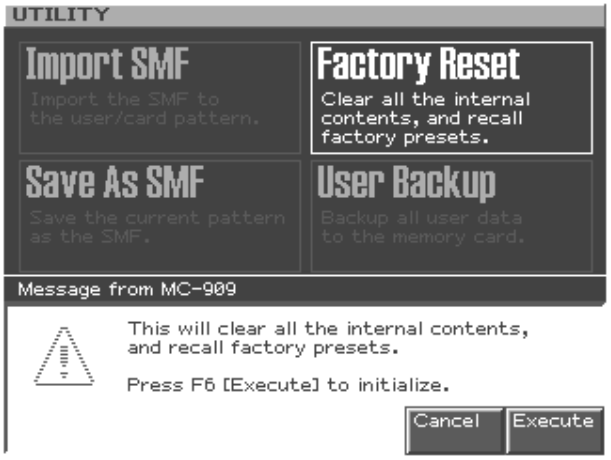


3. Press [ENTER] to access the Utility menu.



4. Press [F4 (Factory Reset)].

   A warning message will appear.



5. To execute a Factory Reset, press [F6 (Execute)].

   The Factory Reset will be carried out.

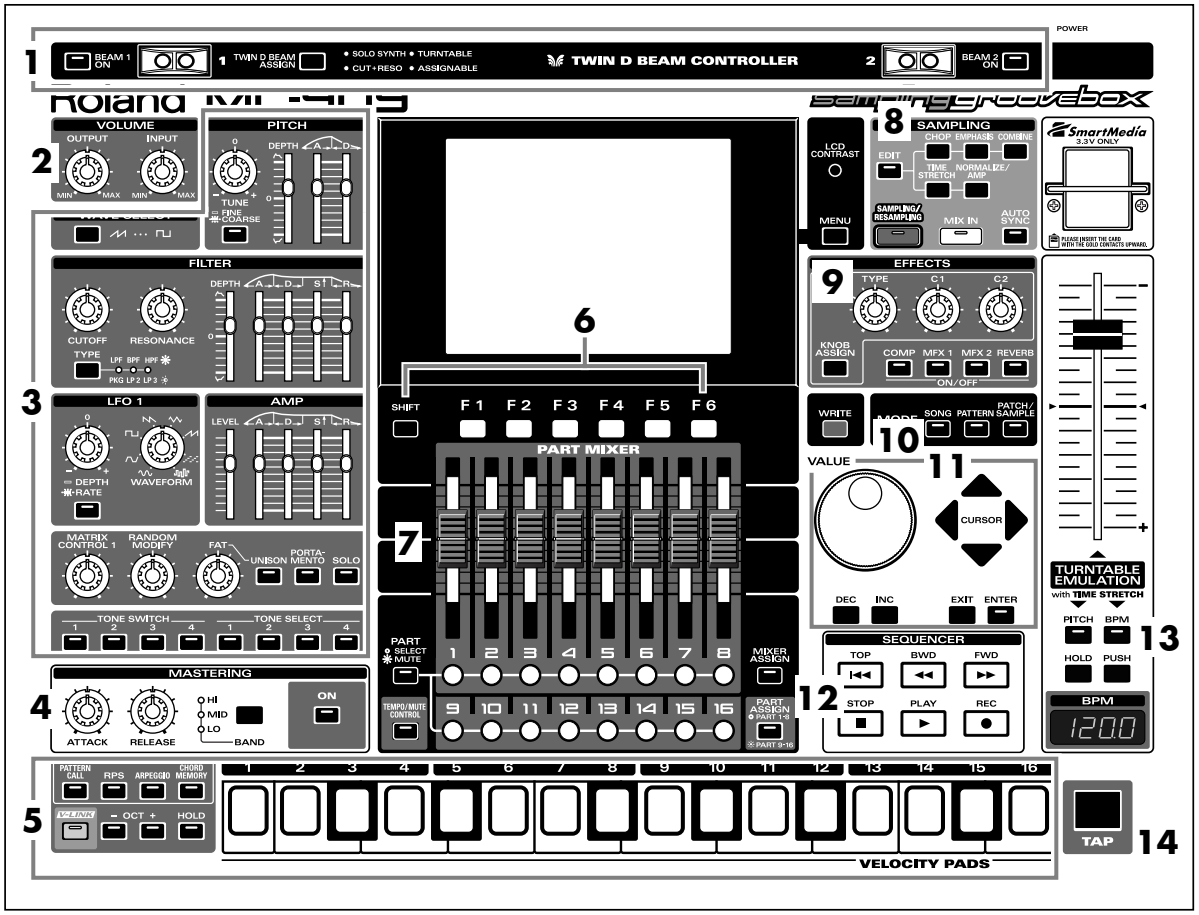
* *If you decide not to proceed with the reset, press [F5 (Cancel)].*

When the screen indicates "Please Power Off," turn the power off, then on again.

Pattern Mode

In this mode you can play, record, and edit patterns.

How Things Work (in Pattern mode)



When you press the Mode section **[PATTERN] button**, the button's indicator will light and the MC-909 will be in Pattern mode.
In Pattern mode, the various parts of the panel will perform the following functions.

1. D Beam controllers

Pass your hand over these to modify the pattern (p. 35).

[BEAM 1 ON]	Turns the left D Beam controller (BEAM 1) on/off.
[BEAM 2 ON]	Turns the right D Beam controller (BEAM 2) on/off.
[TWIN D BEAM ASSIGN]	Selects the function of the D Beam controller.

2. Volume section

[OUTPUT]	Adjusts the output volume of the MIX OUT jacks and the headphone.
[INPUT]	Adjusts the input volume from the INPUT jacks.

3. Realtime Modify section

These controls modify the sound (p. 33).

4. Mastering section

[ON]	Switches the mastering effect (compressor) on/off.
[BAND]	Selects the frequency band to adjust.
[ATTACK]	Specify the time from when the volume goes up the threshold level until the compressor effect applies.
[RELEASE]	Specify the time from when the volume falls below the threshold level until the compressor effect no longer applies.

5. Velocity pads

Use these pads as a keyboard to play sounds or trigger phrases (p. 27).

6. Function buttons

These buttons access the function screens indicated in the bottom line of the display.

7. Part Mixer section

Here you can adjust the volume, pan, etc., of each part (p. 33).

[PART] (SELECT/MUTE)	Selects the function of the Part buttons [1]–[16]. The buttons work as Part Select buttons when the indicator is not lighted, and as Mute buttons when the indicator is lit.
[TEMPO/MUTE CONTROL]	Switches on/off the Tempo/Mute part (a part that records tempo changes and mute operations, p. 42).
[MIXER ASSIGN]	When you press this button so its indicator lights, the Mixer screen will appear.
[PART ASSIGN]	Selects the parts that are controlled by the sliders. The sliders will control parts 1–8 if this indicator is not lighted, or parts 9–16 if the indicator is lit.

8. Sampling section

[EDIT]	Displays the Sample Edit screen (p. 114).
[SAMPLING/RESAMPLING]	Displays the Sampling menu screen (p. 112).
[MIX IN]	Mixes the sound from the INPUT jack into the output (p. 34).
[AUTO SYNC]	Synchronizes a sample to the pattern (p. 36).

9. Effect section

Applies special effects to the sound (p. 88).

[COMP]–[REVERB]	Switch each effect on/off (p. 88).
[KNOB ASSIGN]	Selects the effect to be controlled in real time (p. 91).
[TYPE]	Selects the type of effect.
[C1], [C2]	Modifies the assigned function in real time.

10. Mode section

Press the [PATTERN] button to enter Pattern mode.
Pressing one of the other two buttons will switch you to the corresponding mode.

11. Cursor/Value section

Use these buttons and dial to select patterns or input values (p. 18).

12. Sequencer section

[PLAY]	Plays a pattern (p. 24).
[STOP]	Stops playback/recording.
[FWD]	Advances to the next measure.
[BWD]	Returns to the previous measure.
[TOP]	Moves to the beginning of the pattern.
[REC]	Used when recording (p. 37).

13. Turntable emulation

Applies an effect that simulates increasing/decreasing the rotational speed of a turntable (p. 36).

14. TAP button

Lets you set the BPM (tempo) by pressing the button at the desired timing (p. 25).

Playing a pattern

Basics of pattern play

The top screen of Pattern mode



1. Current pattern

The pattern that is now playing

2. Next pattern

The pattern that will play next

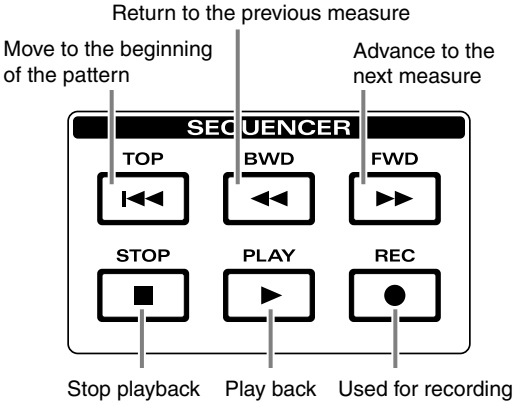
* *"Len" is the number of measures (Length) of the pattern.*

Function buttons

[F1 (List)] (Pattern List)	Select a pattern from a list (p. 25).
[F2 (Edit)] (Pattern Edit)	Edit the settings of a pattern (p. 43).
[F3 (Mixer)] (Part Mixer)	Specify the volume, pan, etc., of each part (p. 33).
[F4 (Effects)]	Apply special effects to the sound (p. 88).
[F5 (Mastering)]	Make settings for the Mastering effect (p. 108).
[F6 (BPM/Click)]	Set the tempo, and turn the metronome on/off (p. 25).
[SHIFT] + [F1 (Arp)] (Arpeggiator)	Make arpeggiator settings (p. 30).
[SHIFT] + [F2 (Chord Memory)]	Register chords (p. 32).
[SHIFT] + [F3 (Pattern Call)]	Select a pattern set (p. 27).
[SHIFT] + [F4 (RPS)]	Make RPS settings (p. 29).
[SHIFT] + [F5 (System)] (System Edit)	Make settings that apply to the entire MC-909 (p. 126).
[SHIFT] + [F6 (Utility)] (Utility Menu)	Open the Utility menu (p. 131).

Basic playback operation

Use the following buttons to control the playback.



* *The [FWD], [BWD], and [TOP] buttons can also be used during playback.*

* ** Press [STOP] twice to return to the beginning of the pattern.*

Selecting a pattern to play back

There are two ways to select a pattern for playback; **directly**, or **from a list**.

Selecting a pattern directly

Selecting the current pattern

While the pattern is stopped, use [VALUE] or [INC/DEC] to select a pattern.

Selecting the next pattern

While the pattern is playing, use [VALUE] or [INC/DEC] to select a pattern.

When the current pattern finishes playing, the selected pattern will start playing.

* *Shortly before the current pattern finishes playing, the word "LOCKED" will appear above the name of the next pattern. You will not be able to change the next pattern while this is displayed, since preparations are being made to move to that pattern.*

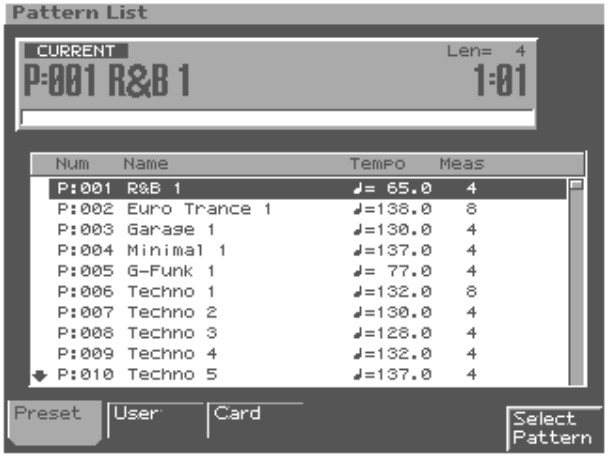


MEMO

If you press [CURSOR (left/right)] while a pattern is playing, the pattern will change immediately, and will start playing from the beginning of the pattern.

Selecting a pattern from the list

1. **Press [F1 (List)].**



2. **Press [F1 (Preset)], [F2 (User)], or [F3 (Card)] to choose the group that contains the desired pattern.**

3. **Use [VALUE], [INC/DEC] or [CURSOR (up/down)] to select a pattern.**

   If you hold down [SHIFT] while using the above controls, the pattern number will change in steps of ten.

4. **Press [F6 (Select Pattern)] to finalize your selection.**

[F1 (Preset)]	Choose preset patterns.
[F2 (User)]	Choose user patterns.
[F3 (Card)]	Choose patterns stored on a memory card.
[F6 (Select Pattern)]	Finalize the selected pattern.

BPM (tempo) when playing patterns successively

Each pattern has its own specified tempo (BPM). If you play back patterns successively, the tempo will also change when the pattern changes.

MEMO

If desired, you can maintain the tempo of the first-played pattern even while switching patterns (BPM Lock ->p. 128).

Changing the BPM (Tempo)

Using the [VALUE] dial

1. **Press [F6 (BPM/Click)] to access the BPM window.**



2. **Use [VALUE] or [INC/DEC] to set the BPM.**

3. **Press [F6 (Close)] to close the BPM window.**

MEMO

You can access the BPM window during TR-REC by pressing [SHIFT]+[F6], or during sampling by pressing [F4].

Using the TAP button

Press [TAP] **three or more times** at **quarter-note intervals** of the desired BPM.

* *If desired, you can set the BPM by pressing [TAP] at eighth-note/sixteenth-note intervals (Tap Resolution ->p. 127).*

Turning the metronome (click) on/off

1. **Press [F6 (BPM/Click)] to access the BPM window.**

2. **Press [F5 (Click)] to select on or off.**
   When on, the "✔" will be displayed.

3. **Press [F6 (Close)] to close the BPM window.**

* *The metronome volume adjustment is a System setting (Metronome Level -> p. 117)*

Selecting the metronome output destination

1. **Press [F6 (BPM/Click)] to access the BPM window.**

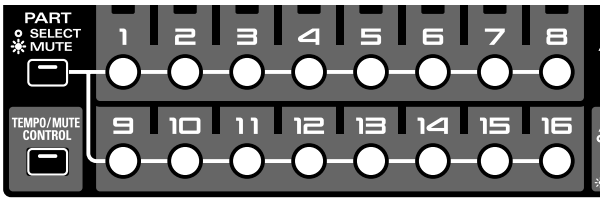
2. **Press [CURSOR (up/down)] to move the cursor to "Output Asgn."**

3. **Use [VALUE] or [INC/DEC] to select the output destination.**

MIX	Output from the MIX OUT jacks and the headphones.
DIR1	Output from the DIRECT 1 OUTPUT jacks.
DIR2	Output from the DIRECT 2 OUTPUT jacks.

Muting (silencing) a part

A pattern contains sixteen parts. You can mute (silence) each part in real time.



1. **In the Part Mixer section, press [PART] (SELECT/MUTE) so the indicator is lighted.**
   Part buttons [1]–[16] now control part muting.
2. **Press the button of the part that you want to mute, making it blink.**
   That part will be muted.
3. **To cancel muting, press the button of the muted part once again, making it light.**

The indicators of the part buttons show the muted state of the parts as follows:

- **Lit:** The part can be played.
- **Blinking:** The part is muted.
- **Not lit:** No performance has been recorded in the part. (The indicator will light when you record data.)

Mute Remain

This function maintains the mute status of each part while the next pattern plays. For example, this lets you play the next pattern without sounding the rhythm part.

1. **During pattern playback, press [PLAY].**
   The screen will indicate "MUTE REMAIN."
2. **Select the next pattern.**
   After a time, the selected pattern will play, with the mute settings of each part remaining as they were.
   When the pattern changes, the Mute Remain function will automatically be cancelled.

* *Mute Remain will be cancelled if you press [PLAY] once again before the pattern changes.*

Solo

This function assigns play-ready status to one specified part, muting the others.

1. **Hold down [SHIFT] and press the part button [1]–[16] of the part you want to play.**
   All parts other than the selected part will be muted.

All Parts Mute

This function mutes all parts at once.

1. **Hold down [SHIFT] and press [PART ASSIGN].**
   The sound of all parts will be muted.

All Parts On

This function un-mutes all parts at once.

1. **Hold down [SHIFT] and press [MIXER ASSIGN].**
   Muting will be cancelled for all parts, so they are all allowed to play.

Mute Reverse

This function inverts the currently muted and currently playing parts.

1. **Hold down [SHIFT] and press [TEMPO/MUTE CONTROL].**
   The status of parts that are currently muted changes, so they are allowed to play, while the parts that are currently playing will be muted.

Default Mute

This function restores the part mute settings to the state stored in the pattern.

1. **Hold down [SHIFT] and press [PART] (SELECT/MUTE).**
   The part mute settings will return to the state stored in the pattern.

About the setup parameters

On the MC-909, the following parameters allow their settings to be individually stored for each pattern. These parameters are collectively called the "setup parameters."

- BPM (Tempo) (p. 25)
- Patch/Rhythm set * (p. 55)
- Part Level * (p. 33)
- Part Pan * (p. 33)
- Part Key Shift * (p. 33)
- Part Reverb Level * (p. 33)
- Part Output Assign * (p. 55)
- Sequencer Output Assign * (p. 55)
- Reverb settings (p. 90)
- Compressor settings (p. 89)
- Multi-effect settings (p. 90, p. 92)
- Part mute status * (p. 26)
- Auto Sync on/off * (p. 36)

* *The asterisk indicates parameters that can be set for each part.*

Velocity pads

These pads work just like a keyboard. They can also be used to play RPS and the arpeggiator. Normally, pad number 2 will be C4. The force with which you strike the pads will vary the dynamics (velocity) of the sound.

MEMO

You can also set velocity to a fixed value (Pad Velocity ->p. 127).

[HOLD]	If you press this button so its indicator lights, the sound will still be heard even after you take your finger off the velocity pad. The sound will stop when you press [HOLD] once again, extinguishing the indicator.
[OCT -]/[OCT +]	These buttons shift the range of the velocity pads in steps of one octave (maximum +/-4 octaves). If you press both buttons simultaneously, the octave shift will be reset to 0.

Various ways to use the velocity pads

[PATTERN CALL]	The pads will recall patterns (Pattern Call, p. 27).
[RPS]	The pads will trigger phrases (RPS, p. 28).
[ARPEGGIO]	The pads will play arpeggios (Arpeggiator, p. 30).
[CHORD MEMORY]	Produce chords by pressing a single pad (Chord Memory, p. 32).

Pattern Call

You can use the sixteen velocity pads as buttons to select patterns. The patterns that are registered to each of the sixteen velocity pads are handled as one "pattern set." You are free to edit the contents of a pattern set, and can store 50 different sets. You can also switch between pattern sets during pattern playback.

MEMO

You can use this method to select either the current pattern or the next pattern.

* *Pattern Call cannot be used in Song mode.*

Using Pattern Call

1. Press [PATTERN CALL] so its indicator is lighted.

2. Press one of the velocity pads [1]–[16].

The pattern that is registered to the pad you pressed will be selected.

* *[HOLD] and [OCT +/-] will have no effect.*

* *Pattern Call cannot be used simultaneously with RPS, arpeggiator, or chord memory.*

Selecting a pattern set

1. Hold down [PATTERN CALL] and use [VALUE] or [INC/DEC] to select a set.

Registering a pattern in a Pattern Set

1. Select the pattern you want to register, so it is the current pattern.

2. Select the pattern set into which you want to register that pattern.

3. Hold down [PATTERN CALL], and press the velocity pad to which you want to register the pattern.

That pattern will be registered to the pad you pressed.

Saving a Pattern Set

Pattern Set settings that you have edited will be lost when you turn off the power. If you want to keep your changes, you must save them as follows.

1. Hold down [PATTERN CALL] and press [F6 (PtnCall Setting)].

Alternatively, hold down [SHIFT] and press [F3 (Pattern Call)].
The Pattern Call editing screen will appear.

2. Use [VALUE] or [INC/DEC] to select the pattern set that you want to save.

3. Press [WRITE].

The Write menu screen will appear.
Make sure that "Pattern Set" is highlighted.

4. Press [ENTER] or [F4 (PCL)].

5. Assign a name to the pattern set.

For details on how to assign a name, refer to "Saving a pattern" (p. 43).

6. When you finish inputting the name, press [F6 (Write)].

A message will ask you for confirmation.

7. To save the pattern set, press [F6 (Execute)].

* *To cancel without saving, press [F5 (Cancel)].*

MEMO

Patterns that are registered in a pattern set allow you to specify setup parameters that are different than in conventional pattern mode.

RPS

Any phrase that's been assigned to one of the sixteen velocity pads will continue playing as long as you hold down its pad.
The phrases that are registered to the sixteen velocity pads are handled as one "RPS set." You are free to edit the contents of an RPS set, and can store 50 different sets. You can also switch between RPS sets during pattern playback.

Using RPS

1. **Press [RPS] so its indicator is lighted.**
2. **Press one of the velocity pads [1]–[16].**
   The phrase that is registered to the pad you pressed will continue playing.

* *[OCT +/-] will have no effect.*

* *RPS cannot be used simultaneously with pattern call, arpeggiator, or chord memory.*

RPS Hold

You can make a phrase continue playing even after you release your finger from the velocity pad.

- **To hold all phrases**

1. **Press [HOLD] so the indicator is lit.**
2. **Press a velocity pad to play a phrase.**
   You can stop that phrase by pressing the same pad once again.

- **To hold individual phrases**

1. **Hold down [HOLD] and press a velocity pad to play a phrase.**
   [HOLD] will blink, and that phrase will continue playing until you press the same pad once again.
2. **To play a phrase that you want to hold, hold down [HOLD] and press the appropriate pad, as described in step 1.**
   The phrases will play together.
3. **To play a phrase that you do not want to hold, press only the appropriate pad.**
   When you release your finger from the pad, that phrase will stop playing.

* *In steps 1 and 2, you can also press [HOLD] while pressing the velocity pad to play the phrase, as an alternative to holding down [HOLD] and then pressing the pad.*

MEMO

To stop all phrases, press [HOLD] so the indicator goes out.

Selecting an RPS set

1. **Hold down [RPS] and use [VALUE] or [INC/DEC] to select a set.**

Registering a phrase in an RPS set

1. **Select the pattern that contains the phrase you want to register, so it is the current pattern.**
2. **Mute all parts other than the single part you want to register in RPS.**
   Refer to p. 26 for details on muting.

HINT

You may find it convenient to use the Solo function (p. 26).

3. **Select the RPS set in which you want to register that phrase.**
4. **Hold down [RPS], and press the velocity pad to which you want to register the phrase.**
   That phrase will be registered to the pad you pressed.

<Note when assigning RPS>

* *It is not possible for multi-part phrases to be assigned to each of the velocity pads. You must mute all parts other than the part that contains the phrase you wish to assign. If you attempt to assign a phrase in which two or more parts are un-muted, the display will indicate "Cannot Assign Phrase!".*

* *If you have assigned a phrase from a user pattern to RPS, and modify the performance data of the pattern that contains that phrase after it has been assigned, be aware that the phrase played by RPS will be affected by these modifications. For example if you delete the performance data of a pattern that contains an assigned phrase, no sound will be heard when you use RPS to play that phrase.*

* *If you assign a phrase from a part that uses MFX, the MFX settings during RPS playback will be determined by the MFX settings of the currently selected pattern. This means that the RPS playback may sound different than the original phrase.*

MEMO

Patterns that are registered in an RPS set allow you to specify setup parameters that are different than in conventional pattern mode.

RPS Settings

1. Hold down [RPS] and press [F6 (RPS Setting)].

Alternatively, hold down [SHIFT] and press [F4 (RPS)].
The RPS setting screen will appear.

2. Use [CURSOR (up/down)] to select a parameter.

3. Use [VALUE] or [INC/DEC] to edit the parameter.

Parameter	Range	Explanation
RPS Set	01–50	RPS set to edit
RPS Part	Part 1–16	RPS part to edit
RPS Part Patch Bank	—	Patch assigned to RPS part
RPS Part Patch Number	—	
RPS Part Output Select	DRY, MFX1, MFX2, COMP, DIR1, DIR2, RHY	How the original sound of each part will be output **DRY:** Output to MIX OUTPUT jacks without passing through effects **MFX1 (2):** Output through multi-effects 1 (or 2) **COMP:** Output through the compressor **DIR1 (2):** Output to the DIRECT 1 (or DIRECT 2) jacks without passing through effects **RHY:** Output according to the settings of the rhythm set assigned to the part
Remote Keyboard Switch	OFF, ON	Refer to p. 128.

<RPS Trigger Quantize>

When using RPS during pattern playback, patterns and phrases may not play back in precise alignment, depending on the timing at which you press the velocity pads. On the MC-909 you can specify the playback timing of the phrase, so it will play back in precise synchronization with the pattern. (RPS Trigger Quantize ->p. 128)

- **REAL:**
  The phrase will play back immediately, at the timing at which you pressed velocity pads.
- **16TH, 8TH, QUARTER:**
  The pattern will be divided into selected note units, and when you press the velocity pads, the phrase will begin playing at the beginning of the next note unit.
- **MEASURE:**
  The pattern will be divided into one-measure units, and when you press the velocity pads, the phrase will begin playing at the beginning of the next measure.

* *Except when this parameter is set to "REAL," pressing on the velocity pads slightly before the actual desired timing will help you synchronize the phrase to the pattern.*

* *If the pattern is stopped, the phrase will play back immediately, regardless of the setting that is selected in the above procedure.*

Adjusting the settings of the RPS parts

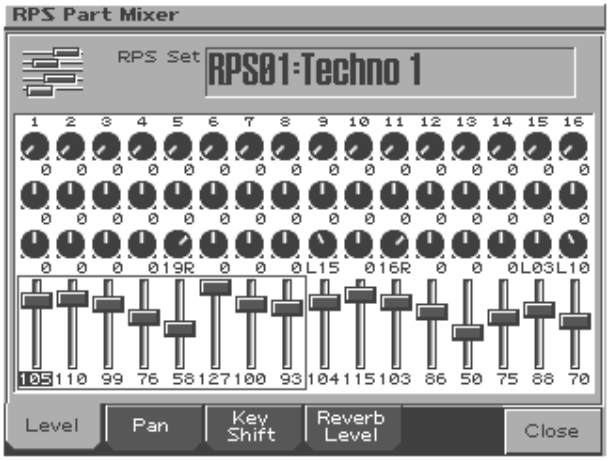
RPS playback uses dedicated RPS parts that are separate from conventional pattern playback. The patterns that are assigned to velocity pads [1]–[16] will play RPS parts 1–16.
Here's how to adjust the settings of these RPS parts.

1. Hold down [RPS] and press [F6 (RPS Setting)].

Alternatively, hold down [SHIFT] and press [F4 (RPS)].
The RPS setting screen will appear.

2. Press [F3 (RPS Mixer)].

The RPS Mixer screen will appear.



3. Use the part mixer section to adjust the volume, pan, etc. of RPS parts 1–16.

[PART ASSIGN]	Selects the RPS parts that will be controlled by the sliders. If this indicator is not lighted, parts 1–8 will be controlled. If lit, parts 9–16 will be controlled.
Sliders	Adjust the volume, pan, key, and reverb level of parts 1–8 or parts 9–16.

Use [F1]--[F4] to select a parameter, and use the sliders to adjust the values.

Function button	Parameter adjusted by the sliders
[F1 (Level)]	Volume of the RPS part
[F2 (Pan)]	Left/right position of the RPS part
[F3 (Key Shift)]	Transposition of the RPS part The pitch will change in semitone steps over a range of +/-4 octaves.
[F4 (Reverb Level)]	Reverb level of the RPS part

* *You can also use [CURSOR] to select a part and parameter, and then use [VALUE] or [DEC/INC] to adjust the value.*

4. Press [F6 (Close)] to close the RPS Mixer screen.

RPS realtime modify

You can use the panel knobs and sliders to modify the sound of the phrase being played by RPS.

1. **Press [RPS] to make the indicator light.**
2. **Press a velocity pad to play back a phrase.**
3. **While holding down a pad, you can operate the following knobs and sliders to modify the sound of the phrase.**

   PITCH: FINE/COARSE TUNE, ENV DEPTH/A/D
   FILTER: CUTOFF, RESONANCE, ENV DEPTH/A/D/S/R
   AMP: LEVEL, ENV DEPTH/A/D/S/R
   LFO1: PITCH DEPTH, FILTER DEPTH, AMP DEPTH, PAN DEPTH, RATE, WAVEFORM

* *Your changes will affect the sound of the phrase assigned to the pad you pressed last.*

* *If you take your finger off the pads, the changes you make will apply to the sound of the current part. The same is true even if you are playing back a phrase with [HOLD] turned on.*

* *Operating MATRIX CONTROL 1, RANDOM MODIFY, or FAT will always affect the sound of the current part.*

Saving an RPS set

The edited settings of an RPS set will be lost when you turn off the power. If you want to keep the settings you edited, save the RPS set as follows.

1. **Hold down [RPS] and press [F6 (RPS Setting)].**
   Alternatively, hold down [SHIFT] and press [F4 (RPS)]. The RPS setting screen will appear.
2. **Use [VALUE] or [INC/DEC] to select the RPS set that you want to save.**
3. **Press [WRITE].**
   The Write menu screen will appear.
   Make sure that "RPS Set" is highlighted.
4. **Press [ENTER] or [F3 (RPS)].**
5. **Assign a name to the RPS set.**
   For details on how to assign a name, refer to "Saving a pattern" (p. 50).
6. **When you finish inputting the name, press [F6 (Write)].**
   A message will ask you for confirmation.
7. **To save, press [F6 (Execute)].**

* *To cancel without saving, press [F5 (Cancel)].*

Arpeggiator

The MC-909's Arpeggiator function lets you perform arpeggios (chords in which notes are played in succession, one note at a time) just by playing the chords, using the notes in the chords you play. Not only can you use the factory-set arpeggio styles, which determine the way the arpeggio is played, but you can also freely rewrite styles.

Using the arpeggiator

1. **Press [ARPEGGIO] so its indicator is lighted.**
2. **Press a chord using the velocity pads.**
   An arpeggio will play according to the specified arpeggio style.

* *Arpeggiator cannot be used simultaneously with Pattern Call or RPS.*

Selecting an arpeggio style

1. **Hold down [ARPEGGIO] and use [VALUE] or [INC/DEC] to select a style.**

Making arpeggiator settings

Here's how to change the way that the arpeggio is sounded.

1. **Hold down [ARPEGGIO] and press [F6 (Arp Setting)].**
   Alternatively, hold down [SHIFT] and press [F1 (Arp)].
   The arpeggiator setting screen will appear.
2. **Use [CURSOR (up/down)] to select a parameter.**
3. **Use [VALUE] or [INC/DEC] to edit the parameter.**

Using in Combination with the Chord Memory Function

When performing with the Arpeggiator, you can also use it along with the Chord Memory (p. 32). After first storing complex Chord Forms in memory, you can then call them up when Arpeggiator is on, and you can easily create complex arpeggio sounds just by pressing a single pad.

Parameter	Explanation
Arpeggio Grid (Grid Type)	Sets the particular note division and resolution in a "single grid" used in creating the arpeggio in an Arpeggio Style, and how much of a "shuffle" syncopation is to be to applied (none/weak/strong) to it. **1/4:** Quarter note **1/8:** Eighth note **1/8L:** Eighth note shuffle Light **1/8H:** Eighth note shuffle Heavy **1/12:** Eighth note triplet **1/16:** Sixteenth note **1/16L:** Sixteenth note shuffle Light **1/16H:** Sixteenth note shuffle Heavy **1/24:** Sixteenth note triplet

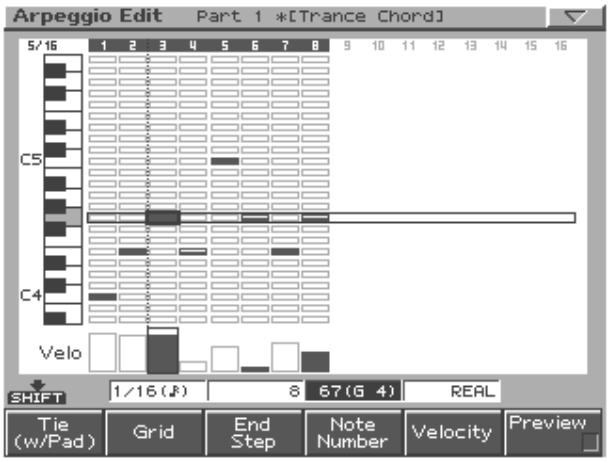
Parameter	Explanation
Arpeggio Motif	Selects the method used to play sounds when you have a greater number of notes than programmed for the Arpeggio Style. **UP(L):** Only the lowest of the pads pressed is sounded each time, and the notes play in order from the lowest of the pressed pads. **UP(L&H):** Notes from both the lowest and highest pressed pads are sounded each time, and the notes play in order from the lowest of the pressed pads. **UP(_):** The notes play in order from the lowest of the pressed pads. No one note is played every time. **DOWN(L):** Only the lowest of the pads pressed is sounded each time, and the notes play in order from the highest of the pressed pads. **DOWN(L&H):** Notes from both the lowest and highest pressed pads are sounded each time, and the notes play in order from the highest of the pressed pads. **DOWN(_):** The notes play in order from the highest of the pressed pads. No note is played every time. **UP&DOWN(L):** Only the lowest of the pads pressed is sounded each time, and the notes in the arpeggio are played in order from the lowest of the pressed pads and then back again in the reverse order. **UP&DOWN(L&H):** Notes from both the lowest and highest pressed pads are sounded each time, and the notes play in order from the lowest of the pressed pads and then back again in the reverse order. **UP&DOWN(_):** The notes play in order from the lowest of the pressed pads, and then back again in the reverse order. No note is played every time. **RANDOM(L):** While only the lowest of the pads pressed is sounded each time, the notes in the arpeggio are played in random order.
Arpeggio Duration	Determines whether the sounds are played staccato (short and clipped), or tenuto (fully drawn out). **30–120%:** For example, when set to "30," the length of the note in a grid (or when a series of grids is connected with ties, the final grid) is 30% of the full length of the note set in the grid type. **FULL:** Even if the linked grid is not connected with a tie, the same note continues to sound until the point at which the next new sound is specified.
Arpeggio Octave Range	Adds an effect that shifts arpeggios one cycle at a time in octave units. You can set the shift range upwards or downwards (up to three octaves up or down).
Remote Keyboard Switch	Refer to p. 128.

Creating an arpeggio style

1. Hold down [ARPEGGIO] and press [F6 (Arp Setting)].
Alternatively, hold down [SHIFT] and press [F1 (Arp)].
The arpeggiator setting screen will appear.

2. Press [F4 (Arp Edit)].
The arpeggio style input screen will appear.

3. Use the function buttons and [VALUE] or [INC/DEC] to specify the note that you want to input.
You can also use **[CURSOR (up/down)]** to select the note number.



4. To input data, press a pad that corresponds to the timing at which you want to input a note, so the pad's indicator lights.
To delete a note you've input, press the corresponding pad so its indicator goes out.

* *You cannot edit the velocity of a note message once you input it. If you want to change the velocity, you must delete the note and re-input it.*

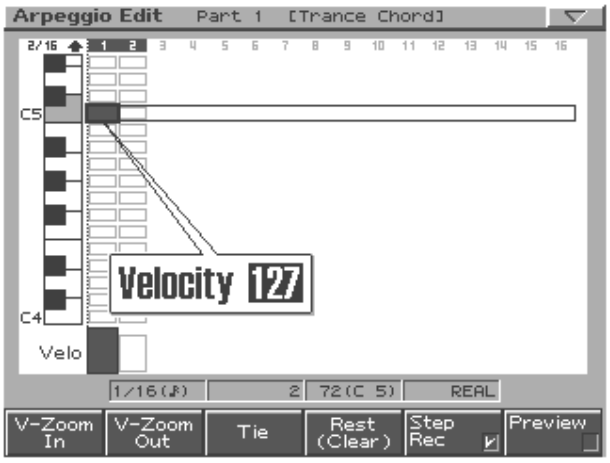
* *A maximum of sixteen notes (specified pitches) can be used in one style.*

[F1 (Tie)]	By holding down [F1 (Tie)] and pressing a pad, you can extend the length of the previously input note by the current setting.
[F2 (Grid)]	Sets the particular note division and resolution in a "single grid" used in creating the arpeggio in an Arpeggio Style, and how much of a "shuffle" syncopation is to be to applied (none/weak/strong) to it. **1/4:** Quarter note **1/8:** Eighth note **1/8L:** Eighth note shuffle Light **1/8H:** Eighth note shuffle Heavy **1/12:** Eighth note triplet **1/16:** Sixteenth note **1/16L:** Sixteenth note shuffle Light **1/16H:** Sixteenth note shuffle Heavy **1/24:** Sixteenth note triplet
[F3 (End Step)]	Specifies the style length **Range:** 1–32
[F4 (Note Number)]	Specifies the pitch of the note to be input. **Range:** 0 (C-1)–127 (G9)
[F5 (Velocity)]	Specify the velocity (volume) of the note messages you will input. **Range:** REAL, 1–127 * If this is set to REAL, your playing strength on the pads will vary the dynamics.
[F6 (Preview)]	Audition arpeggio currently being input. (The operation is the same when [SHIFT] is held.)
[SHIFT] + [F1 (V-Zoom In)]	Zoom-in the arpeggio style input screen.
[SHIFT] + [F2 (V-Zoom Out)]	Zoom-out the arpeggio style input screen.
[SHIFT] + [F3 (Tie)]	Input a tie at the cursor location, and advance to the next step.
[SHIFT] + [F4 (Rest (Clear))]	Delete all data at the step where the cursor is located.
[SHIFT] + [F5 (Step Rec)]	If you press this to add a check mark, you will be able to input data for individual notes (p. 32).

5. When you finish inputting the arpeggio style, press [EXIT].

Step-recording an arpeggio style

You can create an arpeggio style by inputting and editing individual notes.



1. **In the arpeggio style input screen, hold down [SHIFT] and press [F5 (Step Rec)] to apply a check mark.**

   [SHIFT] will be locked.

2. **Use [CURSOR (up/down)] to select the note number, and [CURSOR (left/right)] to select the step.**

3. **Use [VALUE] or [INC/DEC] to edit the data at the cursor (velocity: OFF, 1–127, Tie).**

* *You can also strike a velocity pad to input a note for the corresponding note number.*

[F1 (V-Zoom In)]	Zoom-in the arpeggio style input screen.
[F2 (V-Zoom Out)]	Zoom-out the arpeggio style input screen.
[F3 (Tie)]	Input a tie at the cursor location, and advance to the next step.
[F4 (Rest (Clear))]	Delete all data at the step where the cursor is located.
[F6 (Preview)]	Audition arpeggio currently being input. (The operation is the same when [SHIFT] is held.)

* *If you press [F5 (Step Rec)] and clear the check mark, you are returned to the normal input screen.*

Saving an arpeggio style

A arpeggio style you create will be lost when you turn off the power. If you want to keep your settings, save them as follows.

1. **Hold down [ARPEGGIO] and press [F6 (Arp Setting)].**

   Alternatively, hold down [SHIFT] and press [F1 (Arp)].
   The arpeggiator setting screen will appear.

2. **Press [F6 (Arp Write)].**

   A screen will appear in which you can select the user arpeggio style to which your settings are to be written.

3. **Use [VALUE] or [INC/DEC] to select the arpeggio style that you want to save.**

4. **Press [F6 (Write)].**

   A message will ask you for confirmation.

5. **To write the data, press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

Chord Memory

You can play a previously registered chord form simply by pressing a single pad. You can use the factory-set chord forms, and are also free to rewrite them as desired.

Using chord memory

1. **Press [CHORD MEMORY] so its indicator is lighted.**

2. **Press one of the velocity pads.**

   The pre-specified chord form will sound.

MEMO

When you press velocity pad [2] (C4), the chord form will sound at the pitch that was specified. Other pads will sound parallel chords at pitches relative to pad [2] (C4).

* *Chord Memory cannot be used simultaneously with Pattern Call or RPS.*

Selecting a chord form

1. **Hold down [CHORD MEMORY] and use [VALUE] or [INC/DEC] to select a chord form.**

Inputting a chord form

1. **Hold down [CHORD MEMORY] and press [F6 (Chord Setting)].**

   Alternatively, hold down [SHIFT] and press [F2 (Chord Memory)].
   The chord memory setting screen will appear.

2. **Press [F4 (Chord Edit)].**

   The chord form input screen will appear.

3. **Use the velocity pads to input the chord you want to sound.**

   Input the notes that you want to sound when velocity pad [2] (C4) is pressed.
   The pads will light to indicate the notes that will sound.
   If you press a pad once again, it will go dark and will not sound.

4. **When you finish inputting the chord form, press [EXIT].**

MEMO

While inputting the chord form, you can press [F6 (Preview)] to play the chord that you have input.

Saving a chord form

A chord form you create will be lost when you turn off the power. If you want to keep your settings, save them as follows.

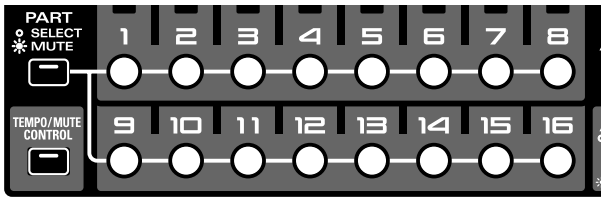
1. **Hold down [CHORD MEMORY] and press [F6 (Chord Setting)].**
   Alternatively, hold down [SHIFT] and press [F2 (Chord Memory)].
   The chord memory setting screen will appear.
2. **Press [F6 (Chord Write)].**
   A screen will appear in which you can select the user chord form to which your settings are to be written.
3. **Use [VALUE] or [INC/DEC] to select the chord form that you want to save.**
4. **Press [F6 (Write)].**
   A message will ask you for confirmation.
5. **To write the data, press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

Realtime Modify section

You can use the knobs and sliders of this section to modify the sound while it plays.
For details on the function of each knob and slider, refer to Patch mode (p. 51).

Selecting the part whose sound you want to modify



1. **In the Part Mixer section, press [PART] (SELECT/MUTE) so the indicator is not lighted.**
   Part buttons [1]–[16] will select parts.
2. **Press the button for the part whose sound you want to modify. The button will light.**
   That part is now selected.

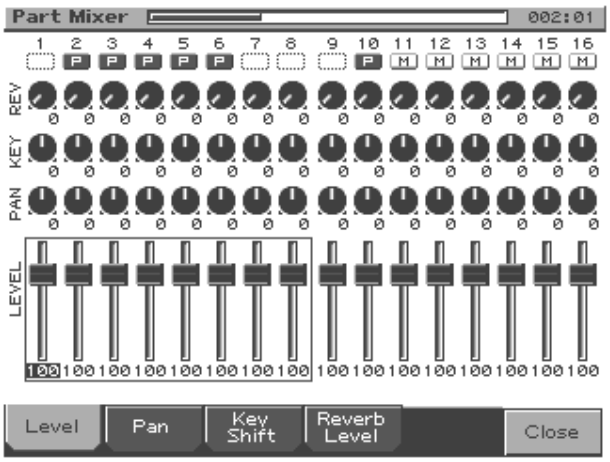
NOTE

If you select a part to which a rhythm set is assigned, the FILTER section "TYPE" indicator will go out.
This is because a rhythm set lets you select a different filter type for each rhythm tone (percussion instrument).

Part Mixer

Here you can adjust the volume, pan, etc., of each part.

[PART] (SELECT/MUTE)	Selects the function of part buttons [1]–[16]. If this indicator is not lighted, the part buttons will select parts. If lit, the part buttons will mute parts.
[TEMPO/MUTE CONTROL]	Switches the Tempo/Mute part (a part that records tempo changes and mute operations, p. 42) on/off.
[MIXER ASSIGN]	The Mixer screen will appear when you press this button and get it to light.
[PART ASSIGN]	Selects the parts that will be controlled by the sliders. If this indicator is not lighted, parts 1–8 will be controlled. If lit, parts 9–16 will be controlled.
Sliders	Adjust the volume of parts 1–8 or parts 9–16. By accessing the Mixer screen, you can also adjust the pan, key, and reverb depth of each part (see illustration below).



Use [F1]–[F4] to select a parameter, and use the sliders to adjust the values.

Function button	Parameter adjusted by the sliders
[F1 (Level)]	Volume of the part
[F2 (Pan)]	Left/right position of the part
[F3 (Key Shift)]	Transposition of the part The pitch will change in semitone steps over a range of +/-4 octaves.
[F4 (Reverb Level)]	Reverb level of the part
[F6 (Close)]	Returns to the previous screen.

* *You can also use [CURSOR] to select a part and parameter, and then use [VALUE] or [DEC/INC] to adjust the value.*

The letter displayed below the part number at the top of the Mixer screen indicates the status of each part, as follows:

- **P:** playable
- **M:** muted
- **Blank:** No performance has been recorded

Mix In

The sound of a device connected to the INPUT jacks or the digital in connector can be mixed into the output.

You can also use the velocity pads to play different pitches using the input sound.

Directly outputting the sound of an external device

1. **In the sampling section, press [MIX IN] so its indicator is lighted.**

   The sound of the external device will be mixed into the output.

2. **To cancel the Mix In function, press [MIX IN] once again so its indicator goes out.**

Playing various pitches using the sound of an external device

1. **Press and hold [MIX IN].**

   The Mix In select sub window will appear.



2. **Continuing to hold down [MIX IN], press [F6 (Velo Pads)] or turn [VALUE] to select "VELOCITY PADS."**

   The indicator will blink, and now you can use the velocity pads to change the pitch of the input sound.

3. **Play the velocity pads.**

   You can control the pitch and duration just as on a conventional keyboard.

   When you press pad 2 (C4), the input sound will be heard at its original pitch.

   You can play the input sound in a range of 14 semitones higher (pad [16]) through 25 semitones lower (pad [1] with [OCT -] pressed twice) than the original pitch.

* *You cannot play chords.*

4. **To cancel the Mix In function, press [MIX IN] once again so its indicator goes out.**

Selecting the input source device

1. **Press and hold [MIX IN].**

   The Mix In select sub window will appear.

2. **Press [F5 (Input Setting)].**

   The input setting screen will appear.

3. **Press [CURSOR (up/down)] to move the cursor to the item that you want to set.**

4. **Use [VALUE] or [INC/DEC] to make the desired setting.**

Parameter	Range	Explanation
Input Select	LINE IN L/R, LINE IN L, DIGITAL(OPT), DIGITAL(CO-AX), MICROPHONE	Input source of the external input sound **LINE IN L/R:** INPUT jacks L/R (stereo) **LINE IN L:** INPUT jack L (mono) **DIGITAL(OPT):** Digital Input (Optical) **DIGITAL(CO-AX):** Digital Input (Coaxial) **MICROPHONE:** INPUT jack (mono, mic level)
Mix-In	OFF, ON, VELOCITY PADS	Switches Mix In on/off **OFF:** External input sound will not be used. **ON:** External input sound will be mixed into the output. **VELOCITY PADS:** The velocity pads can be used to play scales using the external input sound.
Ext Output Asgn (External Output Assign)	DRY, MFX1, MFX2, COMP	Output destination of the external input sound that is mixed in **DRY:** Output to MIX OUTPUT jacks without passing through effects **MFX1 (2):** Output through multi-effects 1 (or 2) **COMP:** Output through the compressor
Ext Level L	0–127	Volume level of the external input sound (left channel)
Ext Level R	0–127	Volume level of the external input sound (right channel)
Ext Reverb Send Level	0–127	Depth of reverb applied to the external input sound Set this to 0 if you don't want to apply reverb.

Adjusting the volume of the external device

You can use the volume section's [INPUT] knob to adjust the volume of the external device.

* *[INPUT] cannot adjust the volume of a device connected to the digital in connector. You will need to adjust the volume on the connected external device.*

D Beam Controller

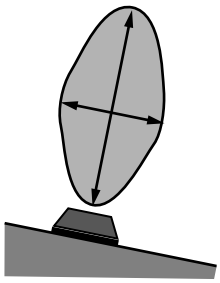
The D Beam controllers let you perform control operations simply by passing your hand over the controller. Three different uses (such as solo synth and turntable) for this controller are offered as presets, but by editing the settings you can use these controllers to apply a wide range of other effects.

[BEAM 1 ON]	Turns the left D Beam controller (BEAM 1) on/off.
[BEAM 2 ON]	Turns the right D Beam controller (BEAM 2) on/off.
[TWIN D BEAM ASSIGN]	Selects the function of the D Beam controller. Press to cycle through the available choices, which are: SOLO SYNTH, CUT+RESO, TURNTABLE, and ASSIGNABLE.

The effective range of the D Beam controller

The following diagram shows the effective range of the D Beam controller. Movements of your hand that occur outside of this range will not produce any effect.

* *The effective range of the D Beam controller will be greatly reduced when it is used in strong, direct sunlight. Please be aware of this when using the D Beam controllers outdoors.*



SOLO SYNTH

This is a monophonic synthesizer for which your left hand (beam 1) controls volume, and your right hand (beam 2) controls the pitch.

1. **Press [D BEAM ASSIGN] so the "SOLO SYNTH" indicator is lighted.**
2. **Press [BEAM 1 ON] and [BEAM 2 ON] so both indicators are lighted.**
3. **When you move your hand near beam 1, sound will be heard.**
   - After the sound begins, moving your hand closer to beam 1 will make the volume softer, and moving your hand away will make the volume louder.
   - Moving your hand closer to beam 2 will raise the pitch, and moving your hand away will lower the pitch.

* *If the hand that is near beam 1 leaves the effective range of the D Beam controller, the volume will gradually diminish and finally the sound will disappear. This prevents the sound from remaining "stuck on."*

* *You can change the pitch range (p. 130).*

CUT + RESO (Cutoff + Resonance)

Your left hand (beam 1) controls the cutoff frequency of the filter (p. 59), and your right hand (beam 2) controls the resonance.

1. **Press [D BEAM ASSIGN] so the "CUT+RESO" indicator is lighted.**
2. **Press [BEAM 1 ON] and [BEAM 2 ON] so both indicators are lighted.**
3. **In the FILTER block, press [TYPE] to select Filter Type (p. 59).**
4. **Pass your hands over beams 1/2 to control the sound of the current part.**
   - Moving your hand closer to beam 1 will raise the cutoff frequency, and moving your hand away will lower it.
   - Moving your hand closer to beam 2 will increase the resonance, and moving your hand away will decrease it.

NOTE

If the Filter Type has been set to LPF2 or LPF3, the resonance setting will have no effect, so moving your hand over beam 2 will not affect the sound.

MEMO

You can adjust the variable range of the parameters (p. 130).

TURNTABLE

Your left hand (beam 1) controls the tempo (BPM), and your right hand (beam 2) controls the pitch.

1. **Press [D BEAM ASSIGN] so the "TURNTABLE" indicator is lighted.**
2. **Press [BEAM 1 ON] and [BEAM 2 ON] so both indicators are lighted.**
3. **Pass your hands over beams 1/2 to control the BPM and pitch of all parts.**
   - Moving your hand closer to beam 1 will slow down the tempo.
   - Moving your hand closer to beam 2 will lower the pitch.

* *If your hand leaves the effective range of the D Beam controller, the sound will return to the original BPM and pitch.*

MEMO

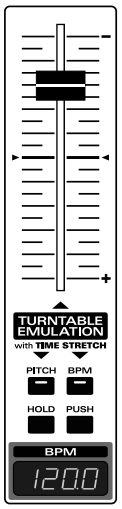
You can also set it so moving your hand closer to the D Beam controller will increase the tempo and raise the pitch (p. 130).

ASSIGNABLE (Other applications)

Refer to the D Beam controller-related parameters (p. 130) in the System settings.

Turntable emulation

You can use this slider and the [PUSH]/[HOLD] buttons to synchronize your performance with a turntable or other audio source.



Slider	The BPM will slow down as you move the slider upward (toward "-"), and speed up as you move it downward (toward "+"). The BPM will be the original value when the slider is at the detent in the center of its range. * You can also adjust the variable range of the slider (p. 127).	
[PITCH], [BPM]	These buttons select whether the slider and [HOLD]/[PUSH] buttons will control the pitch or the BPM.	
	PITCH BPM Both lit	The pitch and BPM will both change. This produces the same result as a turntable.
	PITCH BPM Only [PITCH] lit	Only the pitch will change.
	PITCH BPM Only [BPM] lit	Only the BPM will change.
	PITCH BPM Both not lighted	Operating the slider or [HOLD]/[PUSH] buttons will not change the pitch or BPM. Use this setting if you want to prevent the pitch and BPM from changing when the slider is touched accidentally.
[HOLD]	Slows the performance to the minimum tempo of the slider range in order to match your performance with the turntable.	
[PUSH]	Speeds up the performance to the maximum tempo of the slider range in order to match your performance with the turntable.	

MEMO

You can also assign other functions to the slider, such as pitch bend (p. 127).

NOTE

When playing a patch/rhythm set from a wave expansion board that uses waveforms with an indicated tempo (BPM), it will not be possible to control pitch and BPM independently.

Auto Sync

The playback tempo of a sample (waveform) you sampled or loaded from your computer can be automatically synchronized to the playback tempo of the pattern.

NOTE

In order to use Auto Sync, you must first set the BPM (p. 116) sample parameter.

1. **As the current part, select the part to which is assigned the patch that uses the sample that you want to auto-sync.**
2. **Press [AUTO SYNC] so its indicator is lighted.**

   The playback tempo of the sample will automatically synchronize to the BPM of the pattern.

MEMO

Auto Sync can be turned on/off independently for each part.

NOTE

Auto Sync requires double the usual polyphony. This means that if you turn Auto Sync on, the polyphony of the entire MC-909 will decrease.

Effects

See p. 88.

Mastering

See p. 108.

Recording a pattern

1. **Use [VALUE] or [INC/DEC] to select the number of the pattern you want to record.**
2. **Press [REC].**



3. **Press [F1]–[F4] to select a recording method.**

Function button	Recording method
[F1 (Realtime)]	**Realtime Recording** (p. 37) Data from the velocity pads, knobs, and external MIDI devices will be recorded in real time.
[F2 (TR-Rec)]	**TR-REC** (p. 39) The sixteen velocity pads represent notes, allowing you to input note data by switching each pad on or off.
[F3 (Step)]	**Step Recording** (p. 41) Successively record each note one after the other in a non-realtime fashion.
[F4 (Tempo/Mute)]	**Tempo/Mute Recording** (p. 42) Record tempo changes or mute on/off events in real time.

The corresponding recording standby screen will appear.

4. **Specify the time signature and length of the pattern, and then record.**

For details, refer to the section on each recording method.

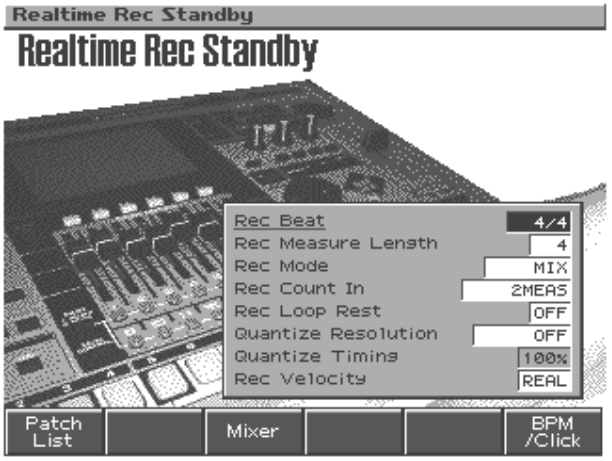
MEMO

The maximum number of notes per pattern is **approximately 30,000 notes**.

Realtime recording

This method lets you record your performance on the MC-909's velocity pads and D Beam controllers or an external MIDI keyboard. Knob and slider movements can also be recorded.

Standby screen



Parameter	Range	Explanation
Rec Beat	2/4–7/4, 5/8–7/8, 9/8, 12/8, 9/16, 11/16, 13/16, 15/16, 17/16, 19/16	Pattern time signature * Can be specified only for an empty pattern.
Rec Measure Length	1–998	Pattern length * An already-recorded pattern can be made longer, but not shorter. To shorten it, use the pattern edit Delete Measure (p. 45) to delete one or more measures.
Rec Mode	MIX, REPLACE	Whether the recorded data will be added to, or replace, the existing data **MIX:** Newly recorded data will be added to the previously-recorded data. **REPLACE:** Previously-recorded data will be replaced by the newly-recorded data.
Rec Count In	OFF, 1 MEAS, 2 MEAS, WAIT NOTE	Length of the count before recording begins If this is set to Wait Note, recording will start when you press a velocity pad or the [PLAY] button.
Rec Loop Rest	OFF, ON	Insert a blank measure before you return to the beginning of the pattern If this is ON, one blank measure will be inserted before you turn to the first measure of the pattern. * This provides a convenient way to keep the end of the last measure from being recorded into the first measure.

Parameter	Range	Explanation
Quantize Resolution	OFF, 32nd note–quarter note	Note value to which timing is to be corrected If this is set to OFF, timing will not be corrected.
Quantize Timing	0–100%	Degree to which timing will be adjusted. Settings near 0% will produce essentially no effect, while a setting of 100% will adjust the note timings all the way to the note locations specified in the Input Quantize Resolution.
Rec Velocity	REAL, 1–127	Volume (velocity) of the notes that you input from the velocity pads. If this is set to REAL, your playing strength on the pads will determine the velocity that is input.

Function buttons

[F1 (Patch List)]	Choose a patch/rhythm set from a list (p. 55).
[F3 (Mixer)] (Part Mixer)	Display the Mixer screen (p. 33).
[F6 (BPM/Click)]	Set the tempo, and turn the metronome on/off (p. 25).

Recording procedure

1. **Select realtime recording (p. 37).**
2. **Press [PLAY], and start recording.**



Perform using the velocity pads, D Beam controllers, or your external MIDI keyboard.

When you come to the last measure, recording will repeat from the first measure. You will also hear what's been recorded so far. Your performance during each pass of the recording will be added to the previously recorded data.

3. **Press [STOP] to stop recording.**

Controllers that can be recorded

- Velocity pads
- D Beam controllers
- Realtime modify knobs
- Turntable Emulation Slider *

*: Can be recorded only if assigned as pitch bender or modulation.

Selecting the part to record

1. **In the Part Mixer section, press [PART] (SELECT/MUTE) so the indicator is not lighted.**

Part buttons [1]–[16] will select parts.

2. **Press the button for the part that you want to record.**

MEMO

You can select the part for recording even while you are recording.

Rehearsal

You can temporarily cease recording without actually halting the realtime recording operation. This lets you alternate between trying out ideas and actually recording, without having to actually perform "record" and "stop" operations each time.

1. **During realtime recording, press [F4 (Rehearsal)] or [REC].**

[REC] will blink, and you will be in rehearsal mode. No performance data will be recorded.

In this state you can try playing phrases before actually recording them.

2. **Press [F4 (Rehearsal)] or [REC] once again, and you will resume recording.**

Realtime Erase

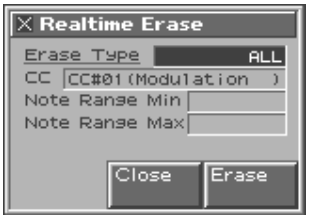
During realtime recording, you can use the velocity pads or the realtime modify knobs to erase data.

1. Select the part from which you want to erase data.

Select a part in the same way as described in "Selecting the part to record" (p. 38).

2. During recording, press [F2 (Erase)].

The realtime erase window will appear.



3. In the Erase Type field, choose the type of data that you want to erase.

ALL	All data
NOTE	Note messages
P-AFT	Polyphonic aftertouch
C-AFT	Channel aftertouch
CC	Control change
PC	Program change
BEND	Bend data
SYSEX	System exclusive data
BPM	Tempo change data
MUTE	Mute on/off
EXCEPT NOTE	All data other than note messages

* *If you want to erase knob data, operate the corresponding knob of the panel to specify that data.*

4. Erase the data.

- When "NOTE" has been selected, hold down two notes on the velocity pads or on an external MIDI keyboard, and all note messages within the region defined by those two notes will be erased while you continue holding down the notes.
- For other types of data, the data selected by Erase Type will be erased while you continue holding down [F5 (Erase)].

5. To return to recording mode, press [F5 (Close)] or [EXIT].

Recording Cancel

Here's how you can cancel the entire content of a recording, and return to the recording-standby state.

1. During recording, press [F5 (Rec Cancel)].

A message will ask for confirmation.

2. To carry out Recording Cancel, press [F6 (Execute)].

All the data that has been recorded from the time you pressed [PLAY] to start recording until you pressed [F5 (Rec Cancel)] will be discarded.

* *To cancel, press [F5 (Cancel)].*

TR-REC

This is a recording method in which the velocity pads of the MC-909 are used as timing scale buttons to enter note messages.

You can input/delete notes by pressing the velocity pads to switch them between lit/extinguished. This is an easy way to specify the timing at which notes are to be placed.

* *This method cannot be used to record data other than note messages (e.g., control changes produced by operating the realtime modify knobs).*

Standby screen



Parameter	Range	Explanation
Rec Beat	2/4–7/4, 5/8–7/8, 9/8, 12/8, 9/16, 11/16, 13/16, 15/16, 17/16, 19/16	Pattern time signature * Can be specified only for an empty pattern.
Rec Measure Length	1–998	Pattern length * An already-recorded pattern can be made longer, but not shorter. To shorten it, use the pattern edit Delete Measure (p. 45) to delete one or more measures.
Rec Velocity	REAL, 1–127	Volume (velocity) of the notes that you input from the velocity pads. If this is set to REAL, your playing strength on the pads will determine the velocity that is input.

Function buttons

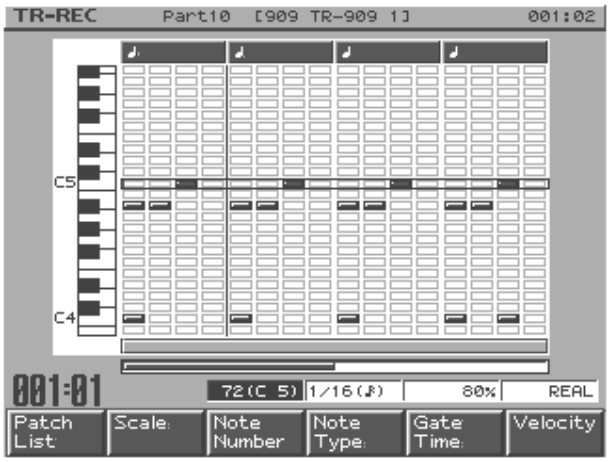
[F1 (Patch List)]	Choose a patch/rhythm set from a list (p. 55).
[F3 (Mixer)] (Part Mixer)	Display the Mixer screen (p. 33).
[F6 (BPM/Click)]	Set the tempo, and turn the metronome on/off (p. 25).

Recording procedure

1. **Select TR-REC (p. 37).**

2. **Press [PLAY] to begin recording.**

   You will enter recording mode, and will hear the notes you enter played as a loop.



3. **Use the function buttons and [VALUE] or [INC/DEC] to specify the note messages to enter.**

   You can also use **[CURSOR (up/down)]** to select the note number.

[F1 (Patch List)]	Choose the patch/rhythm set from a list (p. 55).
[F2 (Scale)]	The timing scale (see the explanatory box on this page) of the velocity pads will change each time you press this.
[F3 (Note Number)]	Choose the pitch of the note to be input. For a rhythm set, this selects the rhythm tone to be input. **Range:** 0 (C-1)–127 (G9)
[F4 (Note Type)]	Choose the note value to be input. **Range:** 1/32–1/1
[F5 (Gate Time)]	Specify the gate time (the duration that the note will be held) for the note data to be input, as a proportion of the value you chose for Note Type. **Range:** 5–200%
[F6 (Velocity)]	Specify the velocity (volume) of the note data to be input. **Range:** REAL, 1–127 * If you set this to REAL, the force with which you strike the pad will be input as the velocity value.
[SHIFT] + [F1 (V-Zoom In)]	Narrow the region of keys shown in the display. You can use this when you want to view an expanded display for specific notes.
[SHIFT] + [F2 (V-Zoom Out)]	Broaden the region of keys shown in the display. You can use this when you want to see which notes have been input.
[SHIFT] + [F6 (BPM/Click)]	Set the tempo, and turn the metronome on/off (p. 25).

MEMO

By holding down [SHIFT] and pressing [TOP] [BWD] [FWD], you can move the pattern playback location in the same way as during playback.

4. **Use [CURSOR (left/right)] or [BWD/FWD] to move the note message input region**

HINT

The bottom of the screen will always show two bars to indicate the input region shown in the screen and the current playback position of the pattern.

MEMO

If you press [TOP], the pattern playback location will return to the beginning of the input region shown in the screen.

5. **To input data, press a pad that corresponds to the timing at which you want to input a note, so the pad's indicator lights.**
   To delete a note you've input, press the corresponding pad so its indicator goes out.

NOTE

You cannot edit the note type, gate time, or velocity of a note message once you input it. If you want to change these parameters, you must delete the note and re-input it.

6. **Press [STOP] to stop recording.**

Selecting the part to record

1. **In the Part Mixer section, press [PART] (SELECT/MUTE) so the indicator is not lighted.**

   Part buttons [1]–[16] will select parts.

2. **Press the button for the part that you want to record.**

MEMO

You can select the part for recording even while you are recording.

About the timing scale

Each time you press [F2 (Scale)], the scale will alternate in the following order.

- 16th notes
  Velocity pads [1]–[16] will correspond to a recording input region of one measure, and you will be able to input notes at 16th note intervals.
- 32nd notes
  Velocity pads [1]–[16] will correspond to a recording input region of two beats, and you will be able to input notes at 32nd note intervals.
- 8th note triplets
  Velocity pads [1]–[12] will correspond to a recording input region of one measure, and you will be able to input notes at 8th note triplet intervals.
- 16th note triplets
  Velocity pads [1]–[12] will correspond to a recording input region of two beats, and you will be able to input notes at 16th note triplet intervals.

Step recording

This is a recording method in which you input note messages one by one.

* *This method cannot be used to record data other than note messages (e.g., control changes produced by operating the realtime modify knobs).*

Standby screen



Parameter	Range	Explanation
Rec Beat	2/4–7/4, 5/8–7/8, 9/8, 12/8, 9/16, 11/16, 13/16, 15/16, 17/16, 19/16	Pattern time signature * Can be specified only for an empty pattern.
Rec Measure Length	1–998	Pattern length * An already-recorded pattern can be made longer, but not shorter. To shorten it, use the pattern edit Delete Measure (p. 45) to delete one or more measures.
Rec Velocity	REAL, 1–127	Volume (velocity) of the notes that you input from the velocity pads. If this is set to REAL, your playing strength on the pads will determine the velocity that is input.

Function buttons

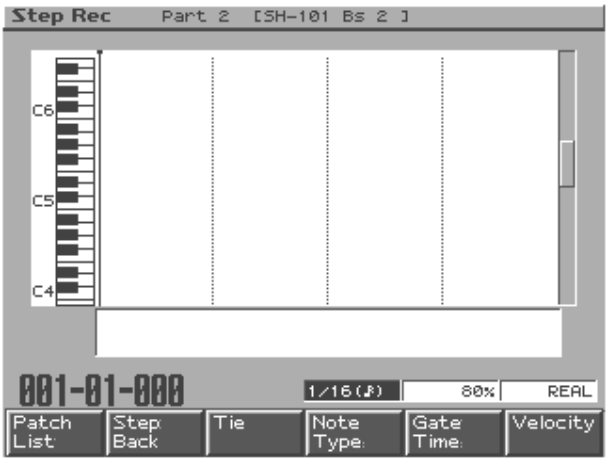
[F1 (Patch List)]	Choose a patch/rhythm set from a list (p. 55).
[F3 (Mixer)] (Part Mixer)	Display the Mixer screen (p. 33).

Recording procedure

1. Select step recording (p. 37).

2. Press [PLAY] to begin recording.

You are now ready to record.



3. Use function buttons [F4]–[F6], and [VALUE] and [INC/DEC] to specify the length and velocity of the notes to input.

[F1 (Patch List)]	From a list, select the patch/rhythm set that you want to use (p. 55).
[F2 (Step Back)]	Cancel the previously input note.
[F3 (Tie)]	Extend the length of the previously input note by the current setting.
[F4 (Note Type)]	Select the type of note value that you want to input. **Range:** 1/32–1/1
[F5 (Gate Time)]	Specify the gate time (duration) of the note messages you will input, as a proportion of the note value you selected as the Note Type. **Range:** 5–200%
[F6 (Velocity)]	Specify the velocity (volume) of the note messages you will input. **Range:** REAL, 1–127 * If this is set to REAL, your playing strength on the pads will vary the dynamics.
[SHIFT] + [F1 (V-Zoom In)]	Narrow the range of keys shown in the display. Use this when you want to view certain notes at greater magnification.
[SHIFT] + [F2 (V-Zoom Out)]	Expand the range of notes shown in the display. Use this when you want to see which notes have been input.

4. Use the velocity pads to input note messages.

The note number is selected by the pad you press. You can also input chords.

When you input a note message, the input position will advance by the value of the Note Type you specified.

5. Repeat steps 2 and 3 to input note messages.

6. When you are finished recording, press [STOP].

Selecting the part to record

1. In the Part Mixer section, press [PART] (SELECT/MUTE) so the indicator is not lighted.

Part buttons [1]–[16] will select parts.

2. Press the button for the part that you want to record.

MEMO

You can select the part for recording even while you are recording.

Moving the input location

- Pressing [CURSOR (right)] will move the input location forward by the current Note Type value.
- Pressing [CURSOR (left)] will move the input location backward by the current Note Type value.
- Pressing [FWD] will advance the input location by one measure.
- Pressing [BWD] will return the input location by one measure.

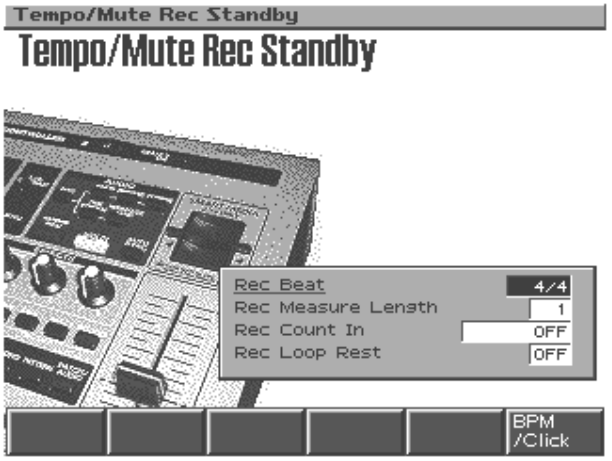
NOTE

You cannot move back to a position at which notes have already been input.

Moving the display region

- Pressing [CURSOR (up/down)] will move the displayed region of notes upward or downward.
- Holding down [SHIFT] and pressing [FWD] will move the displayed region one measure forward.
- Holding down [SHIFT] and pressing [BWD] will move the displayed region one measure backward.

Tempo/mute recording



Tempo changes and mute operations can be recorded on the dedicated tempo/mute part.

The recording procedure is essentially the same as for realtime recording.

Parameter	Range	Explanation
Rec Beat	2/4–7/4, 5/8–7/8, 9/8, 12/8, 9/16, 11/16, 13/16, 15/16, 17/16, 19/16	Pattern time signature * Can be specified only for an empty pattern.
Rec Measure Length	1–998	Pattern length
Rec Count In	OFF, 1 MEAS, 2 MEAS	Length of the count before recording begins
Rec Loop Rest	OFF, ON	Insert a blank measure before you return to the beginning of the pattern If this is ON, one blank measure will be inserted before you turn to the first measure of the pattern. * This provides a convenient way to keep the end of the last measure from being recorded into the first measure.

1. Select tempo/mute recording (p. 37).

2. Press [PLAY] to start recording.

Only changes in BPM (tempo) and changes in the part mute status will be recorded. No operations of the velocity pads, D Beam controllers, knobs, or sliders will be recorded.

- You can adjust BPM (tempo) by using [VALUE], [INC/DEC], or turntable emulation.
- For details on muting parts, refer to p. 26.

3. Press [STOP] to stop recording.

Pattern editing

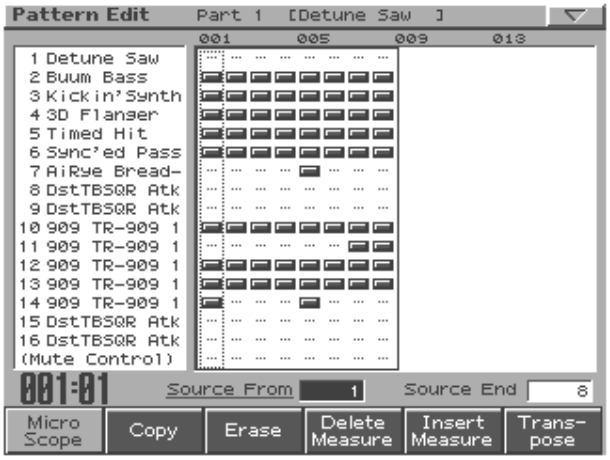
Here's how you can edit the performance data of a pattern in units of measures. You can create completely new patterns by editing the performance data of a pattern, or by combining various patterns.

* *You must stop the pattern before you can edit it.*

Basic procedure for pattern editing

1. Select the pattern that you want to edit.

2. Press [F2 (Edit)] to access the Pattern Edit Menu screen.

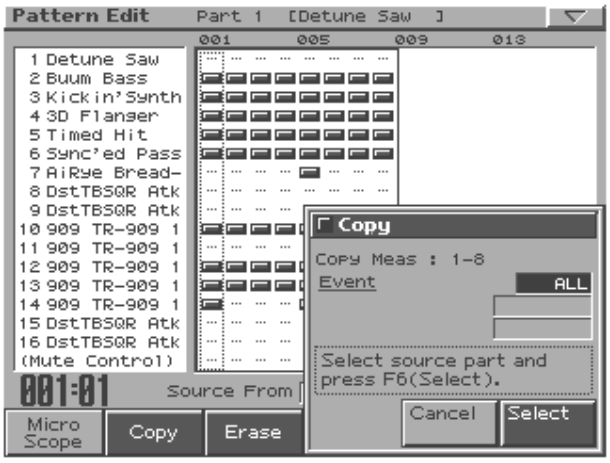


3. Select the region of measures that you want to edit.

- **Source From:** first measure of the region
  If you set this to "SETUP," the setup parameters (p. 18) will be included.
- **Source End:** last measure of the region
  If you set this to "SETUP," only the setup parameters will be selected, and no measures will be included.

4. Use the function buttons to select the type of editing that you want to carry out.

The corresponding editing sub-window will appear.



[F1 (Micro Scope)]	Edit individual items of performance data within a pattern. (p. 48)
[F2 (Copy)]	Copy a pattern. (p. 44)
[F3 (Erase)]	Erase unwanted data. (p. 45)
[F4 (Delete Measure)]	Delete unwanted measures. (p. 45)
[F5 (Insert Measure)]	Insert blank measures. (p. 45)
[F6 (Transpose)]	Transpose the pitch. (p. 45)
[SHIFT] + [F1 (Extract Rhythm)]	Split the rhythm set. (p. 44)
[SHIFT] + [F2 (Velocity Duration)] (Change Velocity/ Change Duration)	Modify the strength/length of the notes. (p. 45)
[SHIFT] + [F3 (Shift Clock)]	Slightly shift the timing. (p. 45)
[SHIFT] + [F4 (Data Thin)]	Thin out unnecessary data. (p. 46)
[SHIFT] + [F5 (Edit Quantize)]	Apply quantization. (p. 46)
[SHIFT] + [F6 (Reclock)]	Convert the note values. (p. 47)

5. Press the part button [1]–[16] and [TEMPO/MUTE] of the part(s) whose data you want to edit, illuminating the relevant indicator(s).

6. Set the parameters, and press [F6 (Execute)].

* *To cancel the procedure, press [F5 (Cancel)].*

The procedures for Extract a Rhythm Instrument and Pattern Copy are explained on the next page.

HINT

When you are specifying the Note (Minimum/Maximum) in Pattern Edit, you can specify the Minimum and Maximum by pressing two velocity pads. First press Minimum, then press Maximum.
If you press one velocity pad twice, the Minimum and Maximum will be the same.

Extract a Rhythm Instrument

This operation extracts data of a specific note number from the specified part, and moves it to a different part. You can use this to divide a rhythm set into separate parts for each instrument.

1. **In step 5 on the preceding page, press a part button [1]–[16] to select the move-source part; the button will light.**
2. **Select the note number that you want to move.**
3. **Press [F6 (Select)].**
4. **Press a part button [1]–[16] to select the move-destination part; the button will light.**
5. **Press [F6 (Execute)].**

* *To cancel the procedure, press [F5 (Cancel)].*

Parameter	Range	Explanation
Src Part	1–16	Move-source part
Extract Note	0 (C-1)–127 (G9)	Note number to be moved
Dest Part	1–16	Move-destination part

* *If the move-source part does not contain any data of the note number specified by Extract Note, a message of "Cannot Extract!" will appear.*

* *If the move-destination part contains no performance data, the setup parameters (p. 26) of the move-source part will be copied.*

* *If the move-destination part does contain performance data, only the note data will be moved. This means that the note data will be played using the sound of the patch selected for the move-destination part.*

Pattern Copy

This operation copies data from the current pattern to another pattern.

1. **In step 5 on the preceding page, press a part button [1]–[16] or [TEMPO/MUTE CONTROL] to select the move-source part; the button will light.**
2. **Select the data that you want to copy.**
3. **Press [F6 (Select)].**
4. **Press a part button [1]–[16] or [TEMPO/MUTE CONTROL] to select the move-source part; the button will light.**
5. **Press [F6 (Execute)].**

* *To cancel the procedure, press [F5 (Cancel)].*

Parameter	Range	Explanation
Event	ALL, NOTE, PROG, CC, BEND, PAFT, CAFT, SYS-EX, BPM, MUTE	Data to be copied
Note Minimum Note Maximum	0 (C-1)–127 (G9)	Note region to be copied * This can be specified only if Event is set to "NOTE."
Min Max	CC#0–CC#127	Control change message to be copied Messages in the specified range will be copied * This can be specified only if Event is set to "CC."
Dest Pattern	Preset, User, Card	Bank of the copy-destination pattern
	1–650 (Preset) 1–200 (User) 1–999 (Card)	Copy-destination pattern number
Dest Meas	1–(last measure + 1)	First measure of the copy-destination
Dest Part	1–16	Copy-destination part
Copy Mode	REPLACE, MIX	How the copy will occur **REPLACE:** The copy-destination data will be replaced by the copy-source data. **MIX:** The copy-destination data will be combined with the copy-source data.
Copy Times	1–998 (Max)	Number of times the data is to be copied

* *You can specify a copy-destination part (Dest Part) only if there is just one copy-source part. If there are two or more copy-source parts, they will be copied to the same parts of the copy-destination.*

* *When copying data from one part to another part within the same pattern, you can select only one part at a time.*

Erase

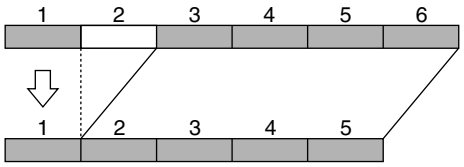
This operation erases all or part of the data from a pattern.

Parameter	Range	Explanation
Event	ALL, NOTE, PROG, CC, BEND, PAFT, CAFT, SYS-EX, BPM, MUTE	Data to be erased
Note Minimum Note Maximum	0 (C-1)–127 (G9)	Note region to be erased * This can be specified only if Event is set to "NOTE."
Min Max	CC#0–CC#127	Control change message to be erased Messages in the specified range will be erased * This can be specified only if Event is set to "CC."

Delete Measure

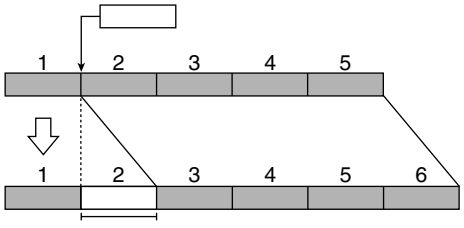
This operation deletes unwanted measures from a pattern, and joins the remaining measures together.

If a part contains data following the deleted region, the performance data of that part will be shortened by the corresponding length. If you specify all parts as the object of the delete operation, the pattern itself will be shortened.



Insert Measure

This operation inserts blank measures between the specified measure of a pattern and the following measure. If you want to add more playing in the middle of a existing performance, use this operation to insert one or more blank measures, and then record the additional performance. The inserted measures will have the same time signature as the time signature preceding the insert location.



Parameter	Range	Explanation
Insert Meas	1–998 (Max)	Number of measures to insert * You cannot specify a number that would cause the pattern to exceed 998 measures.

Transpose

This operation shifts the note numbers (pitch) of one or more parts in the pattern. You can transpose the notes in a range of +/-2 octaves.

Parameter	Range	Explanation
Value	-24– +24	Amount of transposition
Note Minimum Note Maximum	0 (C-1)–127 (G9)	Range of notes to be transposed

Change Velocity/ Change Duration

This operation modifies the velocity (strength) or duration (the length that the note is held) of the notes recorded in the pattern. You can use Change Duration to give the overall performance a staccato feel or tenuto feel.

Parameter	Range	Explanation
Type	VELOCITY, DURATION	Data to be modified **VELOCITY:** Strength of the notes **DURATION:** Length of the notes
When Type is "VELOCITY"		
Value	-99– +99	Amount by which the velocity is to be changed
Note Minimum Note Maximum	0 (C-1)–127 (G9)	Range of notes whose velocity is to be changed
When Type is "DURATION"		
Value	-960– +960	Amount by which the duration is to be changed
Note Minimum Note Maximum	0 (C-1)–127 (G9)	Range of notes whose duration is to be changed

MEMO

If this operation would result in a velocity greater than 127 (or less than 1), the resulting velocity data will be limited to 127 (or 1).

Shift Clock

This operation shifts the timing of the performance data recorded in the pattern backward or forward in units of one clock (1/96th of a beat). Use this when you want to slightly shift the overall performance.

Parameter	Range	Explanation
Value	-960– +960	Amount of clock shift
Event	ALL, NOTE, PROG, CC, BEND, PAFT, CAFT, SYS-EX, BPM, MUTE	Type of data whose timing is to be adjusted
Note Minimum Note Maximum	0 (C-1)–127 (G9)	Range of notes for which the timing is to be adjusted

Data Thin

Since data such as pitch bend or control change varies the value continuously, it can occupy an unexpectedly large amount of memory. The Data Thin operation thins out such data to reduce the amount of memory it occupies without audibly affecting the resulting playback. This lets you use the internal memory more efficiently.

Parameter	Range	Explanation
Value	0–99	Amount by which data is to be thinned
Thin Event	ALL, CC, BEND, PAFT, CAFT	Type of data to be thinned

Edit Quantize

This operation corrects the timing of performance data recorded in the pattern, according to the timing criteria you specify.

Conventional quantization adjusts only the timing of the notes in the pattern as they are played back, without affecting the actual content of the data. However, the Edit Quantize operation lets you quantize the actual data itself.

Parameter	Range	Explanation
QTZ Type	GRID, SHUFFLE, GROOVE	Type of quantization
When Type is "GRID"		
QTZ Template	1/32, 1/24, 1/16, 1/12, 1/8, 1/6, 1/4	Note value toward which notes are to be moved
QTZ Timing	0–100	Strength of quantization Higher settings of this parameter will cause the note timings to be moved closer toward their exact value.
When Type is "SHUFFLE"		
QTZ Template	1/16, 1/8	Note value toward which notes are to be moved
QTZ Timing	0–100	Amount of "shuffle" for backbeats A setting of "50" will produce a "straight" rhythm with no shuffle. Settings in a range of 60–66 will usually produce a pleasant shuffle feel.
When Type is "GROOVE"		
QTZ Template	Refer to "Groove Template List" (p. 46)	Template to use
QTZ Timing	0–100	Strength of timing adjustment Higher settings of this parameter will cause the note timings to be moved closer toward the timings of the template.
QTZ Velocity	0–100	Strength of velocity adjustment Higher settings of this parameter will cause the velocities to be adjusted closer toward the velocities of the template.

Groove Template List

16 Beat Dance type	
Dance-Nm-L.Ac	exact/low dynamics
Dance-Nm-H.Ac	exact/high dynamics
Dance-Nm-L.Sw	exact/light swing
Dance-Nm-H.Sw	exact/strong swing
Dance-Hv-L.Ac	dragging/low dynamics
Dance-Hv-H.Ac	dragging/high dynamics
Dance-Hv-L.Sw	dragging/light swing
Dance-Hv-H.Sw	dragging/strong swing
Dance-Ps-L.Ac	rushing/low dynamics
Dance-Ps-H.Ac	rushing/high dynamics
Dance-Ps-L.Sw	rushing/light swing
Dance-Ps-H.Sw	rushing/strong swing
16 Beat Fusion type	
Fuson-Nm-L.Ac	exact/low dynamics
Fuson-Nm-H.Ac	exact/high dynamics
Fuson-Nm-L.Sw	exact/light swing
Fuson-Nm-H.Sw	exact/strong swing
Fuson-Hv-L.Ac	dragging/low dynamics
Fuson-Hv-H.Ac	dragging/high dynamics
Fuson-Hv-L.Sw	dragging/light swing
Fuson-Hv-H.Sw	dragging/strong swing
Fuson-Ps-L.Ac	rushing/low dynamics
Fuson-Ps-H.Ac	rushing/high dynamics
Fuson-Ps-L.Sw	rushing/light swing
Fuson-Ps-H.Sw	rushing/strong swing
16 Beat Reggae type	
Regge-Nm-L.Ac	exact/low dynamics
Regge-Nm-H.Ac	exact/high dynamics
Regge-Nm-L.Sw	exact/light swing
Regge-Nm-H.Sw	exact/strong swing
Regge-Hv-L.Ac	dragging/low dynamics
Regge-Hv-H.Ac	dragging/high dynamics
Regge-Hv-L.Sw	dragging/light swing
Regge-Hv-H.Sw	dragging/strong swing
Regge-Ps-L.Ac	rushing/low dynamics
Regge-Ps-H.Ac	rushing/high dynamics
Regge-Ps-L.Sw	rushing/light swing
Regge-Ps-H.Sw	rushing/strong swing
8 Beat Pops type	
Pops-Nm-L.Ac	exact/low dynamics
Pops-Nm-H.Ac	exact/high dynamics
Pops-Nm-L.Sw	exact/light swing
Pops-Nm-H.Sw	exact/strong swing
Pops-Hv-L.Ac	dragging/low dynamics
Pops-Hv-H.Ac	dragging/high dynamics
Pops-Hv-L.Sw	dragging/light swing
Pops-Hv-H.Sw	dragging/strong swing
Pops-Ps-L.Ac	rushing/low dynamics
Pops-Ps-H.Ac	rushing/high dynamics
Pops-Ps-L.Sw	rushing/light swing
Pops-Ps-H.Sw	rushing/strong swing
8 Beat Rhumba type	
Rhumb-Nm-L.Ac	exact/low dynamics
Rhumb-Nm-H.Ac	exact/high dynamics
Rhumb-Nm-L.Sw	exact/light swing
Rhumb-Nm-H.Sw	exact/strong swing
Rhumb-Hv-L.Ac	dragging/low dynamics
Rhumb-Hv-H.Ac	dragging/high dynamics
Rhumb-Hv-L.Sw	dragging/light swing
Rhumb-Hv-H.Sw	dragging/strong swing
Rhumb-Ps-L.Ac	rushing/low dynamics
Rhumb-Ps-H.Ac	rushing/high dynamics
Rhumb-Ps-L.Sw	rushing/light swing
Rhumb-Ps-H.Sw	rushing/strong swing

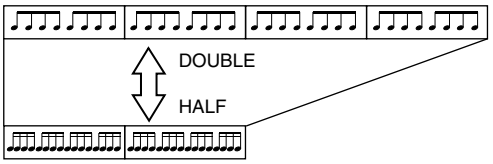
Others	
Samba 1	samba (pandero)
Samba 2	samba (surdo and timba)
Axe 1	axe (caixa)
Axe 2	axe (surdo)
Salsa 1	salsa (cascara)
Salsa 2	salsa (conga)
Triplets	triplets
Quituplets	quintuplets
Sextuplets	sextuplets
7 Against 2	seven notes played over two beats
Lagging Tri	lagging triplets

NOTE

Quantization will correct only note messages; other messages are not corrected. This means that if messages that modify the sound in real time (such as pitch bend) have been recorded in the pattern, some Quantize settings may cause the timing of these messages to become incorrect, so that they are no longer played correctly. It is best to use Quantize on patterns that do not contain messages that produce realtime change.

Reclock

This operation doubles or halves the note values of performance data recorded in the pattern. For example, a four-measure pattern recorded at tempo = 120 can be converted to a two-measure pattern with halved note values, and played at tempo = 60 to produce the identical playback. If you want to connect patterns whose tempo differs drastically, you can use the Reclock operation to match the note values of the two patterns.



* *Using the Reclock operation will not change the original tempo of the pattern.*

Parameter	Range	Explanation
Reclock Size	HALF, DOUBLE	How the note values are to be changed **HALF:** Note values will be halved. **DOUBLE:** Note values will be doubled.

* *You cannot set this parameter in a way that would make the Reclock operation produce a pattern longer than 998 measures or shorter than 1 measure.*

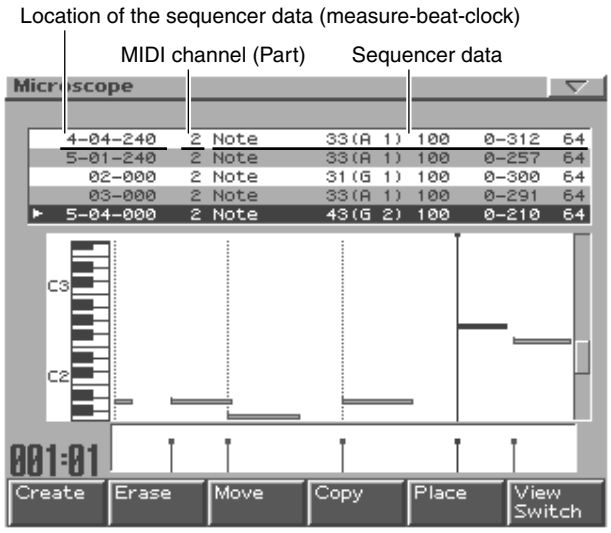
Microscope

This lets you edit individual events of performance data within a completed pattern.

* *You must stop the pattern before you can edit it.*

Basic procedure in the Microscope

1. **Select the pattern that you want to edit.**
2. **Press [F2 (Edit)] to access the Pattern Edit Menu screen.**
3. **Press [F1 (Micro Scope)] to access the Microscope screen.**



4. **Use part buttons [1]–[16] and [TEMPO/MUTE] to select the part that you want to edit.**
5. **Use [CURSOR (up/down)] to select the performance data that you want to edit.**
6. **Use [CURSOR (left/right)] to select the parameter that you want to edit.**
7. **Use [VALUE] or [INC/DEC] to edit the value.**
8. **Repeat steps 4–7 to continue editing.**
9. **When you are finished, press [EXIT].**

Performance data that can be edited in the Microscope

The Microscope editor lets you edit the following nine types of data (MIDI message).

MIDI message	Explanation
Note	Note data for playing sounds From the left, the parameters are Note Number, which indicates the name of the note; On Velocity, which specifies the force with which the key is pressed; Duration (Beat-Tick), which specifies the duration of the note; and Off Velocity, which determines the speed with which the key is released.
Program Change	Messages that switch sounds (patches) The program number (PC#) selects the sound.
Control Change	Messages that can apply effects such as modulation or portamento, depending on the controller number of the message The controller number (CC#) selects the function, and Value specifies the depth of the effect (function).
Pitch Bend	Messages that change the pitch while you play The value specifies the amount of pitch change.
Poly Aftertouch	Messages that apply aftertouch to individual keys From the left, the parameters are Note Number which specifies the key, and Value which specifies the depth of the aftertouch.
Channel Aftertouch	Messages that apply aftertouch to an entire MIDI channel Value specifies the depth of the aftertouch.
System Exclusive	MIDI messages specific to the MC-909
Tempo Change	Messages that change the tempo
Mute Control	Mute data for each part

MEMO

System Exclusive, Tempo Change, and Mute Control are included in the Tempo/Mute Part (p. 42).

Function buttons

[F1 (Create)]	Inserts new performance data.
[F2 (Erase)]	Erases performance data.
[F3 (Move)]	Moves performance data.
[F4 (Copy)]	Copies performance data.
[F5 (Place)]	Places performance data.
[F6 (View Switch)]	Displays only specific data. Data marked by "✔" will be displayed.
[SHIFT] + [F1 (V-Zoom In)]	Narrow the range of keys shown in the display. Use this when you want to view certain notes at greater magnification.
[SHIFT] + [F2 (V-Zoom Out)]	Expand the range of notes shown in the display. Use this when you want to see which notes have been input.

* *In the Microscope, you can press [ENTER] to transmit the currently selected performance data from the MIDI OUT connector.*

Inserting performance data (Create)

Here's how to insert new performance data at a desired location in a pattern.

1. **Press [F1 (Create)].**
   The Create Event window will appear.
2. **Use [VALUE] or [INC/DEC] to select the performance data that you want to insert.**
3. **Press [F6 (OK)].**
   The Create Position window will appear.
4. **Use [CURSOR (left/right)] to move the cursor to the "measure," "beat," and "clock" fields, and use [VALUE] or [INC/DEC] to specify the location at which the data will be inserted.**
5. **Press [F6 (OK)] to insert the performance data.**
6. **The parameters of the inserted performance data will have the default values, so edit the values as necessary.**

Erasing performance data (Erase)

Here's how to erase only a single specific event of performance data.

1. **Use [CURSOR (up/down)] to move the cursor to the performance data that you want to erase.**
2. **Press [F2 (Erase)] to erase that performance data.**

Moving performance data (Move)

Here's how to move a performance data event to a different location.

1. **1. Use [CURSOR (up/down)] to move the cursor to the performance data that you want to move.**
2. **Press [F3 (Move)].**
   The Move Event window will appear.
3. **Use [CURSOR (left/right)] to move the cursor to the "measure," "beat," and "clock" fields, and use [VALUE] or [INC/DEC] to specify the location to which the data will be moved.**
4. **Press [F6 (OK)] to move the performance data.**

Copying performance data (Copy)

Here's how to copy a performance data event to the specified location. This is convenient when you want to use the same performance data two or more times.

1. **Use [CURSOR (up/down)] to move the cursor to the performance data that you want to copy.**
2. **Press [F4 (Copy)] to copy the event.**
3. **Press [F5 (Place)].**
   The Place Event window will appear.
4. **Use [CURSOR (left/right)] to move the cursor to the "measure," "beat," and "clock" fields, and use [VALUE] or [INC/DEC] to specify the location to which the data will be pasted.**
5. **Press [F6 (OK)] to paste the performance data.**

Editing a system exclusive message

1. **Press [TEMPO/MUTE CONTROL] to select the tempo/mute part.**
2. **Use [CURSOR (up/down)] to move the cursor to the location of the system exclusive message that you want to edit.**
3. **Press [CURSOR (right)].**
   The System Exclusive Edit window will appear.
4. **Use [CURSOR] to move the cursor to the location of the data that you want to edit.**
5. **Use [VALUE] or [INC/DEC] to edit the value.**
6. **Press [F6 (OK)] to finalize the data.**

Function buttons

[F1 (Auto Sum)]	If the message is a Roland type IV system exclusive message, you can calculate the checksum automatically when the values are finalized. If this displays a "✔" mark, the check sum will be calculated automatically when the data values are finalized.
[F2 (Delete)]	Deletes the data at the cursor location.
[F3 (Insert)]	Inserts data at the cursor location.
[F4 (Test)]	Transmits the data being edited from the MIDI OUT connector.
[F5 (Cancel)]	Cancels the change in the data.
[F6 (OK)]	Finalizes the data.

Saving a pattern

Pattern settings that you edit will be lost if you edit another pattern or turn off the power. If you want to keep the edited data, you must save it as follows.

1. Select the pattern that you want to save.

2. Press [WRITE].

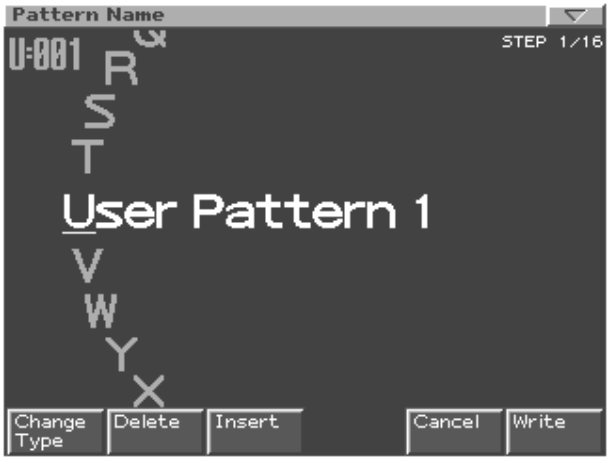
The write menu screen will appear.

Make sure that "Pattern" is highlighted.



3. Press [ENTER] or [F1 (PTN)].

The pattern name input screen will appear.



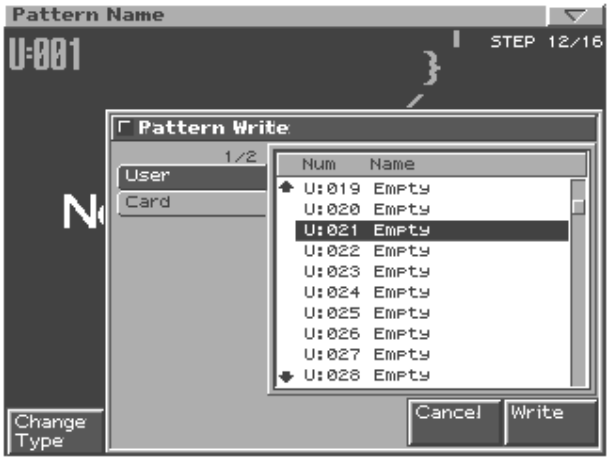
4. Assign a name to the pattern you created.

[CURSOR (left/right)]	Moves the cursor (the location at which to enter/edit a character).
[CURSOR (up/down)]	Switches letters between uppercase and lowercase.
[VALUE] [INC/DEC]	Selects characters.
[F1 (Change Type)]	Selects the type of character. Each time you press this, you will alternately select the first character of the uppercase alphabet (A), lowercase alphabet (a), or numerals and symbols (0).
[F2 (Delete)]	Deletes the character at the cursor location, while shifting the following characters to the left, closing the gap.
[F3 (Insert)]	Inserts a space at the cursor location.

* *If you decide not to enter the name, press [F5 (Cancel)].*

5. When you finish inputting the name, press [F6 (Write)].

A screen will appear in which you can select the pattern to which the data will be written.



6. Use [VALUE] or [INC/DEC] to select the pattern to which the data will be written.

Use [CURSOR (left/right)] to select the bank (user or card).

7. Press [F6 (Write)].

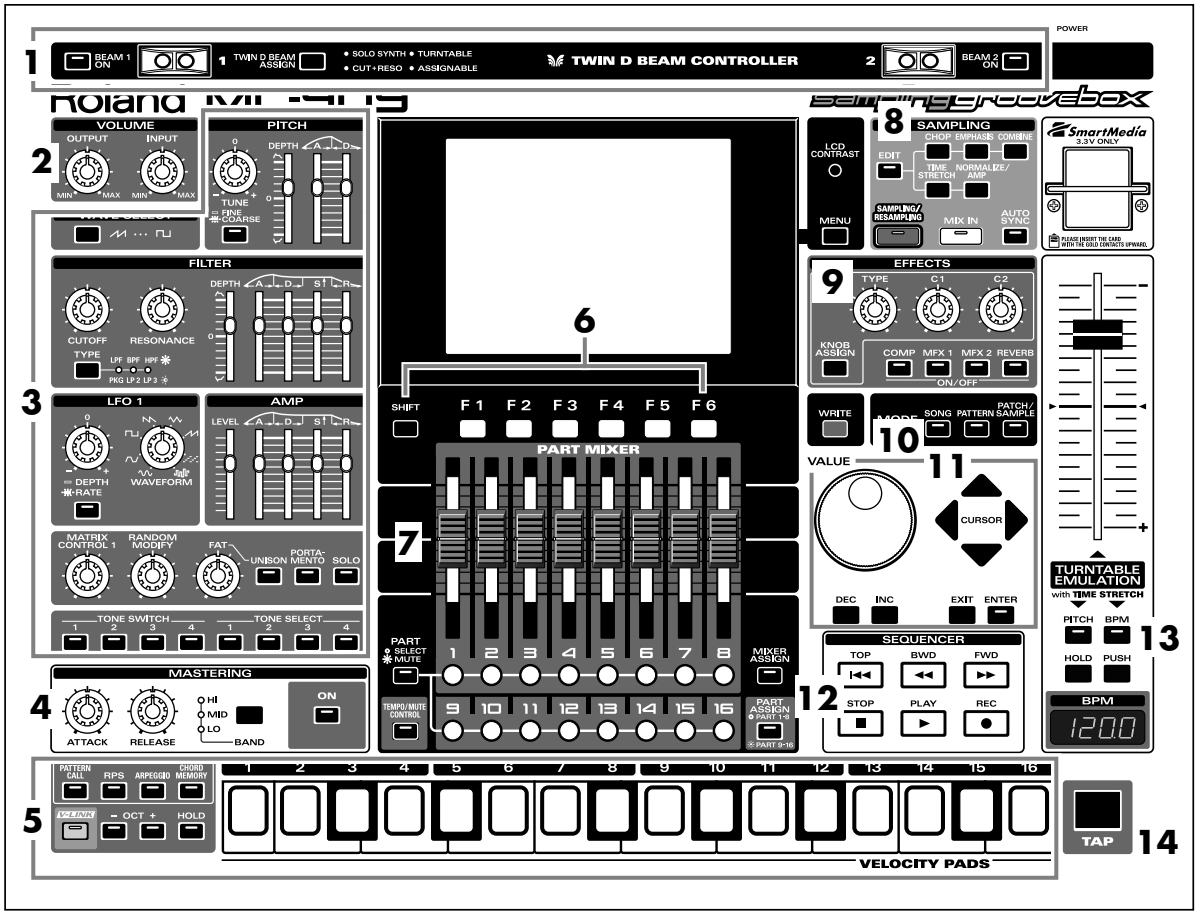
A message will ask you to confirm that you want to write the data.

8. To write the data, press [F6 (Execute)].

* *To cancel, press [F5 (Cancel)].*

Patch/Sample Mode

How Things Work (in Pattern mode)



When you press the Mode section **[PATCH/SAMPLE] button**, the button's indicator will light and the MC-909 will be in Patch/Sample mode.

In Patch/Sample mode, the various parts of the panel will perform the following functions.

1. D Beam controllers

Pass your hand over these to modify the pattern (p. 35).

[BEAM 1 ON]	Turns the left D Beam controller (BEAM 1) on/off.
[BEAM 2 ON]	Turns the right D Beam controller (BEAM 2) on/off.
[TWIN D BEAM ASSIGN]	Selects the function of the D Beam controller.

2. Volume section

[OUTPUT]	Adjusts the output volume of the MIX OUT jacks and the headphone.
[INPUT]	Adjusts the input volume from the INPUT jacks.

3. Realtime Modify section

These controls modify the sound in real time (p. 33).

Knob/Button	Parameter
[WAVE SELECT]	Displays the Wave List.
PITCH block	
[TUNE]	**button is not lit:** Patch Fine Tune (p. 57) **button is lit:** Patch Coarse Tune (p. 57)
[DEPTH]	Pitch Envelope Depth (p. 59)
[A]	Pitch Envelope Time1 (p. 59)
[D]	Pitch Envelope Time3 (p. 59)
FILTER block	
[TYPE]	Filter Type (p. 59)
[CUTOFF]	Cutoff Frequency (p. 59)
[RESONANCE]	Resonance (p. 60)
[DEPTH]	Filter Envelope Depth (p. 61)
[A]	Filter Envelope Time1 (p. 61)
[D]	Filter Envelope Time3 (p. 61)
[S]	Filter Envelope Level3 (p. 61)
[R]	Filter Envelope Time4 (p. 61)
AMP block	
[LEVEL]	Patch Level (p. 62)
[A]	Amp Envelope Time1 (p. 63)
[D]	Amp Envelope Time3 (p. 63)
[S]	Amp Envelope Level3 (p. 63)
[R]	Amp Envelope Time4 (p. 63)
LFO 1 block	
[DEPTH/RATE]	**button is not lit:** LFO1 Pitch/Filter/Amp/Pan Depth (p. 64, p. 65) * Selectable **button is lit:** LFO1 Rate (p. 64)
[WAVEFORM]	LFO1 Waveform (p. 64)

Knob/Button	Parameter
Others	
[MATRIX CONTROL 1]	Parameters set to CTRL1 Destination (p. 68)
[RANDOM MODIFY]	Randomly modifies the sound generator parameters for the current part (p. 56).
[FAT]	Unison Fat Level (p. 66)
[UNISON]	Unison Switch (p. 66)
[PORTAMENTO]	Portamento Switch (p. 65)
[SOLO]	Mono/Poly (p. 65)
TONE SWITCH	
[1]–[4]	Turns the tone on/off (p. 56).
TONE SELECT	
[1]–[4]	Selects a tone to edit (p. 56).

4. Mastering section

[ON]	Switches the mastering effect (compressor) on/off.
[BAND]	Selects the frequency band to adjust.
[ATTACK]	Specify the time from when the volume goes up the threshold level until the compressor effect applies.
[RELEASE]	Specify the time from when the volume falls below the threshold level until the compressor effect no longer applies.

5. Velocity pads

Use these pads as a keyboard to play sounds or trigger phrases (p. 27).

6. Function buttons

These buttons access the function screens indicated in the bottom line of the display.

7. Part Mixer section

Here you can adjust the volume, pan, etc., of each part (p. 33).

[PART] (SELECT/MUTE)	Selects the function of the Part buttons [1]–[16]. The buttons work as Part Select buttons when the indicator is not lighted, and as Mute buttons when the indicator is lit.
[TEMPO/MUTE CONTROL]	Switches on/off the Tempo/Mute part (a part that records tempo changes and mute operations, p. 42).
[MIXER ASSIGN]	When you press this button so its indicator lights, the Mixer screen will appear.
[PART ASSIGN]	Selects the parts that are controlled by the sliders. The sliders will control parts 1–8 if this indicator is not lighted, or parts 9–16 if the indicator is lit.

8. Sampling section

[EDIT]	Displays the Sample Edit screen (p. 114).
[SAMPLING/RESAMPLING]	Displays the Sampling menu screen (p. 112).
[MIX IN]	Mixes the sound from the INPUT jack into the output (p. 34).
[AUTO SYNC]	Synchronizes a sample to the pattern (p. 36).

9. Effect section

Applies special effects to the sound (p. 88).

[COMP]–[REVERB]	Switch each effect on/off (p. 88).
[KNOB ASSIGN]	Selects the effect to be controlled in real time (p. 91).
[TYPE]	Selects the type of effect.
[C1], [C2]	Modifies the assigned function in real time.

10. Mode section

Press the [PATTERN] button to enter Pattern mode.

Pressing one of the other two buttons will switch you to the corresponding mode.

11. Cursor/Value section

Use these buttons and dial to select patterns or input values (p. 18).

You can press [ENTER] to see a list of the values that can be specified for the currently selected parameter.

12. Sequencer section

[PLAY]	Plays a pattern (p. 24).
[STOP]	Stops playback/recording.
[FWD]	Advances to the next measure.
[BWD]	Returns to the previous measure.
[TOP]	Moves to the beginning of the pattern.
[REC]	Used when recording (p. 37).

13. Turntable emulation

Applies an effect that simulates increasing/decreasing the rotational speed of a turntable (p. 36).

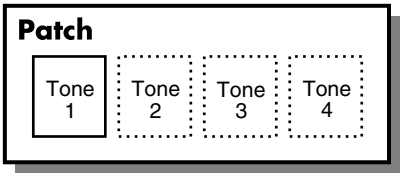
14. TAP button

Lets you set the BPM (tempo) by pressing the button at the desired timing (p. 25).

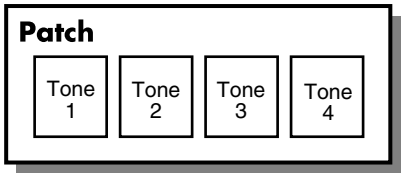
Patch Edit

How a Patch Is Organized

The type of sound most commonly played on the MC-909 is called a Patch. Each Patch can contain up to four Tones.



Example 1:A Patch consisting of only one Tone (Tones 2—4 are turned off).



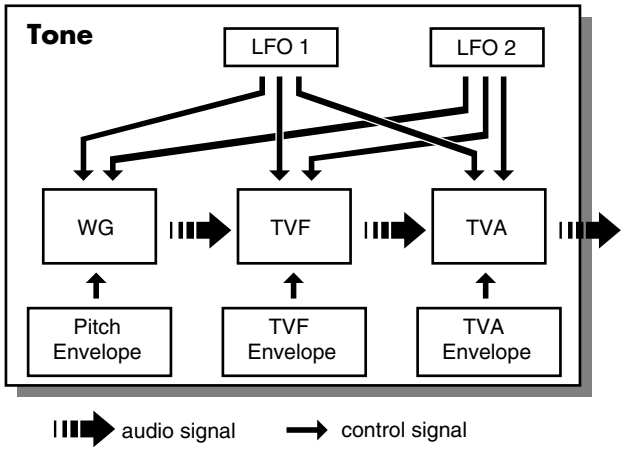
Example 2: A Patch consisting of four Tones.

You can turn the Tones in a Patch on or off. Only Tones that are turned on are heard when you play the Patch. (p. 56)

You can also set the structure of a Patch to specify how Tones 1 and 2 and Tones 3 and 4 are combined. (p. 66)

How a Tone Is Organized

Tones are the smallest programmable unit of sound on the MC-909, and are the basic building blocks that make up a Patch. You can't play a Tone by itself-it can only be played as part of a Patch or Rhythm Set. A Tone consists of the following five components.



WG (Wave Generator)

This selects the PCM waveform material that provides the basis of the Tone. Two waveforms can be assigned to each Tone.

The MC-909 has 693 different waveforms. (See Waveform List p. 150.)

All Patches built into the MC-909 consist of combinations of Tones based on these waveforms.

TVF (Time Variant Filter)

This specifies how the frequency components of the Tone change.

TVA (Time Variant Amplifier)

This determines how the volume and panning of the Tone change.

Envelope

An envelope applies changes to the Tone over time. There are separate envelopes for pitch, TVF (filter) and TVA (volume). For example, you would use the TVA Envelope to modify the way in which the Tone attacks and decays.

LFO (Low Frequency Oscillator)

Use the LFO to create cyclical changes-or cyclical "modulation"-in a Tone. Each Tone has two LFOs. An LFO can be applied to the Tone's pitch settings, TVF (filter), and TVA (volume). When an LFO is applied to pitch, a vibrato effect is produced. When an LFO is applied to the TVF cutoff frequency, a wah-wah effect is produced. When an LFO is applied to the TVA volume, a tremolo effect is produced.

Tips for Creating a Patch

- Choose a Patch that's similar to the sound you wish to create.
  When you want to create a new sound, it's a good idea to begin with a Patch that's close to the sound that you have in mind. Starting with a Patch that bears no resemblance to the one you want to create is likely to result in much more programming work for you.
- Decide which Tones will sound
  When creating a Patch, it's important to decide which Tones you want to use. It's also important to turn off unused Tones to avoid wasting voices, unnecessarily reducing the number of simultaneous notes you can play.
- Check the way in which the Tones are combined
  Structure Type 1&2 and 3&4 are important parameters that determine how the four Tones are combined. Before you select new Tones, make sure you understand how the currently selected Tones are affecting each other.

Top screen of Patch/Sample mode



Bank Num (Number) Patch/Rhythm (Patch Name/Rhythm Set Name)	Bank/Number/Name of the patch (rhythm set) used by each part (1–16)
Lev (Part Level) Pan (Part Pan) Key (Part Key Shift) Rev (Par Reverb Send Level)	Refer to p. 33
Out (Part Output Assign)	How the original sound of each part will be output **DRY:** Output to MIX OUTPUT jacks without passing through effects **MFX1 (2):** Output through multi-effects 1 (or 2) **COMP:** Output through the compressor **DIR1 (2):** Output to the DIRECT 1 (or DIRECT 2) jacks without passing through effects **RHY:** Output according to the settings of the rhythm set assigned to the part * "RHY" can be set only when a rhythm set is assigned to the part.
Seq (Sequencer Output Assign)	Output distination from the sequencer **INT:** Internal soundgenerator **EXT:** MIDI OUT connector **BOTH:** Both of the above simultaneously

Function buttons

[F1 (List)] (Patch List)	Select a patch/rhythm set from a list (p. 55).
[F2 (Edit)] (Patch Edit)	Edit the settings of a patch/rhythm set (p. 56, p. 70).
[F3 (Mixer)] (Part Mixer)	Specify the volume/pan of each part (p. 33).
[F4 (Effects)]	Apply special effects to the sound (p. 88).
[F5 (Mastering)]	Make settings for the mastering effect (p. 108).
[F6 (BPM/Click)]	Set the tempo, and turn the metronome on/off (p. 25).

Selecting a patch/rhythm set

Selecting from a list

1. Press [F1 (List)] to display the Patch List screen.

The currently selected patch/rhythm set (the current patch/rhythm set) will be highlighted.



2. To select a patch, press [F3 (Patch)]. To select a rhythm set, press [F4 (Rhythm)].

3. Use [F1] [F2] or [CURSOR (left/right)] to select a bank.

4. Press [F6 (Select)] to finalize your selection.

Selecting a patch by category

1. In the Patch Select screen, press [F5 (Categ)].

The patches will be displayed by category.

2. Use [F1] [F2] or [CURSOR (left/right)] to select a category.

3. Press [F6 (Select)] to finalize your selection.

NOTE

Rhythm sets do not have categories.

Selecting directly

1. In the top screen of Patch/Sample mode, use [CURSOR] to move the cursor to the patch/rhythm set name or bank.

2. Use [VALUE] or [INC/DEC] to make your selection.

Selecting the Tone(s) That Will Sound

Turn "on" the tone(s) that you want to sound. If you want to hear just a specific tone, turn the other tones "off."
Press **TONE SWITCH [1]–[4]** to switch a tone on (button's indicator lit) or off (indicator extinguished).

Patch editing procedure

Editing from the Panel Knobs

Several of the sound generator parameters can be edited directly from the panel knobs.
Parameters that can be edited are marked by "#" in the detailed editing list.

Special editing

[RANDOM MODIFY]	This controls the sound generator parameters of the current part. It is a convenient way to use randomness to create sounds you like. Once you turn this toward the right, the parameters will be modified randomly. If you turn it all the way to the left and then toward the right once again, the parameters will be newly re-selected and modified randomly.
[FAT]	This is valid if [UNISON] is on. It produces a detune effect (when the knob is between the far left and the center), or a harmonize effect (when the knob is between the center and the far right).

When you get a sound that you like, save the patch (p. 77).

LFO1 waveform morphing

The LFO1 waveform can be morphed (gradually shifted between waveforms) in the order shown on the panel.

Detailed Editing

1. **In the top screen of Patch/Sample mode, move the cursor to the patch that you want to edit.**
2. **Press [F2 (Edit)] to access the Edit screen.**
3. **Use [F1] and [F2] to select a parameter group.**
4. **Press [CURSOR (up/down)] to select the parameter.**
5. **Use [VALUE] or [INC/DEC] to edit the desired parameter.**
   * *You can press [F6 (Zoom Edit)] to edit some parameters graphically.*
   * *You can press [ENTER] to see a list of the values that can be specified for the currently selected parameter.*
   * *You can also use the panel knobs and sliders to edit the sound (p. 52).*
6. **When you are finished editing, press [EXIT] to return to the top screen.**

Selecting a Tone to Edit

Press TONE SELECT [1]–[4] so the indicator for the tone you want to edit is lighted.

* *By simultaneously pressing two or more [TONE SELECT] buttons, you can simultaneously select two or more tones.*

Wave

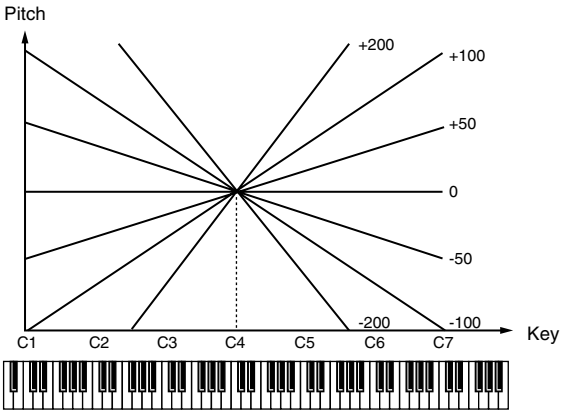
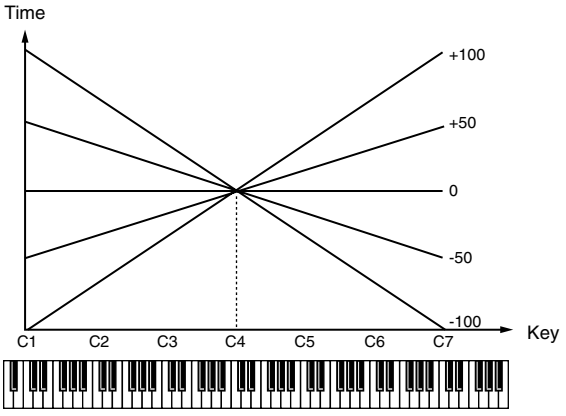
These parameters select the PCM waveform that is to form the basis of the tone, and apply effects to the waveform.

Parameter	Range	Explanation
Wave Group	INT, SRX, PRES, USER, CARD	Group of the waveform upon which the tone is to be based **INT:** Waveforms stored in internal memory **SRX:** Waveforms stored in a wave expansion board **PRES:** Preset sample waveforms **USER:** User sample waveforms **CARD:** Card sample waveforms * SRX can be selected only if a wave expansion board is installed.
Wave No. L/MONO Wave No. R	0 (OFF)–693	Waveform upon which the tone is to be based On the MC-909 you can specify a separate waveform for the L and R channels. * If you want to use the same waveform for the L and R channels, set the R channel to 0 (OFF).
Wave Gain	-6, 0, +6, +12 dB	Waveform gain (amplitude) The value will change in steps of 6 dB (decibels). An increase of 6 dB will double the gain. If you want to use the booster to distort the sound, it is effective to set this to the maximum.
FXM (Frequency Cross Modulation) FMX creates a complex overtone structure by using a specific waveform to frequency-modulate the selected waveform. This is suitable for creating extreme sounds or sound effects.		
FXM SW (Wave FXM Switch)	OFF, ON	Selects whether FMX will be used (ON) or not (OFF)
FXM Color (Wave FXM Color)	1–4	Selects how FXM will apply frequency modulation. Increasing this value will produce a rougher sound. Decreasing this value will produce a more metallic sound.
FXM Depth (Wave FXM Depth)	0–16	Depth of frequency modulation applied by FXM

Pitch

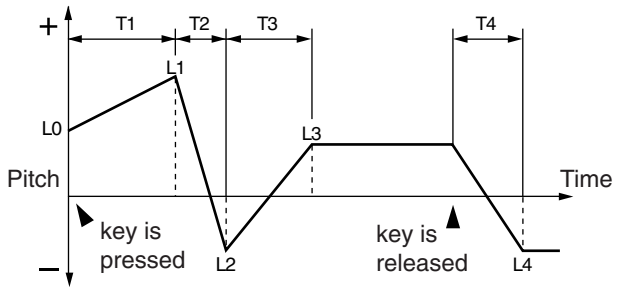
These parameters specify the pitch of the waveform, and how your keyboard playing dynamics will affect the pitch envelope (change in pitch over time).

Parameter	Value	Description
Patch Coarse Tune #	-48– +48	Pitch of the entire patch Specifies the pitch in semitone steps over a range of +/-4 octaves.
Patch Fine Tune #	-50– +50	Pitch of the entire patch Adjusts the pitch in one-cent steps (1/100th of a semitone) over a range of 1/2 semitone upward or downward.
Tone Coarse Tune	-48– +48	Pitch of the tone Adjusts the pitch in semitone steps over a range of +/-4 octaves.
Tone Fine Tune	-50– +50	Pitch of the tone Adjusts the pitch in one-cent steps (1/100th of a semitone) over a range of 1/2 semitone upward or downward.
Rnd Pitch Depth (Tone Random Pitch Depth)	0–1200	Range of random pitch change that occurs each time a pad is pressed Set this to 0 if you do not want the pitch to change randomly. This value is set in units of one cent (1/100th of a semitone).

Parameter	Value	Description
Pitch Keyfollow (Wave Pitch Keyfollow)	-200– +200	Amount of pitch change that occurs when you play upward one octave (12 notes) Set this to +100 if you want the pitch to rise one octave as you play 12 notes upward (as on a conventional keyboard). Set this to +200 if you want the pitch to rise two octaves as you play 12 notes upward. Conversely, set this to a negative value if you want the pitch to fall as you play upward on the keyboard. Set this to 0 if you want the same pitch to be sounded regardless of the note you play. 
P-Env V-Sens (Pitch Envelope Velocity Sensitivity)	-63– +63	Amount of pitch change that will occur in response to your pad playing dynamics. Increasing this value will produce a greater difference in pitch between softly and strongly played notes. Negative (-) values will produce the opposite result.
P-Env T1 V-Sens (Pitch Envelope Time 1 Velocity Sensitivity)	-63– +63	Amount by which T1 (time) of the pitch envelope will change in response to the speed (velocity) at which you press a pad. Increasing this value will produce a greater difference between softly and strongly played notes. Set this to a positive (+) value if you want to speed up the T1 time, or to a negative (-) value to slow it down.
P-Env T4 V-Sens (Pitch Envelope Time 4 Velocity Sensitivity)	-63– +63	Amount by which T4 (time) of the pitch envelope will change in response to the speed at which you release a pad (key-off velocity) Increasing this value will produce a greater difference between quickly released and slowly released notes. Set this to a positive (+) value if you want to speed up the T4 time, or to a negative (-) value to slow it down.
P-Env Time KF (Pitch Envelope Time Keyfollow)	-100– +100	Amount by which the pitch envelope times (T2--T4) will change in response to the key you play Relative to middle C (C4), higher settings for this parameter will produce greater change. Positive (+) values will cause the times to become shorter as you play toward the right on the velocity pad. Conversely, negative (-) values will cause the times to become longer. 

Pitch Env (Pitch Envelope)

These parameters specify the depth of the pitch envelope (the way in which pitch will change over time), and the shape of the envelope itself.

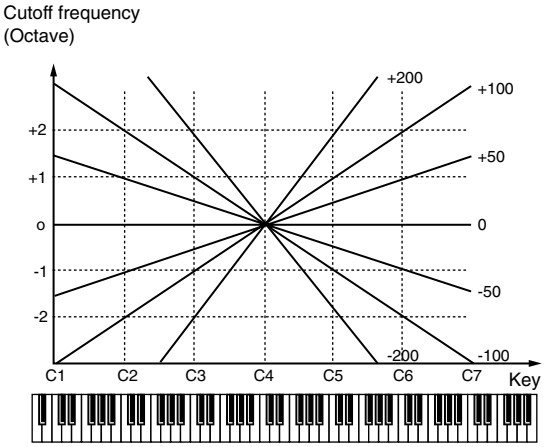
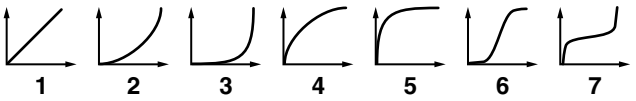
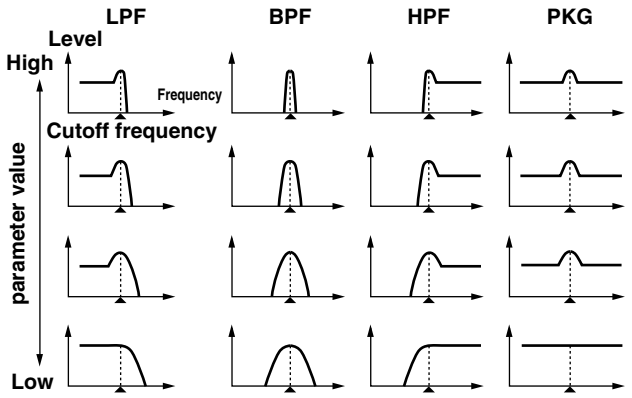


Parameter	Value	Description
P-Env Depth #	-12– +12	Pitch envelope depth Increasing this value will produce greater change. Negative (-) values will invert the change produced by the envelope.
P-Env Time1–4 #	0–127	Pitch envelope times (T1–T4) Increasing this value will lengthen the time until the next pitch level is reached (for example, T2 is the time over which the pitch will change from L1 to L2). * Realtime modify knob [A] adjusts Time 1, and knob [D] adjusts Time 3.
P-Env Level0–4	-63– +63	Pitch envelope levels (L0–L4) These parameters specify the amount by which the pitch will change from the basic pitch (specified by Coarse Tune and Fine Tune) at each point of the envelope. Positive (+) values will raise the pitch above the basic pitch, and negative (-) values will lower it.

Filter

These parameters are settings for the TVF (Time Variant Filter). They modify the timbral character of the tone by adjusting the brightness and fatness of the sound.

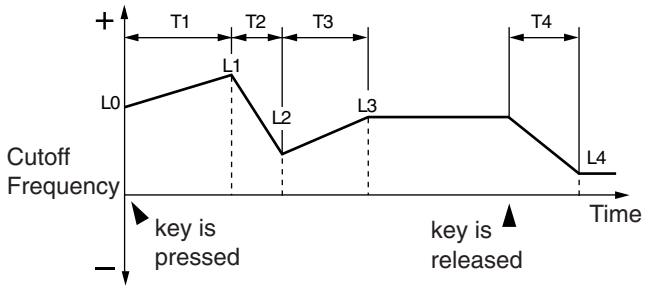
Parameter	Value	Description
Filter Type #	OFF, LPF, BPF, HPF, PKG, LPF2, LPF3	Type of filter A filter cuts a specific frequency region of the sound to modify the brightness or thickness of the sound. **OFF:** A filter will not be used. **LPF:** Low Pass Filter. Cuts the region that lies above the cutoff frequency. The sound will become more mellow as the high frequency region is cut. This is the most commonly used type of filter. **BPF:** Band Pass Filter. Leaves only the region in the vicinity of the cutoff frequency, and cuts the rest. Suitable for creating sounds with a distinctive character. **HPF:** High Pass Filter. Cuts the region that lies below the cutoff frequency. Suitable for creating percussion instrument sounds that have a distinctive high range. **PKG:** Peaking filter. Emphasizes the region in the vicinity of the cutoff frequency. You can create a wah effect by using an LFO to cyclically modulate the cutoff frequency. **LPF2:** Low Pass Filter 2. Cuts the region that lies above the cutoff frequency. This lets you leave the cutoff frequency fixed, and use the TVF envelope settings to vary the depth of the cutoff. Since this does not impair the feeling of energy of the sound, it is effective for acoustic-type sounds. * The resonance setting is ignored. **LPF3:** Low Pass Filter 3. Cuts the region that lies above the cutoff frequency. This filter cuts the high frequency region more gently than LPF2. Since this does not impair the feeling of energy of the sound, it is effective for acoustic-type sounds. * The resonance setting is ignored.
Cutoff Frequency #	0–127	Frequency (cutoff frequency) at which the filter will begin affecting the frequency content of the waveform **If the Filter Type is LPF/LPF2/LPF3**, reducing the cutoff frequency will diminish the higher overtones, producing a more mellow sound. Raising the cutoff frequency will brighten the sound. **If the Filter Type is BPF**, the cutoff frequency value will change the harmonic content that will be sounded. This is suitable for creating sounds with a distinctive character. **If the Filter Type is HPF**, raising the cutoff frequency will diminish the lower overtones, emphasizing only the bright portion of the sound. **If the Filter Type is PKG**, the cutoff frequency value will change the harmonic content that will be boosted.

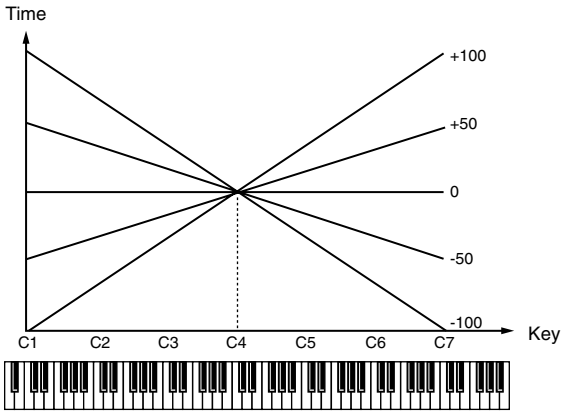
Parameter	Value	Description
Cutoff Keyfollow	-200– +200	Specifies how the pad position will affect the cutoff frequency Relative to the cutoff frequency of the C4 key, positive (+) values will raise the cutoff frequency as you play above C4, and negative (-) values will lower the cutoff frequency as you play above C4. Increasing this value will produce a correspondingly greater change. 
Cutoff Velo Curve (Cutoff Frequency Velocity Curve)	FIX, 1–7	Curve by which pad playing dynamics will affect the cutoff frequency If you select "FIX," the cutoff frequency will remain fixed regardless of your playing dynamics. 
Cutoff Velo Sens (Cutoff Frequency Velocity Sensitivity)	-63– +63	Amount by which your pad playing dynamics will affect the cutoff frequency Increasing this value will cause a correspondingly greater difference between softly played and strongly played notes. Negative (-) values will invert the change.
Resonance #	0–127	Amount by which the sound in the region of the cutoff frequency will be emphasized Increasing this value will produce a more strongly distinctive character. Raising this excessively will cause oscillation and distortion. 
Reso Velo Sens (Resonance Velocity Sensitivity)	-63– +63	Amount by which your pad playing dynamics will affect the resonance Increasing this value will cause a correspondingly greater difference between softly played and strongly played notes. Negative (-) values will invert the change.
F-Env V-Curve (Filter envelope velocity curve)	FIX, 1–7	Curve by which keyboard playing dynamics will affect the filter envelope If you select "FIX," the filter envelope will remain constant regardless of your playing dynamics. 
F-Env V-Sens (Filter envelope velocity sensitivity)	-63– +63	Amount by which your pad playing dynamics will affect the filter envelope depth Increasing this value will cause a correspondingly greater difference between softly played and strongly played notes. Negative (-) values will invert the change.
F-Env T1 V-Sens (Filter Envelope Time 1 Velocity Sensitivity)	-63– +63	Amount by which your pad playing dynamics (velocity) will affect T1 (time) of the filter envelope Increasing this value will cause a correspondingly greater difference between softly played and strongly played notes. Negative (-) values will invert the change. Specify a positive (+) value if you want to speed up the T1 time, or a negative (-) value to slow it down.

Parameter	Value	Description
F-Env T4 V-Sens (Filter Envelope Time 4 Velocity Sensitivity)	-63– +63	Amount by which the speed at which you release the pad (key-off velocity) will affect T4 (time) of the filter envelope Increasing this value will cause a correspondingly greater difference between slowly released and quickly released notes. Specify a positive (+) value if you want to speed up the T4 time, or a negative (-) value to slow it down.

Filter Env (Filter Envelope)

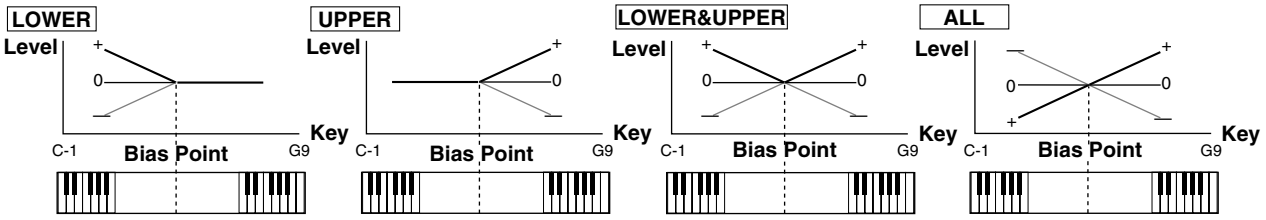
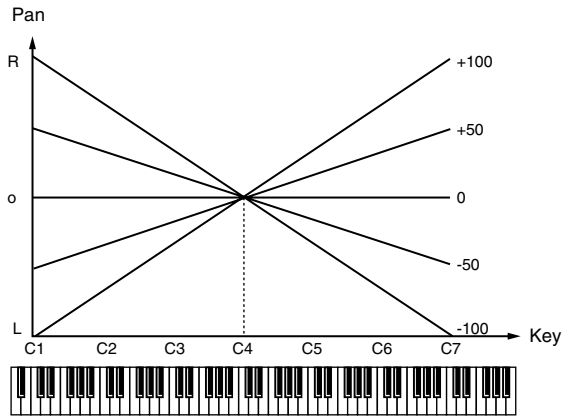
These parameters specify the depth of the filter envelope (time-variant change in cutoff frequency), and specify the shape of the envelope itself.



Parameter	Value	Description
F-Env Depth (Filter envelope depth)	-63– +63	Depth of the filter envelope Increasing this value will produce a greater effect. Negative (-) values will invert the envelope.
F-Env Time KF (Filter Envelope Time Keyfollow)	-100– +100	Amount by which the note you play (relative to C4) will affect the filter envelope times (T2–T4) Increasing this value will cause greater change to occur. Positive (+) values will cause the times to become shorter as you play toward the right of the keyboard. Conversely, negative (-) values will cause the times to become longer. 
F-Env Time1–4 # (Filter Envelope Time 1–4)	0–127	Filter envelope times (T1–T4) Higher settings of these values will lengthen the time over which the next cutoff frequency level of the envelope is reached. (For example, T2 is the time over which the level changes from L1 to L2.) * Realtime modify knob [A] adjusts Time 1, knob [D] adjusts Time 3, and knob [R] adjusts Time 4.
F-Env Level0–4 # (Filter Envelope Level 0–4)	0–127	Filter envelope levels (L1–L3) Specifies the change in cutoff frequency at each point, relative to the reference level. * Realtime modify knob [S] adjusts Level 3.

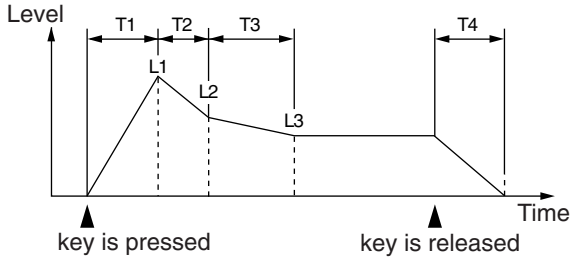
Amp

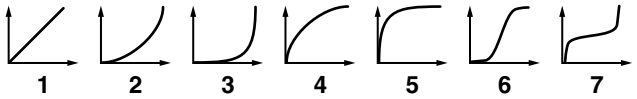
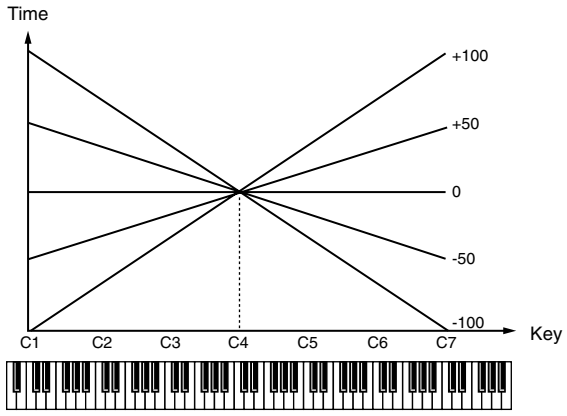
These TVA (Time Variant Amplifier) parameters specify how the volume and pan of the sound will change.

Parameter	Value	Description
Patch Level #	0–127	Volume of the entire patch
Tone Level	0–127	Volume of each tone This parameter is used mainly to adjust the volume balance between tones.
BIAS Use the Bias parameter when you want the position of notes on a keyboard to affect the TVA level.  		
Bias Level	-100– +100	Angle at which the volume will change relative to the bias direction Increasing this value will produce a greater change. Negative (-) values will invert the direction of the change.
Bias Position	0–127	Selects the note number relative to which the volume will change.
Bias Direction	LWR, UPR, L&U, ALL	Direction of change relative to the bias point **LWR:** Notes below the bias point **UPR:** Notes above the bias point **L&U:** Notes to the left and right of the bias point **ALL:** Bias level varies the angle relative to the bias point
Tone Pan	L64–63R	Pan of each tone L64 is far left, 0 is center, and 63R is far right.
Pan Keyfollow (Tone Pan Keyfollow)	-100– +100	Set this parameter if you want the pan to be affected by the note you play. Increasing this value will produce a greater change relative to middle C (C4). Positive (+) values will cause the pan to move toward the right as you play toward the right. Conversely, negative (-) values will adjust pan toward the right. 
Random Pan Depth (Tone Random Pan Depth)	0–63	Amount by which the pan will be varied randomly each time you play a note Increasing this value will produce a greater amount of random change.
Alter Pan Depth (Tone Alternate Pan Depth)	L63–63R	Amount by which the pan will be moved alternately between left and right each time you play a note Increasing this value will produce a greater amount of change. This value can be adjusted in the L or R direction, and these will invert the order in which the tone is panned to left and right. If you want two tones to alternate between left and right, set each tone to opposite L and R values.

Amp Env (Amp Envelope)

These parameters specify the depth of the amp envelope (change in volume over time) and the shape of the envelope itself.



Parameter	Value	Description
A-Env V-Curve (Amp Envelope Velocity Curve)	FIX, 1–7	Curve by which pad playing dynamics will affect the volume of the tone If you specify "FIX," the volume of the tone will remain the same regardless of your playing dynamics. 
A-Env V-Sens (Amp Envelope Velocity Sensitivity)	-63– +63	Amount by which pad playing dynamics will affect the volume of the tone Specify a positive (+) value if you want the volume of the tone to increase as you play more strongly. Specify a negative (-) value if you want the volume to decrease.
A-Env T1 V-Sens (Amp Envelope Time 1 Velocity Sensitivity)	-63– +63	Amount by which T1 (time) of the Amp envelope will change in response to your playing dynamics Increasing this value will produce a greater change between softly played and strongly played notes. Specify a positive (+) value if you want the T1 time to speed up, or a negative (-) value if you want it to slow down.
A-Env T4 V-Sens (Amp Envelope Time 4 Velocity Sensitivity)	-63– +63	Amount by which T4 (time) of the Amp envelope will change in response to the speed at which you release the pad (key-off velocity) Increasing this value will produce a greater change between slowly released and quickly released notes. Specify a positive (+) value if you want the T4 time to speed up, or a negative (-) value if you want it to slow down.
A-Env Time KF (Amp Envelope Time Keyfollow)	-100– +100	Amount by which Amp envelope times (T2–T4) will be affected by the pad you play Higher settings for this value will produce a greater change relative to the C4 key. Positive (+) values will cause the times to become shorter as you play toward the right. Conversely, negative (-) values will cause the times to become longer. 
A-Env Time1–4 # (Amp Envelope Time 1–4)	0–127	Amp envelope times (T1–T4) Higher settings of these values will lengthen the time over which the next volume level of the envelope is reached. (For example, T2 is the time over which the level changes from L1 to L2.) * Realtime modify knob [A] adjusts Time 1, knob [D] adjusts Time 3, and knob [R] adjusts Time 4.
A-Env Level1–3 # (Amp Envelope Level 1–3)	0–127	Amp envelope levels (L1–L3) Specifies the change in volume at each point, relative to the reference level. * Realtime modify knob [S] adjusts Level 3.

LFO1/LFO2

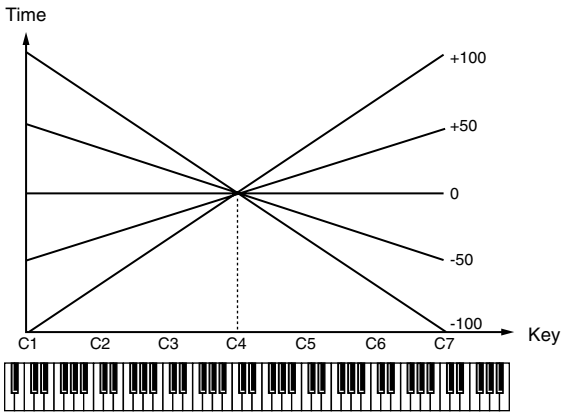
LFO (Low Frequency Oscillator) creates cyclic changes. Each tone has two LFOs, and these can be used to apply change to pitch, filter cutoff frequency, amp level, and pan.

Using the LFOs

An LFO applied to pitch creates vibrato, applied to filter cutoff frequency creates a wah effect, and applied to amp level creates tremolo. When LFO is applied to pan, a distinctive auto-pan effect is produced.

LFO settings can also be used to do things such as cyclically exchanging two tones. For example, to cyclically exchange tones 1 and 2, specify the same LFO effect for each, and set the LFO depth to opposite polarities (+/-) for the amp level.

* *The parameters of LFO 1 and 2 are the same.*

Parameter	Value	Description
LFO1(2) Waveform #	SIN, TRI, SAWU, SAWD, SQR, RND, BD-U, BD-D, TRP, S&H, CHS, XSIN, TWM,STRS, VSIN, M001–M113	LFO waveform **SIN:** sine wave **TRI:** triangle wave **SAWU:** sawtooth wave **SAW-D:** sawtooth wave (inverted) **SQR:** square wave **RND:** random wave **BD-U:** a waveform that lets the LFO output waveform rise to the reference level and holds it there **BD-D:** a waveform that lets the LFO output waveform fall to the reference level and holds it there **TRP:** trapezoidal wave **S&H:** sample and hold wave (LFO value will change once each period) **CHS:** chaos wave **XSIN:** sine wave that reverses between positive and negative at an extremely short interval **TWM:** modified triangle wave **STRS:** stair-step wave **VSIN:** modified sine wave suitable for vibrato **M001–M113:** the waveform will change continuously from a sine wave to sample & hold * If you select "BD-U" or "BD-D," set the Key Trigger (p. 64) parameter to "ON." There will be no effect if you set it to "OFF."
LFO1(2) Rate #	0–127, note	Speed of the LFO cycle * The chaos waveform has no cycle. If you select the chaos waveform, the rate setting will be ignored.
Offset (LFO Offset)	-100– +100	Offset level of the LFO waveform Adjusts the waveform upward or downward.
Rate Detune (LFO Rate Detune)	0–127	Amount by which the LFO rate will be changed
Delay Time (LFO Delay Time)	0–127	Time from when you press (or release) a pad until the LFO amplitude begins to change
Delay Time KF (LFO Delay Keyfollow)	-100– +100	Amount by which the Delay Time will be affected by the note you play Modifies the Delay Time parameter according to the note you play, relative to C4 (middle C). Specify a positive (+) value if you want the LFO effect to be applied more quickly as you play higher notes, or specify a negative (-) value if you want a greater delay to occur before the effect is applied. Higher settings will produce a correspondingly greater change. 
Fade Mode (LFO Fade Mode)	On<, On>, Off<, Off>	How the LFO effect is applied **On< (ON-IN):** The effect will be applied gradually after you press the pad. **On> (ON-OUT):** The effect will be applied when you press the pad, and will gradually disappear. **Off< (OFF-IN):** The effect will be applied gradually after you release the pad. **Off> (OFF-OUT):** The effect will be applied as long as you hold down the pad, and will gradually disappear when you release the pad.
Fade Time (LFO Fade Time)	0–127	Rise (or decay) time for the LFO effect
Key Trigger (LFO Key Trigger)	OFF, ON	Selection for whether the beginning of the LFO cycle will be aligned to the timing at which you press a pad (ON), or will not be aligned (OFF)
Pitch Depth # (LFO Pitch Depth)	-63– +63	Depth to which the LFO will affect the WG pitch

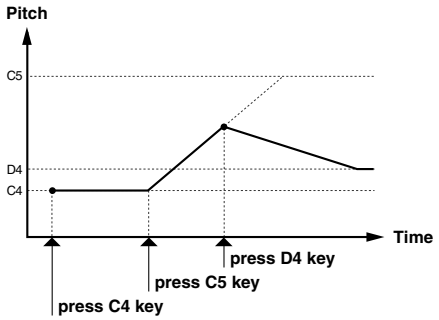
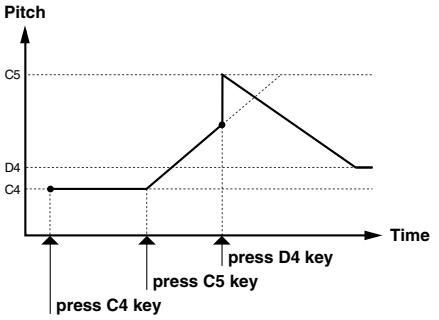
Parameter	Value	Description
Filter Depth # (LFO Filter Depth)	-63– +63	Depth to which the LFO will affect the filter cutoff frequency
Amp Depth # (LFO Amp Depth)	-63– +63	Depth to which the LFO will affect the amp level
Pan Depth # (LFO Pan Depth)	-63– +63	Depth to which the LFO will affect the amp pan * If the Waveform is "XSIN," it may be difficult to notice the effect.

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)

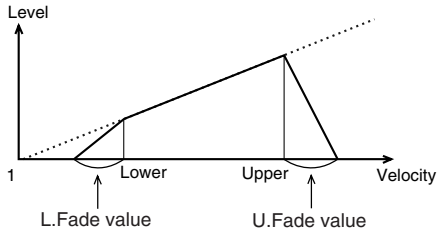
Solo/Porta (Portamento)

Parameter	Value	Description
Mono/Poly #	MONO, POLY	Specifies how notes will be produced **MONO:** Only one note at a time will sound. **POLY:** More than one note can be played simultaneously. It is effective to use the MONO setting when playing a patch of a single-note instrument such as sax or flute.
Legato Switch	OFF, ON	Specifies whether legato will be used (ON) or not (OFF) Legato is a function that is available when the Mono/Poly parameter is set to MONO. When Legato is turned ON, pressing another key while the previously played key is still held down will cause the pitch to change to the newly played key, while the note continues to sound. This can be used to simulate the hammering-on/pulling-off performance techniques used by a guitarist.
Legato Retrigger	OFF, ON	Selects whether the note will be retriggered when using Legato. Normally, you will leave this "ON." If this parameter is turned "OFF," pressing another key while the previously played key is still held down will cause only the pitch to change, which may cause an unnatural-sounding result for some waveforms. It is best to turn this "OFF" when playing wind or bowed-string instrument sounds, or when simulating a monophonic synthesizer. * This setting is ignored if the Legato Switch is "OFF."
PORTAMENTO Portamento is a function that causes the Patch's pitch to change smoothly from one note to the next note played. When the Key Mode Asign is MONO, this can be effective in simulating performance techniques such as a violinist's glissando.		
Portamento Switch #	OFF, ON	Portamento on/off
Porta Mode (Portamento Mode)	NORMAL, LEGATO	Method of play for which the portamento effect will be applied **NORMAL:** Portamento will always be applied. **LEGATO:** Portamento will be applied only when you play legato (i.e., press the next note before releasing the previous note).
Portamento Type	RATE, TIME	How the difference in pitch between the notes you play will affect the time over which the pitch change occurs **RATE:** The time over which the pitch changes will be proportionate to the difference in pitch between the two notes. **TIME:** The pitch change will occur over a fixed time, regardless of the difference in pitch between the two notes.

Parameter	Value	Description
Porta Start (Portamento Start)	PITCH, NOTE	Portamento begins anew if you press another key during a pitch movement. This setting specifies how the new portamento starts. **PITCH:** The pitch begins changing immediately to the new note's pitch when its key is pressed.  **NOTE:** The pitch begins changing to the new note's pitch only after it has first reached its original pitch destination. 
Portamento Time	0–127	Time over which the next pitch is reached
Unison Switch #	OFF, ON	Switches the detune effect on/off If this is "ON," the sound of the selected patch will be layered (three notes), producing a fatter sound. * If this is turned "ON," the Mono/Poly parameter will also be set to "MONO" ([SOLO] will light), and the selected patch automatically uses single notes.
Unison Fat Level #	0–127	Strength of the detune effect Increasing this value will cause the pitch of the layered notes to be raised and lowered farther away from each other (maximum one octave up and down).

TMT (Tone Mix Table)

These parameters specify how the tones will be combined, and how they will be played.

Parameter	Value	Description
Structure Type 1&2 (3&4)	1–10	How tones 1 and 2, or 3 and 4, will be combined If you press [F6 (Zoom Edit)] while this parameter is selected, the screen will show the way in which the tones are combined. (Press [EXIT] to return to the previous screen.) **B** indicates Booster, and **R** indicates Ring Modulator. * If you select Type 2–10 and turn off one of the tones, the other tone will use the conventional configuration of WG/TVF/TVA.
Booster 1&2 (3&4) (Booster Gain)	0, +6, +12, +18 dB	Depth of the booster effect when "Type" is set to 3 or 4
TMT (Tone Mix Table) On the MC-909, you can specify how each tone will sound in response to pad playing dynamics (velocity). These parameters are collectively referred to as the TMT (Tone Mix Table) settings. 		
Velocity Control (TMT Velocity Control)	OFF, ON, RANDOM	Specifies whether velocity data will be used (ON) or ignored (OFF) If you specify RANDOM, the tones will sound randomly, regardless of velocity data.

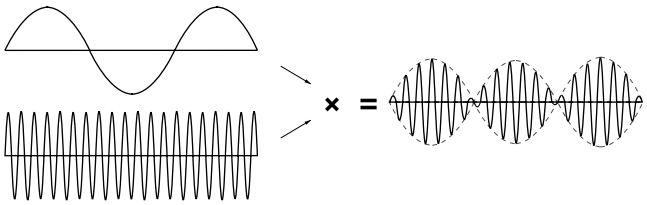
Parameter	Value	Description
Velo Fade Lower (TMT Velocity Fade Width Lower)	0–127	Rate of volume change when you play less strongly than the lower limit of the velocity range Greater settings for this value will cause the volume to decrease more gradually. Set this to 0 if you want notes outside the velocity range to not sound at all.
Velo Range Lower (TMT Velocity Range Lower)	1–Upper	Lower limit of velocities that will sound the tone Set this parameter if you want to use velocity to switch between tones.
Velo Range Upper (TMT Velocity Range Upper)	Lower–127	Upper limit of velocities that will sound the tone Set this parameter if you want to use velocity to switch between tones. * It is not possible to set Lower to a greater value than Upper, nor Upper to a lesser value than Lower.
Velo Fade Upper (TMT Velocity Fade Width Upper)	0–127	Rate of volume change when you play more strongly than the upper limit of the velocity range Greater settings for this value will cause the volume to decrease more gradually. Set this to 0 if you want notes outside the velocity range to not sound at all.
TMT Control Switch	OFF, ON	Specifies whether the controller of the matrix control will control TMT (ON) or not (OFF) By turning Velocity Control (TMT Velocity Control) OFF and turning this parameter on/off, you can easily switch between sounding all tones and using the matrix control. This is convenient when checking the sound.
Bend Range Down	-48–0	Specifies the pitch change that occurs when the Pitch Bend lever is moved fully to the left (or down on some MIDI controllers).
Bend Range Up	0–48	Specifies the pitch change that occurs when the Pitch Bend lever is moved fully to the right (or up on some MIDI controllers).

What is a Booster?

A Booster amplifies the incoming signal, causing it to distort. This creates an effect similar to the distortion often used on an electric guitar.

What is a Ring Modulator?

A Ring Modulator mathematically multiplies two Tones, creating a new sound that includes inharmonic overtones that were not present in either of the two original Tones. Since the difference in pitch between the two Tones changes the overtone structure, an un-pitched "metallic" sound often results. Ring modulation is therefore especially suitable for creating bells and other metallic sounds.



CTRL1

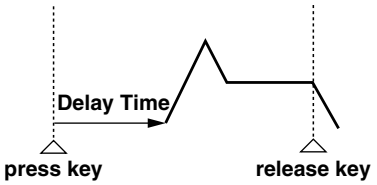
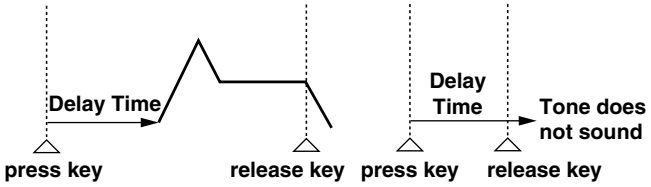
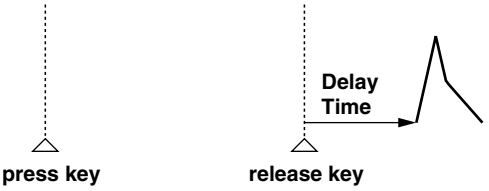
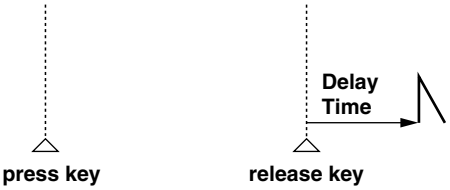
These parameters let you specify the operation and result of various controllers.

Parameter	Value	Description
MATRIX CTRL # This selects the parameters to be controlled by Matrix Control Source 1–4 and the Sens settings, as well as the specific Tones whose parameters you wish to control. Up to four destination parameters can be selected for each controller and controlled simultaneously.		
CTRL1 Destination 1–4 (Matrix Control 1 Destination 1–4)	OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LFO1(2), TVF-LFO1(2), TVA-LFO1(2), PAN-LFO1(2), LFO1(2)-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX-CTRL1–4	Parameter to be controlled
CTRL1 Sens 1–4 (Matrix Control 1 Sens 1–4)	-63– +63	Range of change obtained through operating the controller Negative (-) values will invert the change. If you set LFO depth to a negative value, the phase will be inverted. Setting LFO rate to a negative value will lengthen the cycle, and setting it to a positive value will shorten the cycle.
CTRL1 Switch 1–4 (Matrix Control 1 Tone Control Switch 1–4)	OFF, ON, REVS	Tones to which the preceding two parameter settings will apply The settings will apply to tones for which this is turned "ON." The effect will be inverted for tones that are set to "REVS."

General

Various other parameters are provided here.

Parameter	Value	Description
Patch Priority	LAST, LOUDEST	Specifies what will happen if the maximum polyphony (64 voices) is exceeded **LAST:** Voices played most recently will be given priority, while currently sounding voices will be successively turned off, beginning with the oldest one. **LOUDEST:** Voices of the loudest volume will be given priority, while currently sounding voices will be successively turned off, beginning with the one with the lowest volume.
Tone Env Mode (Tone Envelope Mode)	NSUS, SUST	Specifies how notes will continue to sound while you hold down the key **NSUS (NO-SUSTAIN):** The sound will decay naturally even if you continue to hold down the pad. **SUST (SUSTAIN):** The sound will be sustained as long as you hold down the pad. * If you have selected a one-shot waveform, the sound will not be sustained even if you select "SUST."

Parameter	Value	Description
Tone Delay This produces a time delay between the moment a key is pressed (or released) and the moment the Tone actually begins to sound. Since you can adjust the timing of each Tone in a Patch, you can create effects in which pressing a single key produces two or more sounds occurring at different times. If you don't wish to use Tone Delay, set Tone Dly to NORMAL and Tone Delay Time to 0.		
Tone Delay Mode	NORM, HOLD, OFFN, OFFD	Specifies how the tone will be sounded * If you have selected a decay-type waveform (in which the sound disappears naturally even if you do not release the key), the sound may not be heard if you set this parameter to OFFN or OFFD. **NORM (NORMAL):** The Tone sounds after the specified Delay Time.  **HOLD:** The Tone will only sound if the key is held for longer than the specified Delay Time. If the key is released before the Delay Time has elapsed, the Tone will not sound.  **OFFN (KEY-OFF-NORMAL):** The Tone doesn't sound while the key is being pressed, but sounds after the specified Delay Time when the key is released.  **OFFD (KEY-OFF-DECAY):** The Tone doesn't sound while the key is being pressed, but sounds after the specified Delay Time when the key is released. However, for this setting-unlike KEY-OFF-NOR- the TVA envelope of the Tone begins when the key is first pressed. As a result, in most cases, only the decay portion of the sound is heard. 
Tone Delay Time	0–127, note	Time by which each tone will be delayed when using tone delay If you've selected a Structure Type of 2–10, the output of tone 1 (3) and 2 (4) will be combined into tone 2 (4). Thus, the setting of tone 1 (3) will have no effect.

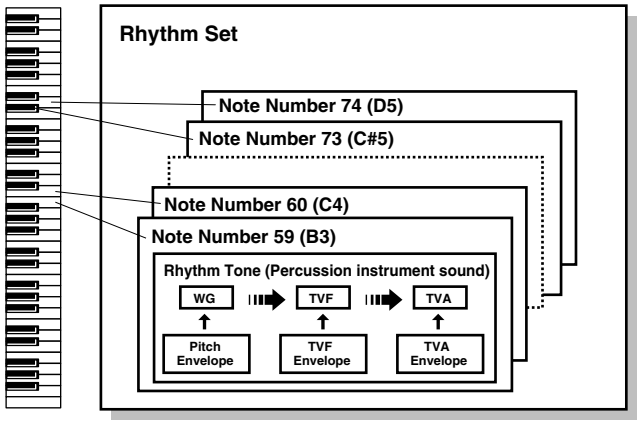
note:

(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)

Rhythm Edit

How Percussion Instruments Are Organized

A Rhythm Set is a collection of Rhythm Tones, each of which represents a percussion instrument played on a single key. An instrument consists of the following four elements.



WG (Wave Generator)

This specifies the PCM waveform (or "wave") that forms the basis of the Rhythm Tone - four waveforms can be assigned to each Rhythm Tone. You can also determine how the pitch of the Rhythm Tone will change.

The MC-909 has 693 different waveforms. (See Waveform List p. 150.)

All Rhythm Sets built into the MC-909 consist of Rhythm Tones based on these waveforms.

TVF (Time Variant Filter)

This sets how the frequency characteristics of the Rhythm Tone will change.

TVA (Time Variant Amplifier)

This sets how the Rhythm Tone's volume and stereo positioning will change.

Envelope

An envelope applies changes to the Rhythm Tone over time. There are separate envelopes for pitch, TVF (filter) and TVA (volume). For example, you would use the TVA Envelope to modify the way in which the Rhythm Tone attacks and decays.

Selecting the Wave(s) That Will Sound

Turn "on" the wave(s) that you want to sound. If you want to hear just a specific wave, turn the other waves "off."

Press **TONE SWITCH [1]–[4]** to switch a wave on (button's indicator lit) or off (indicator extinguished).

Rhythm editing procedure

1. **In the top screen of Patch/Sample mode, move the cursor to the rhythm set that you want to edit.**
2. **Press [F2 (Edit)] to access the edit screen.**
3. **Use [F1] [F2] or [CURSOR (left/right)] to select a parameter group.**
4. **Use [CURSOR (up/down)] to select a parameter.**
5. **Use [VALUE] or [INC/DEC] to edit the parameter.**

   * *You can also use the panel knobs and sliders to edit the sound (p. 52).*
6. **When you are finished editing, press [EXIT] to return to the top screen.**

Selecting the rhythm tone to edit

Press a velocity pad 1–16 to select the rhythm tone that you want to edit.

Selecting the wave that you want to edit

Press TONE SELECT [1]–[4] to illuminate the button for the wave that you want to edit.

* *By simultaneously pressing two or more [TONE SELECT] buttons, you can simultaneously select two or more waves.*

Wave

These parameters select the PCM waveform that is to form the basis of the rhythm tone, and apply effects to the waveform.

Parameter	Value	Description
Wave Group	INT, SRX, PRES, USER, CARD	Group of the waveform upon which the rhythm tone is to be based **INT:** Waveforms stored in internal memory **SRX:** Waveforms stored in a wave expansion board **PRES:** Preset sample waveforms **USER:** User sample waveforms **CARD:** Card sample waveforms * SRX can be selected only if a wave expansion board is installed.
Wave No. L/MONO Wave No. R	0 (OFF)–693	Waveform upon which the tone is to be based On the MC-909 you can specify a separate waveform for the L and R channels. * If you want to use the same waveform for the L and R channels, set the R channel to 0 (OFF).
Wave Gain	-6, 0, +6, +12 dB	Waveform gain (amplitude) The value will change in steps of 6 dB (decibels). An increase of 6 dB will double the gain. If you want to use the booster to distort the sound, it is effective to set this to the maximum.
FXM (Frequency Cross Modulation) FMX creates a complex overtone structure by using a specific waveform to frequency-modulate the selected waveform. This is suitable for creating extreme sounds or sound effects.		
Wave FXM SW (Wave FXM Switch)	OFF, ON	Selects whether FXM will be used (ON) or not (OFF)
Wave FXM Color (Wave FXM Color)	1–4	Selects how FXM will apply frequency modulation. Increasing this value will produce a rougher sound. Decreasing this value will produce a more metallic sound.
Wave FXM Depth (Wave FXM Depth)	0–16	Depth of frequency modulation applied by FXM

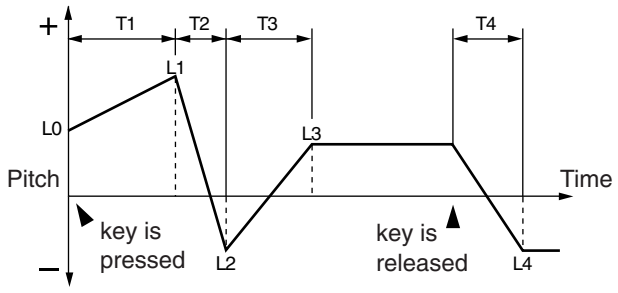
Pitch

These parameters specify the pitch of the waveform.

Parameter	Value	Description
Coarse Tune (Rhythm Tone Coarse Tune)	0 (C-1)–127 (G9)	Basic pitch at which the Rhythm tone will play
Fine Tune (Rhythm Tone Fine Tune)	-50– +50	Pitch of the Rhythm tone Adjusts the pitch in one-cent steps (1/100th of a semitone) over a range of 1/2 semitone upward or downward.
Random Pitch (Random pitch depth)	0–1200	This specifies the width of random pitch deviation that will occur each time a key is pressed. If you don't want random pitch changes, set it to 0. The parameter can be adjusted in units of 1 cent (1/100th of a semitone).
Wave Coarse Tune	-48– +48	Pitch of the Wave Adjusts the pitch in semitone steps over a range of +/-4 octaves.
Wave Fine Tune	-50– +50	Pitch of the Wave Adjusts the pitch in one-cent steps (1/100th of a semitone) over a range of 1/2 semitone upward or downward.

Pitch Env (Pitch Envelope)

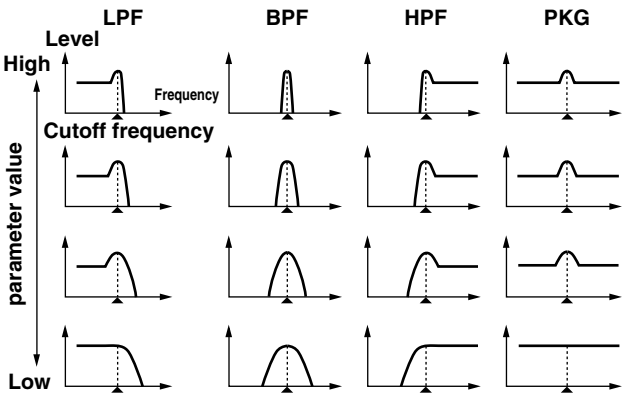
These parameters specify the depth of the pitch envelope (the way in which pitch will change over time), and the shape of the envelope itself.



Parameter	Value	Description
P-Env Depth	-12– +12	Pitch envelope depth Increasing this value will produce greater change. Negative (-) values will invert the change produced by the envelope.
P-Env V-Sens (Pitch Envelope Velocity Sensitivity)	-63– +63	Amount of pitch change that will occur in response to your pad playing dynamics. Increasing this value will produce a greater difference in pitch between softly and strongly played notes. Negative (-) values will produce the opposite result.
P-Env T1 V-Sens (Pitch Envelope Time 1 Velocity Sensitivity)	-63– +63	Amount by which T1 (time) of the pitch envelope will change in response to the speed (velocity) at which you press a pad. Increasing this value will produce a greater difference between softly and strongly played notes. Set this to a positive (+) value if you want to speed up the T1 time, or to a negative (-) value to slow it down.
P-Env T4 V-Sens (Pitch Envelope Time 4 Velocity Sensitivity)	-63– +63	Amount by which T4 (time) of the pitch envelope will change in response to the speed at which you release a pad (key-off velocity) Increasing this value will produce a greater difference between quickly released and slowly released notes. Set this to a positive (+) value if you want to speed up the T4 time, or to a negative (-) value to slow it down.
P-Env Time1–4	0–127	Pitch envelope times (T1–T4) Increasing this value will lengthen the time until the next pitch level is reached (for example, T2 is the time over which the pitch will change from L1 to L2). * Realtime modify knob [A] adjusts Time 1, and knob [D] adjusts Time 3.
P-Env Level0–4	-63– +63	Pitch envelope levels (L0–L4) These parameters specify the amount by which the pitch will change from the basic pitch (specified by Coarse Tune and Fine Tune) at each point of the envelope. Positive (+) values will raise the pitch above the basic pitch, and negative (-) values will lower it.

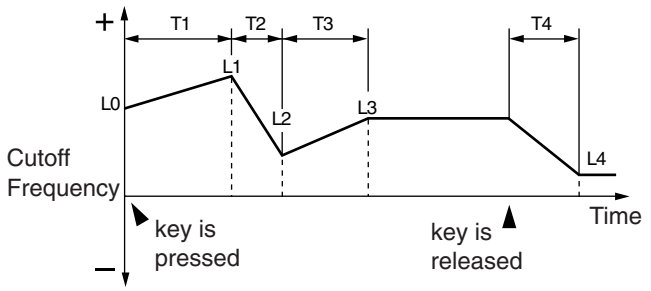
Filter

These parameters are settings for the TVF (Time Variant Filter). They modify the timbral character of the tone by adjusting the brightness and fatness of the sound.

Parameter	Value	Description
Filter Type	OFF, LPF, BPF, HPF, PKG, LPF2, LPF3	Type of filter A filter cuts a specific frequency region of the sound to modify the brightness or thickness of the sound. **OFF:** A filter will not be used. **LPF:** Low Pass Filter. Cuts the region that lies above the cutoff frequency. The sound will become more mellow as the high frequency region is cut. This is the most commonly used type of filter. **BPF:** Band Pass Filter. Leaves only the region in the vicinity of the cutoff frequency, and cuts the rest. Suitable for creating sounds with a distinctive character. **HPF:** High Pass Filter. Cuts the region that lies below the cutoff frequency. Suitable for creating percussion instrument sounds that have a distinctive high range. **PKG:** Peaking filter. Emphasizes the region in the vicinity of the cutoff frequency. You can create a wah effect by using an LFO to cyclically modulate the cutoff frequency. **LPF2:** Low Pass Filter 2. Cuts the region that lies above the cutoff frequency. This lets you leave the cutoff frequency fixed, and use the TVF envelope settings to vary the depth of the cutoff. Since this does not impair the feeling of energy of the sound, it is effective for acoustic-type sounds. * The resonance setting is ignored. **LPF3:** Low Pass Filter 3. Cuts the region that lies above the cutoff frequency. This filter cuts the high frequency region more gently than LPF2. Since this does not impair the feeling of energy of the sound, it is effective for acoustic-type sounds. * The resonance setting is ignored.
Cutoff Frequency	0–127	Frequency (cutoff frequency) at which the filter will begin affecting the frequency content of the waveform **If the Filter Type is LPF/LPF2/LPF3**, reducing the cutoff frequency will diminish the higher overtones, producing a more mellow sound. Raising the cutoff frequency will brighten the sound. **If the Filter Type is BPF**, the cutoff frequency value will change the harmonic content that will be sounded. This is suitable for creating sounds with a distinctive character. **If the Filter Type is HPF**, raising the cutoff frequency will diminish the lower overtones, emphasizing only the bright portion of the sound. **If the Filter Type is PKG**, the cutoff frequency value will change the harmonic content that will be boosted.
Cutoff Velo Curve (Cutoff Frequency Velocity Curve)	FIX, 1–7	Curve by which pad playing dynamics will affect the cutoff frequency If you select "FIX," the cutoff frequency will remain fixed regardless of your playing dynamics. 
Cutoff Velo Sens (Cutoff Frequency Velocity Sensitivity)	-63– +63	Amount by which your pad playing dynamics will affect the cutoff frequency Increasing this value will cause a correspondingly greater difference between softly played and strongly played notes. Negative (-) values will invert the change.
Resonance	0–127	Amount by which the sound in the region of the cutoff frequency will be emphasized Increasing this value will produce a more strongly distinctive character. Raising this excessively will cause oscillation and distortion. 
Reso Velo Sens (Resonance Velocity Sensitivity)	-63– +63	Amount by which your pad playing dynamics will affect the resonance Increasing this value will cause a correspondingly greater difference between softly played and strongly played notes. Negative (-) values will invert the change.

Filter Env (Filter Envelope)

These parameters specify the depth of the filter envelope (time-variant change in cutoff frequency), and specify the shape of the envelope itself.



Parameter	Value	Description
F-Env Depth (Filter envelope depth)	-63– +63	Depth of the filter envelope Increasing this value will produce a greater effect. Negative (-) values will invert the envelope.
F-Env V-Curve (Filter envelope velocity curve)	FIX, 1–7	Curve by which keyboard playing dynamics will affect the filter envelope If you select "FIX," the filter envelope will remain constant regardless of your playing dynamics.  1 2 3 4 5 6 7
F-Env V-Sens (Filter envelope velocity sensitivity)	-63– +63	Amount by which your pad playing dynamics will affect the filter envelope depth Increasing this value will cause a correspondingly greater difference between softly played and strongly played notes. Negative (-) values will invert the change.
F-Env T1 V-Sens (Filter Envelope Time 1 Velocity Sensitivity)	-63– +63	Amount by which your pad playing dynamics (velocity) will affect T1 (time) of the filter envelope Increasing this value will cause a correspondingly greater difference between softly played and strongly played notes. Negative (-) values will invert the change. Specify a positive (+) value if you want to speed up the T1 time, or a negative (-) value to slow it down.
F-Env T4 V-Sens (Filter Envelope Time 4 Velocity Sensitivity)	-63– +63	Amount by which the speed at which you release the pad (key-off velocity) will affect T4 (time) of the filter envelope Increasing this value will cause a correspondingly greater difference between slowly released and quickly released notes. Specify a positive (+) value if you want to speed up the T4 time, or a negative (-) value to slow it down.
F-Env Time1–4 (Filter Envelope Time 1–4)	0–127	Filter envelope times (T1–T4) Higher settings of these values will lengthen the time over which the next cutoff frequency level of the envelope is reached. (For example, T2 is the time over which the level changes from L1 to L2.) * Realtime modify knob [A] adjusts Time 1, knob [D] adjusts Time 3, and knob [R] adjusts Time 4.
F-Env Level0–4 (Filter Envelope Level 0–4)	0–127	Filter envelope levels (L1–L3) Specifies the change in cutoff frequency at each point, relative to the reference level. * Realtime modify knob [S] adjusts Level 3.

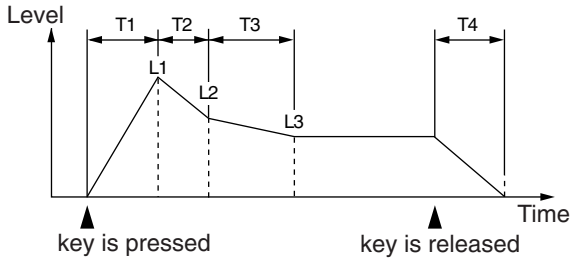
Amp

These TVA (Time Variant Amplifier) parameters specify how the volume and pan of the sound will change.

Parameter	Value	Description
Tone Level (Rhythm Tone Level)	0–127	Volume of each Rhythm Tone This parameter is used mainly to adjust the volume balance between Rhythm Tones.
Wave Level	0–127	Volume of each wave This parameter is used mainly to adjust the volume balance between waves.
Tone Pan (Rhythm Tone Pan)	L64–63R	Pan of each Rhythm Tone L64 is far left, 0 is center, and 63R is far right.
Random Pan Depth	0–63	Amount by which the pan will be varied randomly each time you play a note Increasing this value will produce a greater amount of random change.
Alternate Pan Depth	L63–63R	Amount by which the pan will be moved alternately between left and right each time you play a note Increasing this value will produce a greater amount of change. This value can be adjusted in the L or R direction, and these will invert the order in which the tone is panned to left and right. If you want two tones to alternate between left and right, set each tone to opposite L and R values.
Wave Pan	L64–63R	Pan of each wave L64 is far left, 0 is center, and 63R is far right.
Wave Rnd Pan Sw (Wave Random Pan Switch)	OFF, ON	Use this setting to cause the waveform's panning to change randomly each time a key is pressed (ON) or not (OFF). The range of the panning change is set by the Random Pan Depth setting.
Wave Alt Pan Sw (Wave Alternate Pan Switch)	OFF, ON, REVS	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.

Amp Env (Amp Envelope)

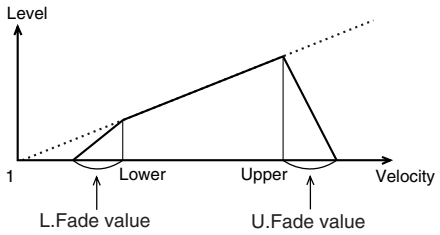
These parameters specify the depth of the amp envelope (change in volume over time) and the shape of the envelope itself.



Parameter	Value	Description
A-Env V-Curve (Amp Envelope Velocity Curve)	FIX, 1–7	Curve by which pad playing dynamics will affect the volume of the tone If you specify "FIX," the volume of the tone will remain the same regardless of your playing dynamics. 
A-Env V-Sens (Amp Envelope Velocity Sensitivity)	-63– +63	Amount by which pad playing dynamics will affect the volume of the tone Specify a positive (+) value if you want the volume of the tone to increase as you play more strongly. Specify a negative (-) value if you want the volume to decrease.
A-Env T1 V-Sens (Amp Envelope Time 1 Velocity Sensitivity)	-63– +63	Amount by which T1 (time) of the Amp envelope will change in response to your playing dynamics Increasing this value will produce a greater change between softly played and strongly played notes. Specify a positive (+) value if you want the T1 time to speed up, or a negative (-) value if you want it to slow down.
A-Env T4 V-Sens (Amp Envelope Time 4 Velocity Sensitivity)	-63– +63	Amount by which T4 (time) of the Amp envelope will change in response to the speed at which you release the pad (key-off velocity) Increasing this value will produce a greater change between slowly released and quickly released notes. Specify a positive (+) value if you want the T4 time to speed up, or a negative (-) value if you want it to slow down.
A-Env Time1–4 (Amp Envelope Time 1–4)	0–127	Amp envelope times (T1–T4) Higher settings of these values will lengthen the time over which the next volume level of the envelope is reached. (For example, T2 is the time over which the level changes from L1 to L2.) * Realtime modify knob [A] adjusts Time 1, knob [D] adjusts Time 3, and knob [R] adjusts Time 4.
A-Env Level1–3 (Amp Envelope Level 1–3)	0–127	Amp envelope levels (L1–L3) Specifies the change in volume at each point, relative to the reference level. * Realtime modify knob [S] adjusts Level 3.

WMT (Wave Mix Table)

With the MC-909, up to four stereo Waves can be assigned to a single Rhythm Tone. You can select the way tones sound according to the force with which the keys are played, thus allowing you to create Rhythm Tones featuring great expressive power. This function is called **WMT (Wave Mix Table)**.



Parameter	Value	Description
Velocity Control (WMT Velocity Control)	OFF, ON, RANDOM	Specifies whether velocity data will be used (ON) or ignored (OFF) If you specify RANDOM, the waves will sound randomly, regardless of velocity data.
Velo Fade Lower (WMT Velocity Fade Width Lower)	0–127	Rate of volume change when you play less strongly than the lower limit of the velocity range Greater settings for this value will cause the volume to decrease more gradually. Set this to 0 if you want notes outside the velocity range to not sound at all.
Velo Range Lower (WMT Velocity Range Lower)	1–Upper	Lower limit of velocities that will sound the tone Set this parameter if you want to use velocity to switch between waves.
Velo Range Upper (WMT Velocity Range Upper)	Lower–127	Upper limit of velocities that will sound the tone Set this parameter if you want to use velocity to switch between waves. * It is not possible to set Lower to a greater value than Upper, nor Upper to a lesser value than Lower.
Velo Fade Upper (WMT Velocity Fade Width Upper)	0–127	Rate of volume change when you play more strongly than the upper limit of the velocity range Greater settings for this value will cause the volume to decrease more gradually. Set this to 0 if you want notes outside the velocity range to not sound at all.

Genaral

Various other parameters are provided here.

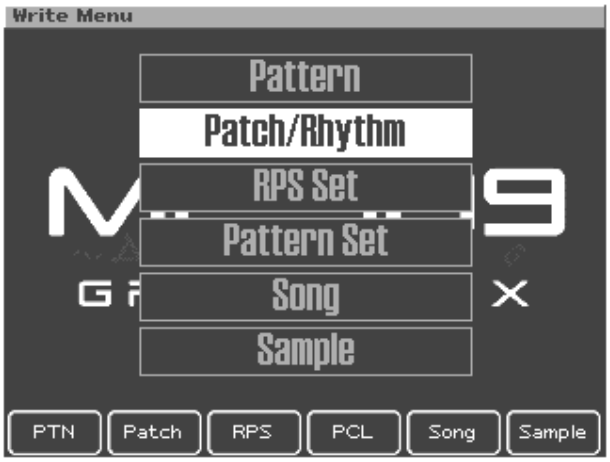
Parameter	Value	Description
Rhythm Level (Rhythm Set Level)	0–127	Overall volume of the Rhythm Set
Assign Type	MULTI, SINGLE	This setting determines whether a Rhythm Tone note that is playing is stopped when the same note is played again (SINGLE), or whether it will continue to play, layered with the new note.
Mute Group	OFF, 1–31	The Mute Group function allows you to designate two or more Rhythm Tones that are not allowed to sound simultaneously. For example, in a real-world acoustic drum set, an open hi-hat and a closed hi-hat sound will never occur simultaneously, since they're produced by the same instrument. To simulate this behavior on the MC-909, you can set the open and closed hi-hat Rhythm Tones to the same Mute Group. You can have up to 31 Mute Groups per Rhythm Set. If you do not want a Rhythm Tone to use a Mute Group, turn the feature off.
Tone Env Mode (Rhythm Tone Envelope Mode)	NSUS, SUST	When a loop-type waveform is selected, it will normally continue to sound as long as a key is pressed. If you want a note to decay naturally even when the key remains pressed, set this to "NSUS." * If a one-shot type Wave is selected, it will not sustain even if this parameter is set to "SUST."
Tone Pitch Bend Range (Rhythm Tone Pitch Bend Range)	0–48	Specifies the amount of pitch change that will occur when you move the Pitch Bend Lever.
Tone Reverb Send Level (Rhythm Tone Reverb Send Level)	0–127	Specifies the depth of reverb applied to each Rhythm Tone Set this to 0 if you don't want to apply reverb.
Tone Output Asgn (Rhythm Tone Output Assign)	DRY, MFX1, MFX2, COMP, DIR1, DIR2	Specifiests the original sound of each Rhythm Tone will be output **DRY:** Output to MIX OUTPUT jacks without passing through effects **MFX1 (2):** Output through multi-effects 1 (or 2) **COMP:** Output through the compressor **DIR1 (2):** Output to the DIRECT 1 (or DIRECT 2) jacks without passing through effects

Saving a Patch/Rhythm Set

Patch/rhythm set settings that you edit will be lost if you re-select the patch/rhythm set or turn off the power. If you want to keep your edits, you must use the following procedure to save the data.

1. Press [WRITE].

The Write menu screen will appear.
Make sure that "Patch/Rhythm" is highlighted.



2. Press [ENTER] or [F2 (Patch)].

The patch name/rhythm set name entry screen will appear.



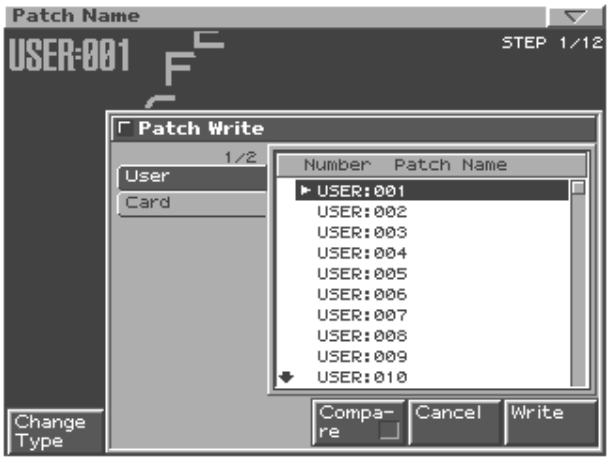
3. Assign a name to the patch/rhythm set.

[CURSOR (left/right)]	Moves the cursor (the location at which to enter/edit a character).
[CURSOR (up/down)]	Switches letters between uppercase and lowercase.
[VALUE] [INC/DEC]	Selects characters.
[F1 (Change Type)]	Selects the type of character. Each time you press this, you will alternately select the first character of the uppercase alphabet (A), lowercase alphabet (a), or numerals and symbols (0).
[F2 (Delete)]	Deletes the character at the cursor location, while shifting the following characters to the left, closing the gap.
[F3 (Insert)]	Inserts a space at the cursor location.

* *If you decide not to enter the name, press [F5 (Cancel)].*

4. When you have finished entering the name, press [F6 (Write)].

A screen in which you can select the write-destination patch/rhythm set will appear.



5. Use [VALUE] or [INC/DEC] to select the write-destination patch/rhythm set.

Use [CURSOR (left/right)] to select the bank (user, card).

6. Press [F6 (Write)].

A message will ask you to confirm that you want to write the data.

7. To write the data, press [F6 (Execute)].

* *If you decide to cancel, press [F5 (Cancel)].*

Copying and Initializing a Patch/Rhythm Set

Copying a Patch Tone

Here's how the tone settings of a patch can be copied to the specified tone of the currently selected patch.

1. **In the top screen of patch / sample mode, move the cursor to the copy-destination patch.**
2. **Press [F2 (Edit)] to access the edit screen.**
3. **Press [F5 (Tone Copy)].**
   The Patch Tone Copy window will appear.
4. **Use [CURSOR] and [VALUE] to select the copy-source patch and tone, and the copy-destination tone.**

Parameter	Value	Description
Source		
Patch Bank	Current, Preset A–G, User, Card	Bank of the copy-source patch To specify the currently selected patch as the copy-source, set this to "Current."
No.	1–128	Patch number of the copy-source If Patch Bank is set to "Current," this cannot be selected.
Source Patch Tone	1–4	Copy-source tone at the copy-source patch
Destination		
Temporary Patch Tone	1–4	Copy-destination tone at the currently selected patch

5. **Press [F6 (Execute)].**
   A message will ask you for confirmation.
6. **Press [F6 (Execute)] to execute.**

* *To cancel, press [F5 (Cancel)].*

HINT

If you press [F4 (Compare)] in step 4 so a "✔" appears in the check box, you can use the velocity pads to play the copy source patch.

Initializing a Patch

Here's how the settings of the currently selected patch can be returned to their default values.

1. **In the top screen of patch / sample mode, select a part assigned a patch.**
2. **Turn [VALUE] to select the patch that you want to initialize.**
3. **Press [F2 (Edit)] to access the edit screen.**
4. **Press [F4 (Patch Init)].**
   A message will ask you for confirmation.
5. **Press [F6 (Execute)] to execute.**

* *To cancel, press [F5 (Cancel)].*

Copying a Rhythm Tone (Key)

Here's how the rhythm tone (percussion sound) settings of a rhythm set can be copied to the specified rhythm tone of the currently selected rhythm set.

1. **In the top screen of patch / sample mode, move the cursor to the copy-destination rhythm set.**
2. **Press [F2 (Edit)] to access the edit screen.**
3. **Press [F5 (R.Tone Copy)].**
   The Rhythm Tone Copy window will appear.
4. **Use [CURSOR] and [VALUE] to select the copy-source rhythm set and rhythm tone, and the copy-destination rhythm tone.**

Parameter	Value	Description
Source		
Rhythm Bank	Current, Preset A, User, Card	Bank of the copy-source rhythm set To specify the currently selected rhythm set as the copy-source, set this to "Current."
No.	1–128	Rhythm set number of the copy-source If Rhythm Bank is set to "Current," this cannot be selected.
Source Rhythm Key	B3–D5	Copy-source rhythm tone (key) at the copy-source rhythm set
Destination		
Temporary Rhythm Key	B3–D5	Copy-destination rhythm tone (key) at the currently selected rhythm set

5. **Press [F6 (Execute)].**
   A message will ask you for confirmation.
6. **Press [F6 (Execute)] to execute.**

* *To cancel, press [F5 (Cancel)].*

HINT

If you press [F4 (Compare)] in step 4 so a "✔" appears in the check box, you can use the velocity pads to play the copy source rhythm set.

Initializing a Rhythm Set

Here's how the settings of the currently selected rhythm set can be returned to their default values.

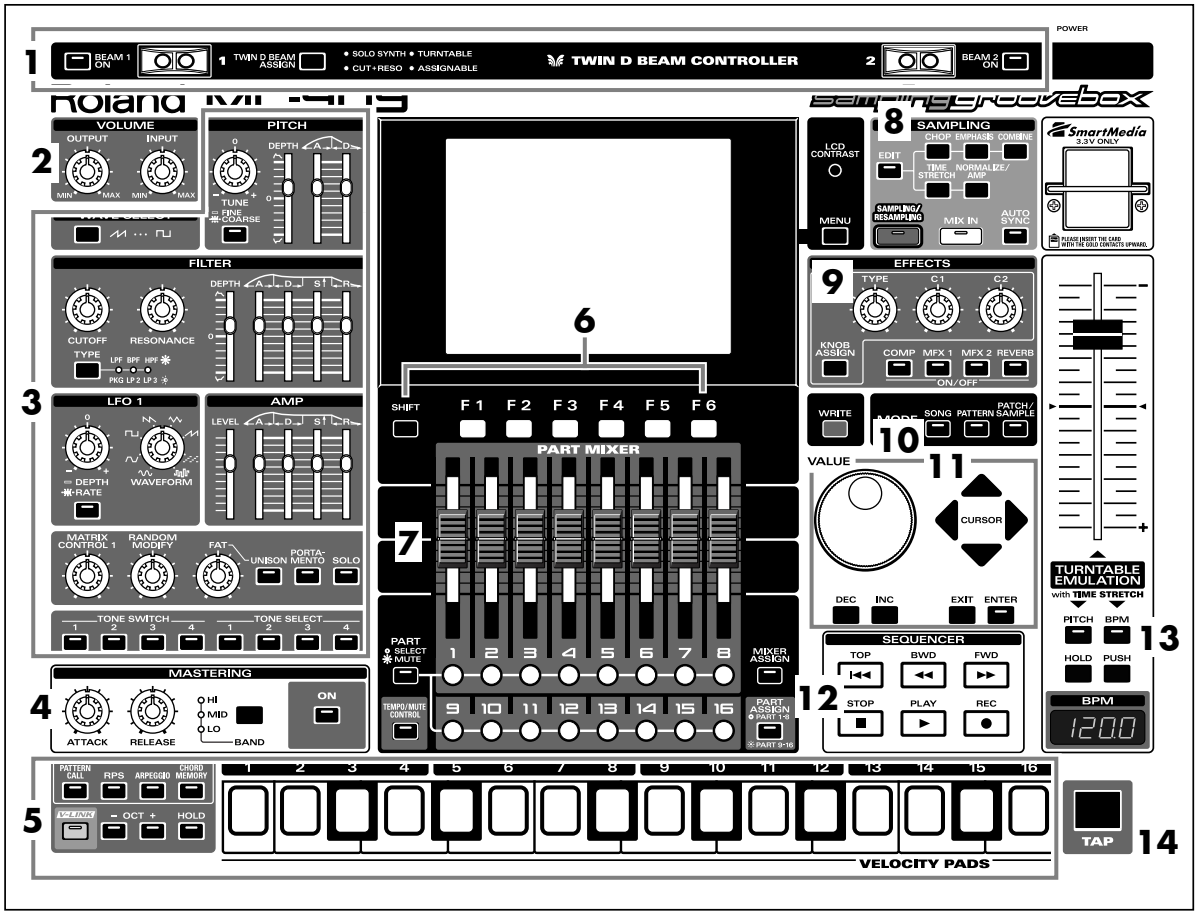
1. **In the top screen of patch / sample mode, select a part assigned a rhythm set.**
2. **Turn [VALUE] to select the rhythm set that you want to initialize.**
3. **Press [F2 (Edit)] to access the edit screen.**
4. **Press [F4 (Rhythm Init)].**
   A message will ask you for confirmation.
5. **Press [F6 (Execute)] to execute.**

* *To cancel, press [F5 (Cancel)].*

Song Mode

In this mode you can play, record, and edit songs.

How Things Work (in Song mode)



When you press the Mode section **[SONG] button**, the button's indicator will light and the MC-909 will be in Song mode.
In Song mode, the various parts of the panel will perform the following functions.

1. D Beam controllers

Pass your hand over these to modify the pattern (p. 35).

[BEAM 1 ON]	Turns the left D Beam controller (BEAM 1) on/off.
[BEAM 2 ON]	Turns the right D Beam controller (BEAM 2) on/off.
[TWIN D BEAM ASSIGN]	Selects the function of the D Beam controller.

2. Volume section

[OUTPUT]	Adjusts the output volume of the MIX OUT jacks and the headphone.
[INPUT]	Adjusts the input volume from the INPUT jacks.

3. Realtime Modify section

These controls modify the sound (p. 33).

4. Mastering section

[ON]	Switches the mastering effect (compressor) on/off.
[BAND]	Selects the frequency band to adjust.
[ATTACK]	Specify the time from when the volume goes up the threshold level until the compressor effect applies.
[RELEASE]	Specify the time from when the volume falls below the threshold level until the compressor effect no longer applies.

5. Velocity pads

Use these pads as a keyboard to play sounds or trigger phrases (p. 27).

6. Function buttons

These buttons access the function screens indicated in the bottom line of the display.

7. Part Mixer section

Here you can adjust the volume, pan, etc., of each part (p. 33).

[PART] (SELECT/MUTE)	Selects the function of the Part buttons [1]–[16]. The buttons work as Part Select buttons when the indicator is not lighted, and as Mute buttons when the indicator is lit.
[TEMPO/MUTE CONTROL]	Switches on/off the Tempo/Mute part (a part that records tempo changes and mute operations, p. 42).
[MIXER ASSIGN]	When you press this button so its indicator lights, the Mixer screen will appear.
[PART ASSIGN]	Selects the parts that are controlled by the sliders. The sliders will control parts 1–8 if this indicator is not lighted, or parts 9–16 if the indicator is lit.

8. Sampling section

[EDIT]	When you press this button, the Sample edit screen will appear (p. 114).
[SAMPLING/RESAMPLING]	When you press this button, the Sampling menu screen will appear (p. 112).
[MIX IN]	Mix the sound from the INPUT jacks into the output (p. 34).
[AUTO SYNC]	Synchronize a sample with the pattern (p. 36).

9. Effect section

Applies special effects to the sound (p. 88).

[COMP]–[REVERB]	Switch each effect on/off (p. 88).
[KNOB ASSIGN]	Selects the effect to be controlled in real time (p. 91).
[TYPE]	Selects the type of effect.
[C1], [C2]	Modifies the assigned function in real time.

10. Mode section

Press the [SONG] button to enter Song mode.

Pressing one of the other two buttons will switch you to the corresponding mode.

11. Cursor/Value section

Use these buttons and dial to select songs or input values (p. 18).

12. Sequencer section

[PLAY]	Plays a song (p. 82).
[STOP]	Stops playback/recording.
[FWD]	Advances to the next step.
[BWD]	Returns to the previous step.
[TOP]	Moves to the beginning of the song.
[REC]	Used when recording (p. 83).

13. Turntable emulation

Applies an effect that simulates increasing/decreasing the rotational speed of a turntable (p. 36).

14. TAP button

Lets you set the BPM (tempo) by pressing the button at the desired timing (p. 25).

Playing songs

Two or more patterns connected in the order of playback are called a "song."

When you play back a song, the patterns will switch automatically—you don't need to select each pattern yourself. In one song, you can register up to 50 patterns in the desired order of playback.

The number describing the order in which the patterns are arranged is called the "step."

Top screen of Song mode

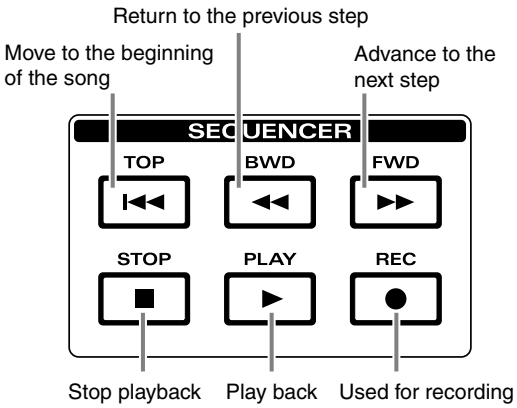


Function buttons

[F1 (Next Step)]	When Song Step Sw (p. 128) is set to "MANUAL," playback will automatically advance to the next step if you press this button to display the "✔" mark.
[F2 (Song Edit)]	Edit the settings of the song (p. 84).
[F3 (Mixer)]	Specify the volume, pan, etc., of each part (p. 33).
[F4 (Effects)]	Apply special effects to the sound (p. 88).
[F5 (Mastering)]	Make settings for the mastering effect (p. 108).
[F6 (BPM Click)]	Set the tempo, and turn the metronome on/off (p. 25).

Basic playback operation

Use the following buttons to control the playback.



* *The [FWD], [BWD], and [TOP] buttons can also be used during playback.*

Song Reset

You can have playback resume from step 1 when the currently playing pattern finishes playing.

This is convenient when you want to play back a few measures while you adjust the BPM to match a turntable, and then when the BPM is correct, play back from step 1.

1. **While the song is playing, press [PLAY].**

   The screen will indicate "SONG RESET."

   When the currently playing pattern finishes, the playback will return to the beginning of the song.

Selecting a song to play

There are two ways to select a song: directly, or from a list.

Selecting a song directly

While the song is stopped, use [VALUE] or [INC/DEC] to select another song.

Selecting a song from a list

1. **Press [ENTER].**

   The song list will appear.

2. **Use [VALUE], [INC/DEC], or [CURSOR (up/down)] to select a song.**

   If you hold down [SHIFT] while using these controls, the song number will change in steps of ten.

3. **Press [F6 (Select)] or [ENTER] to confirm your selection.**

* *If you decide not to execute, press [F5 (Cancel)].*

Changing the BPM or mute status

In Song mode as well, you can change the BPM or part muting status in the same way as in Pattern mode. For details on how to change these, refer to the section "Playing a pattern" (p. 24).

Recording a song

You can input patterns one by one to specify the order in which the patterns will be played back.

Recording procedure

1. **Use [VALUE] or [INC/DEC] to select the song number that you want to record.**
2. **Press [REC].**



3. **Select the pattern to be played at this step.**
   Refer to **Selecting a pattern to play back** (p. 24)
4. **Press [ENTER].**
   You will proceed to the next step.
5. **Repeat the above steps 3 and 4 to input the patterns to be played for the subsequent steps.**
6. **After you have finished inputting the last step, press [STOP] to end the recording process.**

Auditioning a pattern

While you are recording, you can press [PLAY] to audition the selected pattern. You can select different patterns while you audition them. To stop the auditioning, press [STOP].

Moving between steps

After recording several steps, you can press [BWD] [FWD] to move between steps.

Editing the setup parameters

During song recording, you can edit setup parameters (p. 26) such as part mute and effect settings and then press [ENTER] to register the state of those parameters. This will simply store the setup parameters of each pattern as song data, and does not affect the original pattern in any way.
By using this to change the mute status of a pattern or to change the MFX type, you can have a single pattern play in a variety of ways as the song progresses.

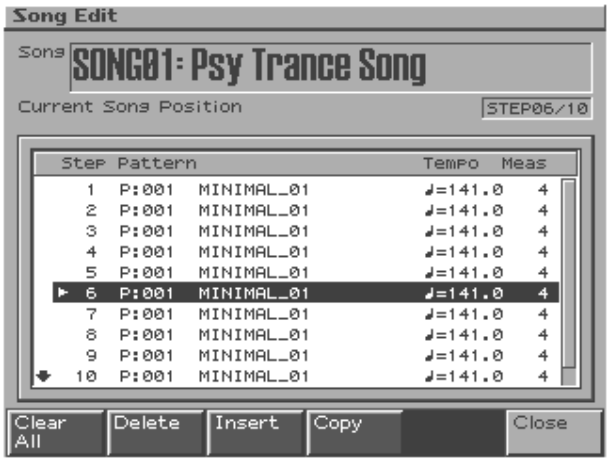
- Tempo (BPM) can be input/edited only at the first step.
- It is not possible to change the tempo during the song.

Song editing

"Song editing" is the process of editing individual steps of performance data for a song.

* *You must stop the song playback before you can edit the song.*

1. **Select the song that you want to edit.**
2. **In Song mode, press [F2 (Song Edit)] to access the Song Edit screen.**



Type of song editing

[F1 (Clear All)] (Clear All Steps)	Erase all steps.
[F2 (Delete Step)]	Delete an unwanted step.
[F3 (Insert Step)]	Insert a step.
[F4 (Copy)] (Song Copy)	Copies a song to a different song.
[F6 (Close)]	Returns to the previous screen.

Clear All Steps

This operation clears all of the steps that you input, returning them to the blank condition. Use this when you want to create a song from scratch.

1. **Press [F1 (Clear All)].**

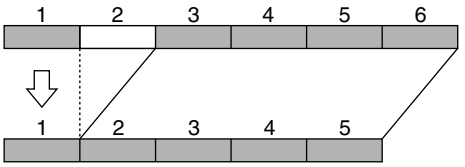
   A message will ask you for confirmation.

2. **If you are sure that you want to clear all steps, press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

Delete Step

This operation deletes an unwanted step from the song, and joins the two sections.

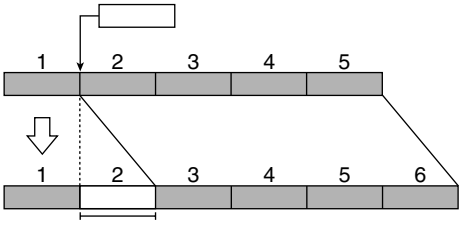


1. **Use [VALUE] or [INC/DEC] to select the step that you want to delete.**
2. **Press [F2 (Delete)].**

   The selected step will be deleted.

Insert Step

This operation inserts a step into the song, and moves subsequent steps backward by one.



1. **Use [VALUE] or [INC/DEC] to select the step at which you want to insert a pattern.**

   In the example shown above, select step 2.

2. **Press [F3 (Insert)].**

   A step containing the same pattern as the step you selected in step 1 will be inserted, and the subsequent steps will be moved backward by one.

Song Copy

This operation copies song data to a different song.

1. **Press [F4 (Copy)].**
2. **Select the copy-destination song.**
3. **Press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

NOTE

If the copy destination contains data, that data will be erased when you execute this copy operation.

Saving a song

Songs that you record will be lost if you turn off the power. If you want to keep the song data, you must save it as follows.

1. Select the song that you want to save.

2. Press [WRITE].

The write menu screen will appear.

Make sure that "Song" is highlighted.



3. Press [ENTER] or [F5 (Song)].

The song name input screen will appear.



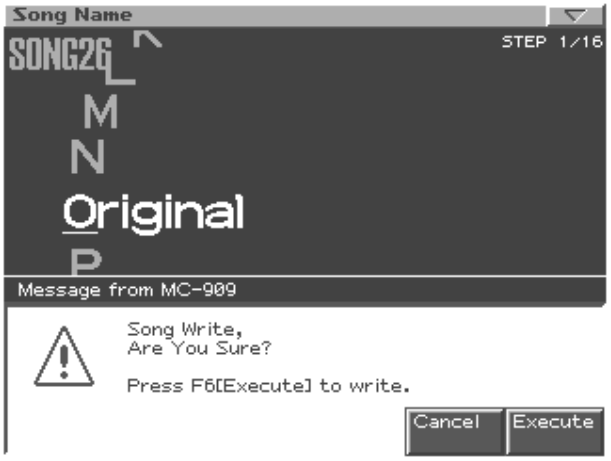
4. Assign a name to the song you created.

[CURSOR (left/right)]	Moves the cursor (the location at which to enter/edit a character).
[CURSOR (up/down)]	Switches letters between uppercase and lowercase.
[VALUE] [INC/DEC]	Selects characters.
[F1 (Change Type)]	Selects the type of character. Each time you press this, you will alternately select the first character of the uppercase alphabet (A), lowercase alphabet (a), or numerals and symbols (0).
[F2 (Delete)]	Deletes the character at the cursor location, while shifting the following characters to the left, closing the gap.
[F3 (Insert)]	Inserts a space at the cursor location.

* *If you decide not to enter the name, press [F5 (Cancel)].*

5. When you finish inputting the name, press [F6 (Write)].

A message will ask you to confirm that you want to write the data.



6. To write the data, press [F6 (Execute)].

* *To cancel, press [F5 (Cancel)].*

MEMO

Effects

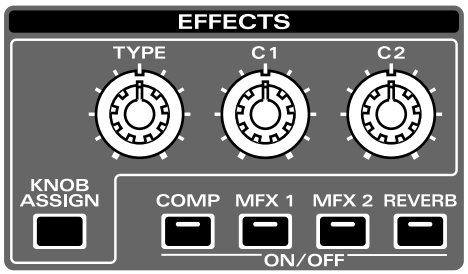
Compressor/Multi-effect/Reverb/Mastering Effect settings

Effects

Here you can apply special effects to the sound.

Effect on/off

Use the ON/OFF buttons of the Effects section to switch each effect on/off.



[COMP]: Compressor
[MFX 1]: Multi-effects 1
[MFX 2]: Multi-effects 2
[REVERB]: Reverb

Effect settings

1. In the top screen of each mode, press [F4 (Effects)].

2. Press [F1]–[F5] to select an effect to adjust.

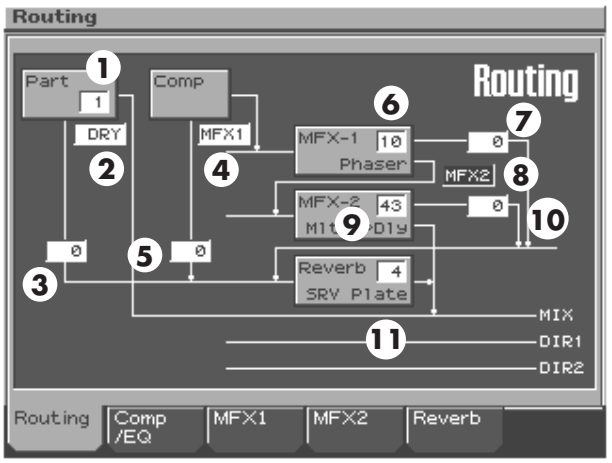
[F1 (Routing)]	Specify the connections (routing) between parts, effects, and output destinations.
[F2 (Comp/EQ)]	Compressor settings.
[F3 (MFX 1)]	Multi-effects 1 settings.
[F4 (MFX 2)]	Multi-effects 2 settings.
[F5 (Reverb)]	Reverb settings.

3. Use [CURSOR] to select a parameter.

4. Use [VALUE] or [INC/DEC] to make settings.

Effect connection (Effect Routing)

You can specify the connections independently for each pattern. The way in which the direct sound is output (**2**) and the depth of reverb (**3**) can be set independently for each part.



Parameter	Range	Explanation
1. Part Number	1–16, EXT	The part for which you are making effect settings. **EXT:** External input
2. Part Output Assign	DRY, MFX1, MFX2, COMP, DIR1, DIR2, RHY	How the original sound of each part will be output **DRY:** Output to MIX OUTPUT jacks without passing through effects **MFX1 (2):** Output through multi-effects 1 (or 2) **COMP:** Output through the compressor **DIR1 (2):** Output to the DIRECT 1 (or DIRECT 2) jacks without passing through effects **RHY:** Output according to the settings of the rhythm set assigned to the part * "RHY" can be set only when a rhythm set is assigned to the part.
3. Part Reverb Send Level	0–127	Depth of reverb applied to each part Set this to 0 if you don't want to apply reverb.
4. Comp Output Assign	(see explanation)	Output destination of the sound processed through the compressor. **DRY:** MIX OUTPUT jacks **MFX1 (2):** Multi-effects 1 (or 2)
5. Comp Reverb Send Level	0–127	Depth of reverb applied to the sound processed through the compressor Set this to 0 if you don't want to apply reverb.
6. (MFX Type)	See "Multi-Effects List" (p. 92)	The effect used by multi-effects 1 * For details on each effect, refer to "Multi-Effects List" (p. 92).

Parameter	Range	Explanation
7. MFX1 Reverb Send Level	0–127	Depth of reverb applied to the sound processed through multi-effects 1 Set this to 0 if you don't want to apply reverb.
8. MFX1 Output Assign	DRY, MFX2	Output destination of the sound processed through multi-effects 1 **DRY:** MIX OUTPUT jacks **MFX2:** Multi-effects 2 (multi-effects 1 and 2 will be connected in series)
9. (MFX Type)	See "Multi-Effects List" (p. 92)	The effect used by multi-effects 2 * For details on each effect, refer to "Multi-Effects List" (p. 92).
10. MFX2 Reverb Send Level	0–127	Depth of reverb applied to the sound processed through multi-effects 2 Set this to 0 if you don't want to apply reverb.
11. (Reverb Type)	See "Reverb" (p. 90)	The type of reverb * For details on reverb, refer to "Reverb" (p. 90).

HINT

If you change the "Output Assign" setting, the routing connections in the screen will also change.

NOTE

Parameters 4–11 in the above table are linked with the identically named parameters in the setting screens of each effect.

Compressor

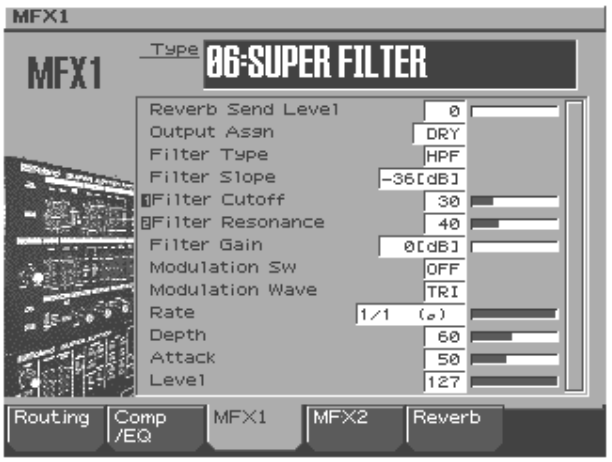
The compressor is an effect that limits the level of loud sounds and boosts the level of soft sounds, making the overall level more consistent.



Parameter	Range	Explanation
Comp Reverb Send Level	0–127	Depth of reverb applied to the sound processed through the compressor Set this to 0 if you don't want to apply reverb.
Comp Output Assign	DRY, MFX1, MFX2	Output destination of the sound processed through the compressor **DRY:** MIX OUTPUT jacks **MFX1 (2):** Multi-effects 1 (or 2)
Attack Time	0.05–50 ms	Time from when the volume goes up the threshold level until the compressor effect applies
Release Time	0.05–2000 ms	Time from when the volume falls below the threshold level until the compressor effect no longer applies
Threshold	0–127	Volume level at which compression begins
Ratio	1:1–inf:1	Compression ratio (inf: infinity)
Output Gain	0– +24 dB	Level of the output sound
Low Freq	200, 400 Hz	Reference frequency of the low range
Low Gain	-15– +15	Amount of low-range boost/cut
High Freq	2k, 4k, 8kHz	Reference frequency of the high range
High Gain	-15– +15	Amount of high-range boost/cut
Level	0–127	Output volume of the compressor

Multi-effects

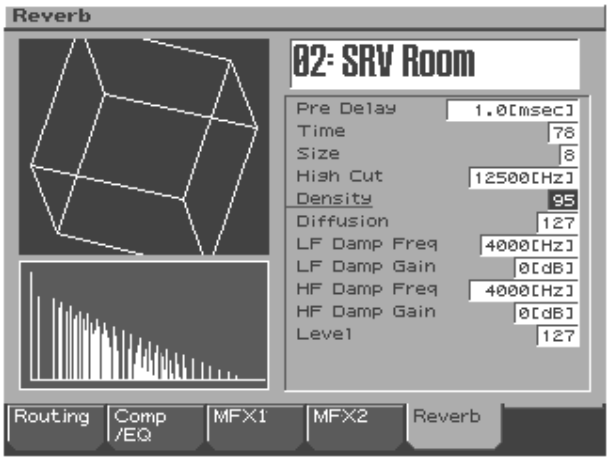
These are general-purpose multi-effects that can transform the sound, and give it a completely different character. MFX1 provides 38 types, and MFX2 provides 47 types. You can select one effect type for each of these two effect units. A wide range of types are included, such as distortion and flanger. Although the multi-effect types include a compressor, this is independent of the compressor described earlier.



Parameter	Range	Explanation
(MFX Type)	0–38 (MFX1) 0–47 (MFX2)	The effect used by multi-effects 1 (or 2) * For details on each effect, refer to "Multi-Effects List" (p. 92).
MFX1 (2) Reverb Send Level	0–127	Depth of reverb applied to the sound processed through multi-effect 1 (2) Set this to 0 if you don't want to apply reverb.
MFX1 Output Assign	DRY, MFX2	Output destination of the sound processed through multi-effects 1 **DRY:** MIX OUTPUT jacks **MFX2:** Multi-effects 2 (multi-effects 1 and 2 will be connected in series) * This parameter exists only for MFX 1.

Reverb

Reverb is an effect that creates the reverberation that is characteristic of sound heard in a hall. You can choose from four types of reverb.

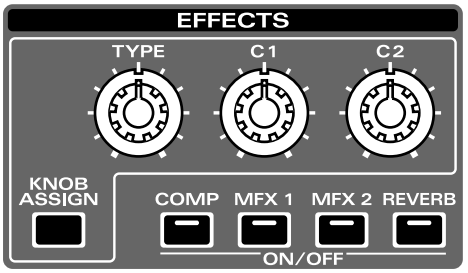


Parameter	Range	Explanation
(Reverb Type)	OFF, 1–4	Type of reverb **OFF:** Reverb not used **1 (REVERB):** Basic reverb **2 (SRV ROOM):** A more detailed simulation of room reverberation **3 (SRV HALL):** A more detailed simulation of hall reverberation **4 (SRV PLATE):** A simulation of a plate echo (a reverb device using a metal plate)
1 (REVERB)		
Type	ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DELAY	Type of reverb/delay **ROOM1:** Short, high-density reverberation **ROOM2:** Short, low-density reverberation **STAGE1:** A greater amount of late reverberation **STAGE2:** Emphasis on early reflections **HALL1:** Clear reverberation **HALL2:** Rich reverberation **DELAY:** A conventional delay **PAN-DELAY:** A delay in which the reflected sound moves between left and right
Time	0–127	Length of reverberation (Type: ROOM1–HALL2) Delay time (Type: DELAY, PAN-DELAY)
HF Damp	200–8000 Hz, BYPASS	Frequency at which the high-frequency portion of the reverberation will be cut (BYPASS: no cut)
Delay Feedback	0–127	Number of delay repetitions (valid only if Type is DELAY or PAN-DELAY)
Level	0–127	Volume of the reverb sound/delay sound

Parameter	Range	Explanation
2 (SRV ROOM) / 3 (SRV HALL) / 4 (SRV PLATE)		
Pre Delay	0.0–100.0 ms	Delay time from original sound until reverb is heard
Time	0–127	Length of reverb
Size	1–8	Size of room/hall
High Cut	160–12500 Hz, BYPASS	Frequency at which the high-frequency portion of the final output sound will be cut (BYPASS: no cut)
Density	0–127	Density of reverb
Diffusion	0–127	Change in reverb density over time Higher settings will cause density to increase as time passes. (This is more noticeable with longer Time settings.)
LF Damp Freq	50–4000 Hz	Frequency at which the low-frequency portion of the reverb will be cut
LF Damp Gain	-36–0 dB	Amount of attenuation for LF Damp (0: no attenuation)
HF Damp Freq	4000–12500 Hz	Frequency at which the high-frequency portion of the reverb will be cut
HF Damp Gain	-36–0 dB	Amount of attenuation for HF Damp (0: no attenuation)
Level	0–127	Volume of the reverb sound

Realtime control of effects

The Effects section lets you control effect parameters in real time.



Selecting the effect that you want to control

1. Press and hold [KNOB ASSIGN].

The ON/OFF button of the currently selected effect will blink.

2. Still holding down [KNOB ASSIGN], press one of the [COMP]–[REVERB] buttons to select the effect you want to control.

Knob	Parameter
When "COMP" is selected	
[TYPE]	Attack Time
[C1]	Release time
[C2]	Threshold
When "MFX1/2" is selected	
[TYPE]	Select the type of effect (p. 92).
[C1], [C2]	Control the assigned function in real time.
When "REVERB" is selected	
[TYPE]	Reverb Type
[C1]	Time
[C2]	Level

NOTE

If you are controlling a multi-effect parameter that is set in terms of a note value, it will not be possible to use the knob to select the note.

Multi-Effects List

Multi-Effects Types

There are 47 types of multi-effect. MFX1 lets you use 38 types (delay-type effects are unavailable), and MFX2 lets you use all 47 types.

FILTER (9 types)		
01	STEREO EQ	p. 92
02	SPECTRUM	p. 92
03	ENHANCER	p. 93
04	ISOLATOR	p. 93
05	LOW BOOST	p. 93
06	SUPER FILTER	p. 93
07	STEP FILTER	p. 94
08	AUTO WAH	p. 94
09	HUMANIZER	p. 94
MODULATION (7 types)		
10	PHASER	p. 94
11	STEREO PHASER	p. 95
12	STEP PHASER	p. 95
13	RING MODULATOR	p. 95
14	TREMOLO	p. 95
15	AUTO PAN	p. 96
16	ROTARY	p. 96
CHORUS (6 types)		
17	HEXA-CHORUS	p. 96
18	TREMOLO CHORUS	p. 96
19	SPACE-D	p. 97
20	STEREO CHORUS	p. 97
21	STEREO FLANGER	p. 97
22	STEP FLANGER	p. 98
DYNAMICS (7 types)		
23	OVERDRIVE	p. 98
24	DISTORTION	p. 98
25	GUITAR AMP SIMULATOR	p. 99
26	STEREO COMPRESSOR	p. 100
27	STEREO LIMITER	p. 100
28	SLICER	p. 100
29	GATE	p. 101
LOFI (6 types)		
30	LOFI NOISE	p. 101
31	LOFI COMPRESS	p. 102
32	LOFI RADIO	p. 102
33	TELEPHONE	p. 102
34	PHONOGRAPH	p. 102
35	TAPE ECHO	p. 103
PITCH (2 types)		
36	FBK PITCH SHIFTER	p. 103
37	2Vo PITCH SHIFTER	p. 103
REVERB (1 type)		
38	GATED REVERB	p. 104
DELAY (9 types) * These cannot be selected for MFX1.		
39	STEREO DELAY	p. 104
40	MODULATION DELAY	p. 105
41	TRIPLE TAP DELAY	p. 105
42	QUADRUPLE TAP DELAY	p. 105
43	MULTI TAP DELAY	p. 106
44	REVERSE DELAY	p. 106
45	SHUFFLE DELAY	p. 106
46	TIME CONTROL DELAY	p. 107
47	TIME SKIP DELAY	p. 107

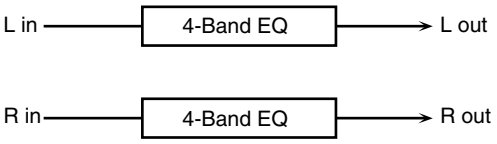
Multi-Effects Parameters

MEMO

Parameters with the designators "#1" and "#2" can be controlled using the [C1] and [C2] knobs of the effect section.

01: STEREO EQ (Stereo Equalizer)

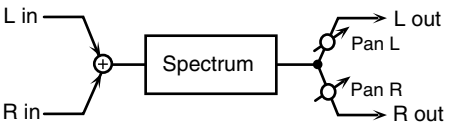
This is a four-band stereo equalizer (low, mid x 2, high).



Parameter	Value	Description
Low Freq	200, 400 Hz	Frequency of the low range
Low Gain #1	-15– +15 dB	Gain of the low frequency range
High Freq	2000, 4000, 8000 Hz	Frequency of the high range
High Gain #2	-15– +15 dB	Gain of the high frequency range
Mid1 Freq	200–8000 Hz	Frequency of Middle Range 1
Mid1 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of Middle Range 1 Select a higher Q value to narrow Middle Range 1.
Mid1 Gain	-15– +15 dB	Gain of Middle Range 1
Mid2 Freq	200–8000 Hz	Frequency of Middle Range 2
Mid2 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of Middle Range 2 Select a higher Q value to narrow Middle Range 2.
Mid2 Gain	-15– +15 dB	Gain of Middle Range 2
Level	0–127	Output level

02: SPECTRUM

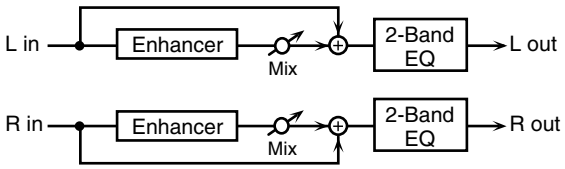
This is a type of filter that modifies the timbre by boosting or cutting the level of specific frequencies. It is similar to an equalizer, but has eight frequency points fixed at locations most useful for adding character to the sound.



Parameter	Value	Description
Q	0.5, 1.0, 2.0, 4.0, 8.0	Simultaneously adjusts the width of the adjusted ranges for all of the frequency bands.
Pan #1	L64–63R	Stereo location of the SPECTRUM output
Level #2	0–127	Output level
Band 1 (250Hz) Band 2 (500Hz) Band 3 (1kHz) Band 4 (1.25Hz) Band 5 (2kHz) Band 6 (3.15Hz) Band 7 (4kHz) Band 8 (8kHz)	-15– +15 dB	Gain of each frequency band * This can be set using the sliders of the part mixer.

03: ENHANCER

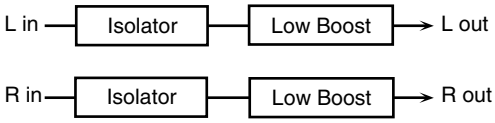
Controls the overtone structure of the high frequencies, adding sparkle and brightness to the sound.



Parameter	Value	Description
Sens #1	0–127	Sensitivity of the enhancer
Mixl #2	0–127	Level of the overtones generated by the enhancer
Low Gain	-15– +15 dB	Gain of the low frequency range of frequencies
High Gain	-15– +15 dB	Gain of the high frequency range of frequencies
Level	0–127	Output level

04: ISOLATOR

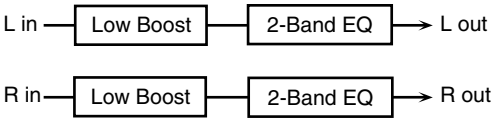
This is an equalizer that radically cuts the volume of selected frequencies, allowing you to create special effects cutting the volume in various ranges.



Parameter	Value	Description
Boost/Cut High Boost/Cut Middle #1 Boost/Cut Low #2	-60– +4 dB	These boost and cut each of the High, Middle, and Low frequency ranges. At -60 dB, the sound becomes inaudible. 0 dB is equivalent to the input level of the sound.
AntiPhase Middle Sw	OFF, ON	Settings of the Anti-Phase function for the Middle frequency ranges. When turned on, a stereo copy of the sound is phase-inverted and added to the signal.
AntiPhase Middle Level	0–127	Adjusts the level settings for the Middle frequency ranges. Adjusting this level for certain frequencies allows you to lend emphasis to specific elements within a sound. (This is effective only for stereo source.)
Anti Phase Low Sw Anti Phase Low Level	OFF, ON 0–127	Settings of the Anti-Phase function for the Middle frequency ranges The parameters are the same as for the Middle frequency ranges.
Low Boost Sw	OFF, ON	Turns Low Booster on/off. This emphasizes the bottom frequencies 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 hear.
Level	0–127	Output level

05: LOW BOOST

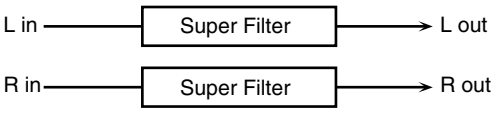
Boosts the volume of the lower range, creating powerful lows.



Parameter	Value	Description
Boost Frequency #1	50–125 Hz	Center frequency at which the lower range will be boosted
Boost Gain #2	0–12 dB	Amount by which the lower range will be boosted
Boost Width	WIDE, MID, NARROW	Width of the lower range that will be boosted
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

06: SUPER FILTER

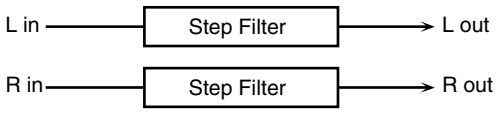
This is a filter with an extremely sharp slope. The cutoff frequency can be varied cyclically.



Parameter	Value	Description
Filter Type	LPF, BPF, HPF, NOTCH	Filter type Frequency range that will pass through each filter **LPF**: frequencies below the cutoff **BPF:** frequencies in the region of the cutoff **HPF:** frequencies above the cutoff **NOTCH:** frequencies other than the region of the cutoff
Filter Slope	-12, -24, -36 dB	Amount of attenuation per octave **-36 dB:** extremely steep **-24 dB:** steep **-12 dB:** gentle
Filter Cutoff #1	0–127	Cutoff frequency of the filter Increasing this value will raise the cutoff frequency.
Filter Resonance #2	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
Modulation Sw	OFF,ON	On/off switch for cyclic change
Modulation Wave	TRI, SQU, SIN, SAW1, SAW2	How the cutoff frequency will be modulated TRI: triangle wave SQR: square wave SIN: sine wave SAW1: sawtooth wave (upward) SAW2: sawtooth wave (downward)
Rate	0.05–10.0 Hz, note	Rate 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

07: STEP FILTER

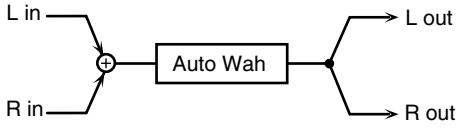
This is a filter whose cutoff frequency can be modulated in steps. You can specify the pattern by which the cutoff frequency will change.



Parameter	Value	Description
Rate	0.05–10.00 Hz, note	Rate of modulation
Attack #1	0–127	Rate at which the cutoff frequency will change between beats
Filter Type	LPF, BPF, HPF, NOTCH	Filter type Frequency range that will pass through each filter **LPF:** frequencies below the cutoff **BPF:** frequencies in the region of the cutoff **HPF:** frequencies above the cutoff **NOTCH:** frequencies other than the region of the cutoff
Filter Slope	-12, -24, -36 dB	Amount of attenuation per octave **-12 dB:** gentle **-24 dB:** steep **-36 dB:** extremely steep
Filter Resonance #2	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
Beat 1-1–4-4	0–127	Cutoff frequency for each 16th note of a 4/4 measure * This can be set using the sliders of the part mixer.

08: AUTO WAH

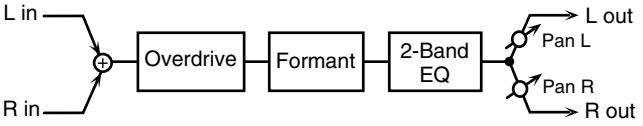
A filter that turns on and off to create a cyclical change in timbre.



Parameter	Value	Description
Filter Type	LPF, BPF	Type of filter **LPF**: The wah effect is applied over a wide frequency range. **BPF**: The wah effect is applied over a narrow frequency range
Rate #2	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Sens	0–127	Adjusts the sensitivity with which the filter is controlled.
Manual #1	0–127	Adjusts the center frequency at which the effect is applied.
Peak	0–127	Adjusts the amount of the wah effect that occurs in the range of the center frequency. Set a higher value for Q to narrow the range to be affected.
Level	0–127	Output level

09: HUMANIZER

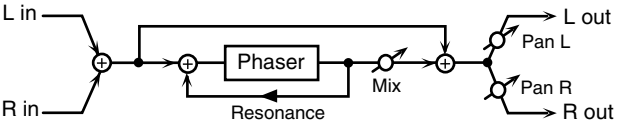
Adds a vowel character to the sound, making it similar to a human voice.



Parameter	Value	Description
Drive Sw	OFF, ON	Turns Drive on/off.
Drive	0–127	Degree of distortion Also changes the volume.
Vowel1 #1	a, e, i, o, u	Selects the vowel.
Vowel2 #2	a, e, i, o, u	
Rate	0.05–10.00 Hz, note	Frequency at which the two vowels switch
Depth	0–127	Effect depth
Input Sync Sw	OFF, ON	Determines whether the LFO for switching the vowels is reset by the input signal (ON) or not (OFF).
Input Sync Threshold	0–127	Volume level at which reset is applied
Manual	0–100	Point at which Vowel 1/2 switch **49 or less:** Vowel 1 will have a longer duration. **50:** Vowel 1 and 2 will be of equal duration. **51 or more:** Vowel 2 will have a longer duration.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Pan	L64–63R	Stereo location of the output
Level	0–127	Output level

10: PHASER

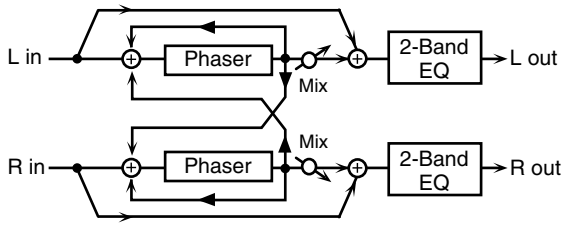
Adds a phase-shifted sound to the original sound, producing a swirling modulation that creates spaciousness and depth.



Parameter	Value	Description
Manual #1	0–127	Adjusts the basic frequency at which the sound will be modulated.
Rate #2	0.05–10.00 Hz	Frequency of modulation
Depth	0–127	Depth of modulation
Resonance	0–127	Amount of feedback
Mix	0–127	Level of the phase-shifted sound
Pan	L64–63R	Stereo location of the PHASER output
Level	0–127	Output Level

11:STEREO PHASER

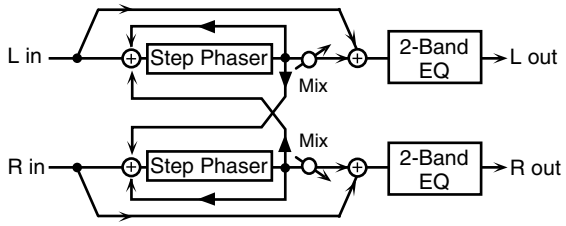
This is a stereo phaser.



Parameter	Value	Description
Mode	4, 8 stage	Number of stages in the phaser
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation are the same or opposite each other. **INVERSE:** The left and right phase are opposite. When using a mono source, this spreads the sound in stereo. **SYNCHRO:** The left and right phase are the same. Select this when working with a stereo source.
Rate #2	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Manual #1	0–127	Adjusts the basic frequency from which the sound is modulated.
Resonance	0–127	Amount of feedback
Cross Feedback	-98– +98 %	Adjusts the amount of the phaser sound that's fed back into the effect. Negative (-) settings invert the phase.
Mix	0–127	Level of the phase-shifted sound
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

12:STEP PHASER

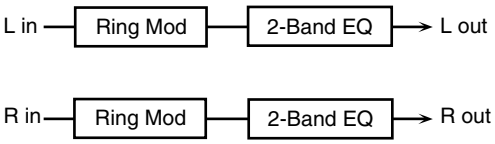
With the Step effects, you can also make stepped changes in the pitch of sounds to which the Phaser effect is applied.



Parameter	Value	Description
Mode	4, 8 stage	Number of stages in the phaser
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation are the same or opposite each other. **INVERSE:** The left and right phase are opposite. When using a mono source, this spreads the sound in stereo. **SYNCHRO:** The left and right phase are the same. Select this when working with a stereo source.
Rate	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Manual #1	0–127	Adjusts the basic frequency from which the sound is modulated.
Resonance	0–127	Amount of feedback
Cross Feedback	-98– +98 %	Adjusts the amount of the phaser sound that's fed back into the effect. Negative (-) settings invert the phase.
Step Rate #2	0.1–20.0 Hz, note	Rate of pitch change
Mix	0–127	Level of the phase-shifted sound
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

13: RING MODULATOR

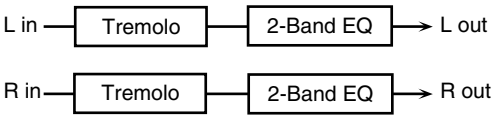
This is an effect that applies amplitude modulation (AM) to the input signal, producing bell-like sounds. You can also change the modulation frequency in response to changes in the volume of the sound sent into the effect.



Parameter	Value	Description
Frequency #1	0–127	Adjusts the frequency at which modulation is applied.
Sens	0–127	Adjusts the amount of frequency modulation applied.
Polarity	UP, DOWN	Determines whether the frequency modulation moves towards higher frequencies (**UP**) or lower frequencies (**DOWN**).
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

14: TREMOLO

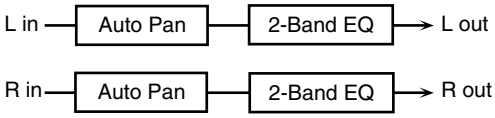
Cyclically modulates the volume to add tremolo to the sound.



Parameter	Value	Description
Modulation Wave	TRI, SQR, SIN, SAW1, SAW2	Modulation Wave **TRI:** triangle wave **SQR:** square wave **SIN:** sine wave **SAW1:** sawtooth wave (upward) **SAW2:** sawtooth wave (downward)
Rate #1	0.05–10.00 Hz, note	Frequency of the change
Depth #2	0–127	Depth to which the effect is applied
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

15: AUTO PAN

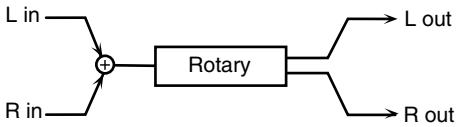
Cyclically modulates the stereo location of the sound.



Parameter	Value	Description
Modulation Wave	TRI, SQR, SIN, SAW1, SAW2	Modulation Wave **TRI:** triangle wave **SQR:** square wave **SIN:** sine wave **SAW1:** sawtooth wave (upward) **SAW2:** sawtooth wave (downward)
Rate #1	0.05–10.00 Hz, note	Frequency of the change
Depth #	0–127	Depth to which the effect is applied
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

16: ROTARY

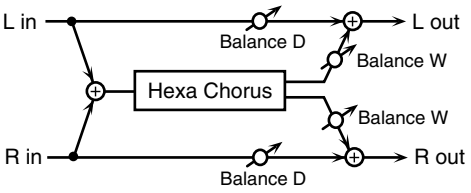
The Rotary effect simulates the sound of the rotary speakers often used with the classic electric organs. Since the movement of the high-range and low-range rotors can be set independently, the unique characteristics of these speakers can be simulated quite accurately. This effect is most suitable for electric organ Patches.



Parameter	Value	Description
Tweeter Slow Rate	0.05–10.00 Hz	Slow speed (SLOW) of the high-frequency rotor
Woofer Slow Rate	0.05–10.00 Hz	Slow speed (SLOW) of the low-frequency rotor
Tweeter Fast Rate	0.05–10.00 Hz	Fast speed (FAST) of the high-frequency rotor
Woofer Fast Rate	0.05–10.00 Hz	Fast speed (FAST) of the low-frequency rotor
Speed #1	SLOW, FAST	Simultaneously switches the rotational speed of the low frequency rotor and high frequency rotor. **SLOW:** Slows down the speed to the Slow Rate. **FAST:** Speeds up the speed to the Fast Rate.
Tweeter Acceleration	0–15	Adjusts the time it takes the high frequency rotor to reach the newly selected speed when switching between fast and slow speeds.
Woofer Acceleration	0–15	Adjusts the time it takes the low frequency rotor to reach the newly selected speed when switching between fast and slow speeds.
Tweeter Level	0–127	Volume of the high frequency rotor
Woofer Level	0–127	Volume of the low frequency rotor
Separation	0–127	Stereo width of the sound
Level #2	0–127	Output level

17: HEXA-CHORUS

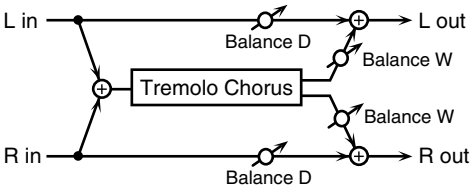
Uses a six-phase chorus (six layers of chorused sound) to give richness and spaciousness to the sound.



Parameter	Value	Description
Pre Delay	0.0–100.0 ms	Adjusts the time until chorusing is heard.
Rate #1	0.05–10.00 Hz	Frequency of modulation
Depth	0–127	Depth of modulation
Pre Delay Deviation	0–20	Adjusts the differences in Pre Delay between each chorus layer.
Depth Deviation	-20– +20	Adjusts the difference in modulation depth between each chorus layer.
Pan Deviation	0–20	Adjusts the difference in stereo location between each chorus layer. **0:** All chorus layers are in the center. **20:** The chorus layers are spaced at 60-degree intervals relative to the center.
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output level

18: TREMOLO CHORUS

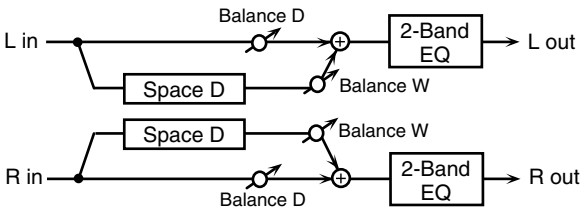
This is a chorus effect with added Tremolo (cyclic modulation of volume).



Parameter	Value	Description
Pre Delay	0.0–100.0 ms	Adjusts the time until the chorus sound is heard.
Chorus Rate	0.05–10.00 Hz	Modulation frequency of the chorus effect
Chorus Depth	0–127	Modulation depth of the chorus effect
Tremolo Rate #1	0.05–10.00 Hz	Modulation frequency of the tremolo effect
Tremolo Separation	0–127	Spread of the tremolo effect
Tremolo Phase	0–180 deg	Depth of the tremolo effect
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the tremolo chorus sound (W)
Level	0–127	Output level

19: SPACE-D

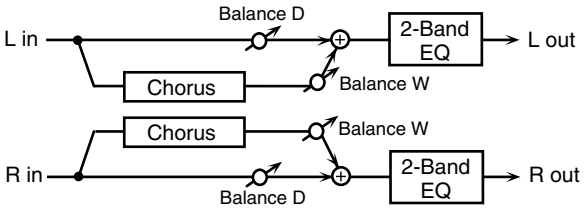
This is a multiple chorus that applies two-phase modulation in stereo. It creates no audible modulation, yet produces a transparent chorus effect.



Parameter	Value	Description
Pre Delay	0.0–100.0 ms	Adjusts the time until the chorus sound is heard.
Rate #1	0.05–10.00 Hz	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output level

20: STEREO CHORUS

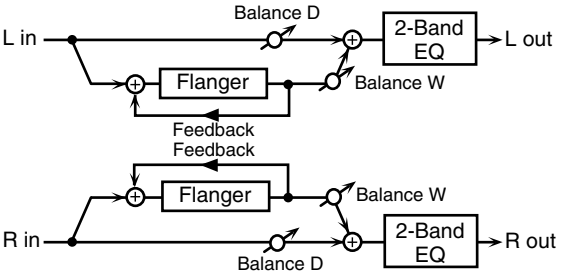
This is a stereo chorus. A filter is provided so that you can adjust the timbre of the chorused sound.



Parameter	Value	Description
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Adjusts the time until the chorus sound is heard.
Rate #1	0.05–10.00 Hz	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output level

21: STEREO FLANGER

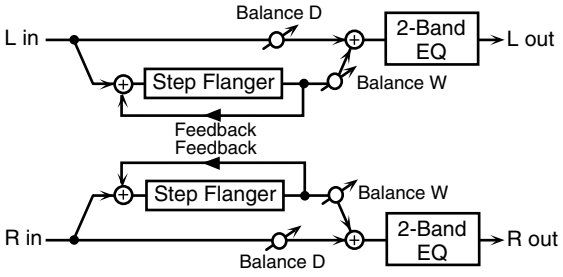
This is a stereo flanger. It produces a metallic resonance that rises and falls somewhat like a jet airplane taking off or landing. A filter is provided so that you can adjust the timbre of the flanged sound.



Parameter	Value	Description
Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff Freq **HPF:** cuts the frequency range below the Cutoff Freq
Cutoff Freq	200–8000 Hz	Basic frequency of the filter
Pre Delay	0.0–100.0 ms	Adjusts the time until the flanger sound is heard.
Rate #1	0.05-10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Feedback #2	-98– +98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output level

22: STEP FLANGER

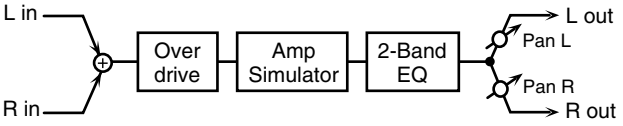
This is a flanger in which the flanger pitch changes in steps. The speed at which the pitch changes can also be specified in terms of a note value based on a specified tempo.



Parameter	Value	Description
Pre Delay	0.0–100.0 ms	Adjusts the time until the flanger sound is heard.
Rate	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Feedback #2	-98– +98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
Step Rate #1	0.10–20.00 Hz, note	Rate (period) of pitch change
Phase	0–180 deg	Spatial spread of the sound
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output level

23: OVERDRIVE

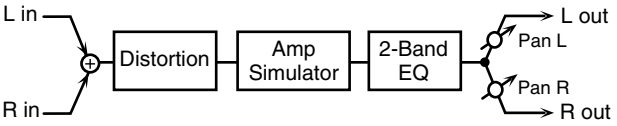
Creates a soft distortion similar to that produced by vacuum tube amplifiers.



Parameter	Value	Description
Drive #1	0–127	Amount of distortion Also changes the volume.
Tone #2	0–127	Sound Quality
Pan	L64–63R	Stereo location of the OVERDRIVE output
Amp Sw	OFF, ON	Amp simulator on/off
Amp Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp **SMALL:** small amp **BUILT-IN:** single-unit type amp **2-STACK:** large double-stack amp **3-STACK:** large triple-stack amp
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

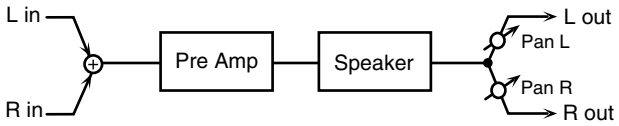
24: DISTORTION

Produces a more intense distortion than Overdrive. The parameters are the same as for "23: OVERDRIVE."



25: GUITAR AMP SIM (Guitar Amp Simulator)

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



Parameter	Value	Description
Pre Amp Sw	OFF, ON	Turns the amp switch on/off.
Pre Amp Type	JC-120, Clean Twin, Match Drive, BG Lead, MS1959I, MS1959II, MS1959I+II, SLDN Lead, Metal 5150, Metal Lead, OD-1, OD-2 TURBO, Distortion, Fuzz	Type of guitar amp
Pre Amp Volume #1	0–127	Volume and amount of distortion of the amp
Pre Amp Master #2	0–127	Volume of the entire pre-amp
Pre Amp Gain	Low, Mid, High	Amount of pre-amp distortion
Pre Amp Bass	0–127	Tone of the bass/mid/treble frequency range * Middle cannot be set if "Match Drive" is selected as the Pre Amp Type.
Pre Amp Middle		
Pre Amp Treble		
Pre Amp Presence	0–127 (MATCH DRIVE: -127 - 0)	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," and "BG Lead" Pre Amp Types.
Speaker Sw	OFF, ON	Determines whether the signal passes through the speaker (ON), or not (OFF).
Speaker Type	(See the table below.)	Type of speaker
Mic Setting	1, 2, 3	Adjusts the location of the mic that's capturing the sound of the speaker. This can be adjusted in three steps, from 1 to 3, with the mic becoming more distant as the value increases.
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
Level	0–127	Output level

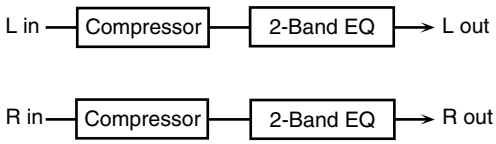
Specifications for each Speaker Type

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

Type	Cabinet	Speaker	Microphone
Small1	small open-back enclosure	10	dynamic
Small2	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 Stack1	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

26: COMPRESSOR

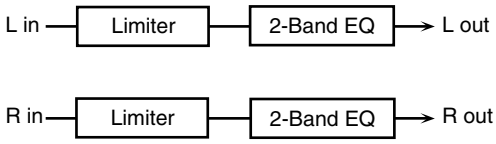
Flattens out high levels and boosts low levels, smoothing out fluctuations in volume.



Parameter	Value	Description
Attack #1	0–127	Sets the speed at which compression starts
Threshold #2	0–127	Adjusts the volume at which compression begins
Post Gain	0, +6, +12, +18 dB	Adjusts the output gain.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

27: LIMITER

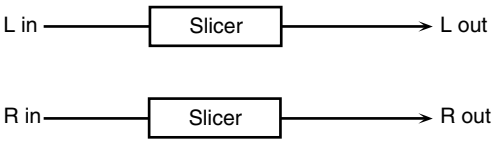
Compresses signals that exceed a specified volume level, preventing distortion from occurring.



Parameter	Value	Description
Release #1	0–127	Adjusts the time after the signal volume falls below the Threshold Level until compression is no longer applied.
Threshold #2	0–127	Adjusts the volume at which compression begins
Ratio	1.5:1, 2:1, 4:1, 100:1	Compression ratio
Post Gain	0, +6, +12, +18 dB	Adjusts the output gain.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

28: SLICER

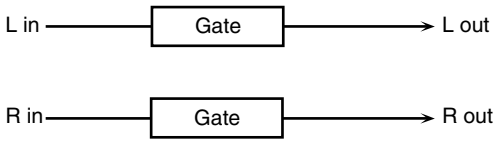
By applying successive cuts to the sound, this effect turns a conventional sound into a sound that appears to be played as a backing phrase. This is especially effective when applied to sustain-type sounds.



Parameter	Value	Description
Rate #1	0.05–10.00 Hz, note	Cycle for one measure
Attack #2	0–127	Speed at which the volume changes between beats
Input Sync Sw	OFF, ON	Determines whether the LFO for switching the vowels is reset by the input signal (ON) or not (OFF).
Input Sync Threshold	0–127	Volume level at which the reset begins
Mode	LEGATO, SLASH	Sets the manner in which the volume changes as one beat progresses to the next. **LEGATO:** The change in volume from one beat's level to the next remains unaltered. If the level of a following beat is the same as the one preceding it, there is no change in volume. **SLASH:** The level is momentarily set to 0 before progressing to the level of the next beat. This change in volume occurs even if the level of the following beat is the same as the preceding beat.
Shuffle	0–127	Timing of volume changes in levels for even-numbered Beats (Beat 1-2/Beat 1-4/Beat 2-2/...). The higher the value, the later the beat progresses.
Level	0–127	Output level
Beat 1-1–4-4	0–127	For a single measure containing four quarter notes, this sets the level of each sixteenth note when the measure is divided into sixteenth notes. * This can be set using the sliders of the part mixer.

29: GATE

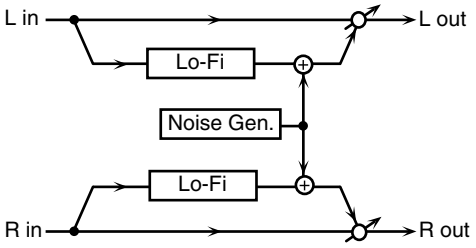
Cuts the reverb's delay according to the volume of the sound sent into the effect. Use this when you want to create an artificial-sounding decrease in the reverb's decay.



Parameter	Value	Description
Threshold #1	0–127	Volume level at which the gate begins to close
Mode	GATE, DUCK	Type of gate **GATE:** The gate will close when the volume of the original sound decreases, cutting the original sound. **DUCK (Ducking):** The gate will close when the volume of the original sound increases, cutting the original sound.
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Attack Time	0–127	Adjusts the time it takes for the gate to fully open after being triggered.
Hold Time	0–127	Adjusts the time it takes for the gate to start closing after the source sound falls beneath the Threshold.
Release Time	0–127	Adjusts the time it takes the gate to fully close after the hold time.
Level	0–127	Output level

30: LOFI NOISE (Lo-Fi Noise)

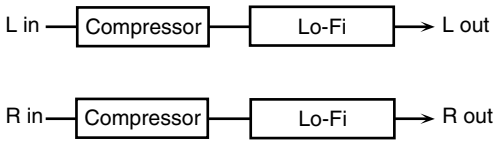
In addition to a lo-fi effect, this adds various types of noise such as white noise and disc noise.



Parameter	Value	Description
LoFi Type	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Flter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff **HPF:** cuts the frequency range below the Cutoff
Post Filter Cutoff	200–8000 Hz	Center frequency of the filter
W/P Noise Type	WHITE, PINK	Switch between white noise and pink noise.
W/P Noise LPF	200–8000 Hz, BYPASS	Center frequency of the low pass filter applied to the white/pink noise (BYPASS: no cut)
W/P Noise Level	0–127	Volume of the white/pink noise
Disc Noise Type	LP, EP, SP, RND	Type of record noise The frequency at which the noise is heard depends on the selected type.
Disc Noise LPF	200–8000 Hz, BYPASS	Adjusts the cutoff frequency of the low pass filter applied to the record noise. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Disc Noise Level	0–127	Volume of the record noise
Hum Noise Type	50Hz, 60Hz	Frequency of the hum noise
Hum Noise LPF	200–8000 Hz, BYPASS	Center frequency of the low pass filter applied to the hum noise (BYPASS: no cut)
Hum Noise Level	0–127	Volume of the hum noise
Balance #1	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level #2	0–127	Output level

31: LOFI COMPRESS (Lo-Fi Compress)

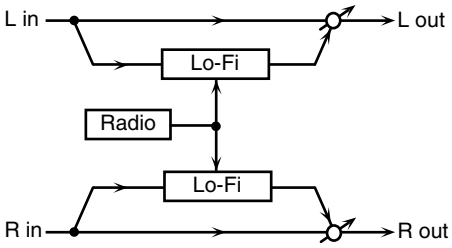
This is an effect that intentionally degrades the sound quality for creative purposes.



Parameter	Value	Description
Pre Filter Type	1–6	Selects the type of filter applied to the sound before it passes through the Lo-Fi effect.
LoFi Type	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff **HPF:** cuts the frequency range below the Cutoff
Post Filter Cutoff	200–8000 Hz	Basic frequency of the Post Filter
Balance #1	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level #2	0–127	Output level

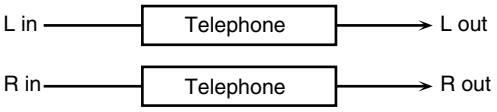
32: LOFI RADIO (Lo-Fi Radio)

In addition to a Lo-Fi effect, this effect also generates various types of noise, such as radio noise or disk noise.



Parameter	Value	Description
LoFi Type	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Flter Type	OFF, LPF, HPF	Type of filter **OFF:** no filter is used **LPF:** cuts the frequency range above the Cutoff **HPF:** cuts the frequency range below the Cutoff
Post Filter Cutoff	200–8000 Hz	Basic frequency of the Post Filter
Radio Detune #1	0–127	Simulates the tuning noise of a radio. As this value is raised, the tuning drifts further.
RadioNoise Level	0–127	Volume of the radio noise
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

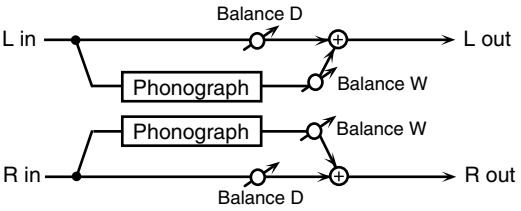
33: TELEPHONE



Parameter	Value	Description
Voice Quality #1	0–15	Audio quality of the telephone voice
Treble	-15– +15 dB	Bandwidth of the telephone voice
Balance #2	D100:0–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

34: PHONOGRAPH

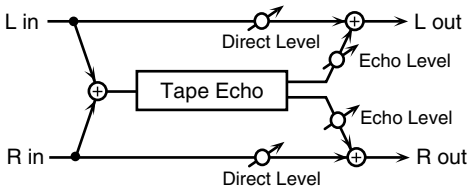
Simulates a sound recorded on an analog record and played back on a record player. This effect also simulates the various types of noise that are typical of a record, and even the rotational irregularities of an old turntable.



Parameter	Value	Description
Signal Distortion	0–127	Depth of distortion
Frequency Range	0–127	Frequency response of the playback system Decreasing this value will produce the impression of an old system with a poor frequency response.
Disc Type	LP, EP, SP	Rotational speed of the turntable This will affect the frequency of the scratch noise.
Scratch Noise Level	0–127	Amount of noise due to scratches on the record
Dust Noise Level	0–127	Volume of noise due to dust on the record
Hiss Noise Level	0–127	Volume of continuous “hiss”
Total Noise Level #1	0–127	Volume of overall noise
Wow	0–127	Depth of long-cycle rotational irregularity
Flutter	0–127	Depth of short-cycle rotational irregularity
Random	0–127	Depth of indefinite-cycle rotational irregularity
Total Wow/Flutter #2	0–127	Depth of overall rotational irregularity
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

35: TAPE ECHO

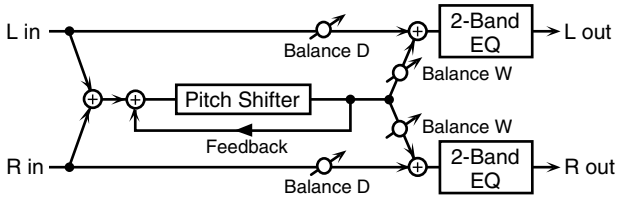
A virtual tape echo that produces a realistic tape delay sound. This simulates the tape echo section of a Roland RE-201 Space Echo.



Parameter	Value	Description
Mode	S, M, L, S+M, S+L, M+L, S+M+L	Combination of playback heads to use Select from three different heads with different delay times. **S:** short **M:** middle **L:** long
Repeat Rate #1	0–127	Tape speed Increasing this value will shorten the spacing of the delayed sounds.
Intensity #2	0–127	Amount of delay repeats
Bass	-15– +15	Boost/cut for the lower range of the echo sound
Treble	-15– +15	Boost/cut for the upper range of the echo sound
Head S Pan Head M Pan Head L Pan	L64–63R	Independent panning for the short, middle, and long playback heads
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.
Wow/Flutter Rate	0–127	Speed of wow/flutter (complex variation in pitch caused by tape wear and rotational irregularity)
Wow/Flutter 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

36: FBK PITCH SHIFTER (Feedback Pitch Shifter)

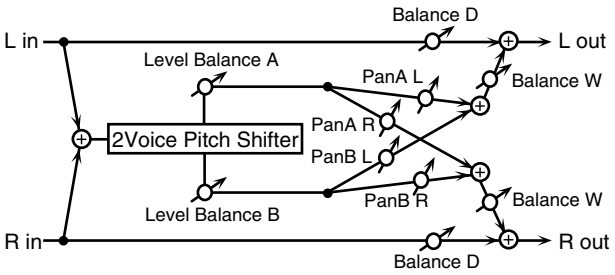
This allows the pitch-shifted sound to be fed back into the effect.



Parameter	Value	Description
Mode	1, 2, 3, 4, 5	Setting a higher value for this parameter results in a slower response, but steadier pitch.
Coarse #1	-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.
Pre Delay	0.0–500 ms	Adjusts the time until the pitch shifted sound is heard.
Feedback #2	-98– +98 %	Adjusts the amount of the pitch-shifted sound that's fed back into the effect. Negative (-) settings invert the phase.
Pan	L64–63R	Stereo location of the pitch-shifted sound
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance	D100:0W– D0:100W	Volume balance between the direct sound (D) and the pitch-shifted sound (W)
Level	0–127	Output level

37: 2Vo PITCH SHIFTER (2-Voice Pitch Shifter)

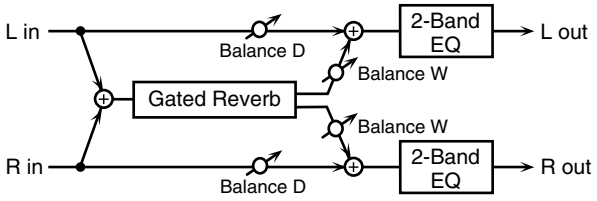
Shifts the pitch of the original sound. This 2-voice pitch shifter has two pitch shifters, and can add two pitch-shifted versions of the original sound.



Parameter	Value	Description
Mode	1, 2, 3, 4, 5	Setting a higher value for this parameter results in a slower response, but steadier pitch.
Coarse A #1 Coarse B #2	-24– +12 semi	Adjusts the pitch of Pitch Shift A/B in semitone steps.
Fine A Fine B	-100– +100 cent	Adjusts the pitch of Pitch Shift A/B in 2-cent steps.
Pre Delay A Pre Delay B	0.0–500 ms	Adjusts the time until Pitch Shift A/B is heard.
Pan A Pan B	L64–63R	Stereo location of Pitch Shift A/B
Level Balance	A100:0B– A0:100B	Volume balance between Pitch Shift A and Pitch Shift B
Balance	D100:0W– D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0–127	Output level

38: GATED REVERB

This is a special type of reverb in which the reverb is cut off without being allowed to decay naturally.

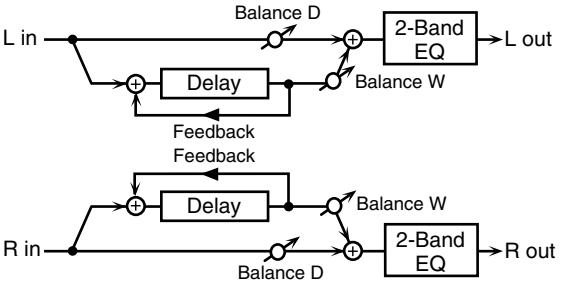


Parameter	Value	Description
Type	NORMAL, REVERSE	Type of reverb **NORMAL:** conventional gated reverb **REVERSE:** backwards reverb
Pre Delay	0.0–100.0 ms	Adjusts the time until the reverb sound is heard.
Time	5–500 ms	Adjusts the time from when the reverb is first heard until it disappears.
Pan #1	L64–63R	Stereo location of Pitch Shift
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the reverb sound (W)
Level	0–127	Output level

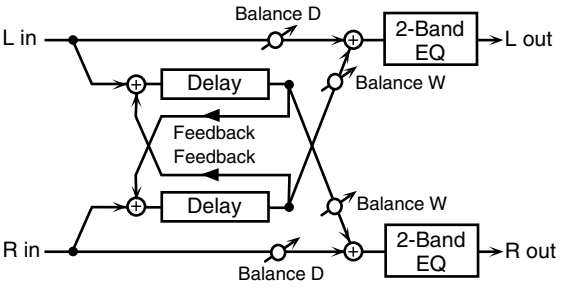
39: STEREO DELAY (MFX2 only)

This is a stereo delay.

When Feedback Mode is NORMAL:



When Feedback Mode is CROSS:

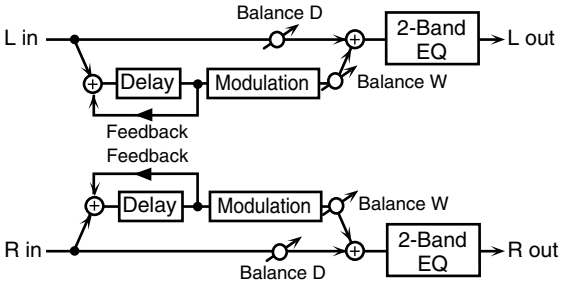


Parameter	Value	Description
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect. (See the figures above.)
Delay Left Delay Right	0–2000 ms, note	Adjusts the time until the delay sound is heard.
Phase Left Phase Right	NORMAL, INVERT	Phase of the delay sound
Feedback #1	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

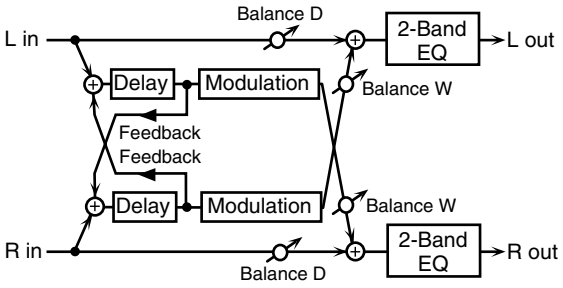
40: MODULATION DELAY (MFX2 only)

Adds modulation to the delayed sound.

When Feedback Mode is NORMAL:



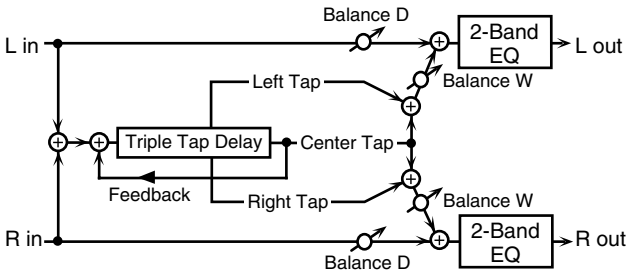
When Feedback Mode is CROSS:



Parameter	Value	Description
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect (See the figures above.)
Delay Left Delay Right	0–2000 ms, note	Adjusts the time until the delay sound is heard.
Feedback	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BY-PASS	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.
Rate	0.05–10.00 Hz	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0-180 deg	Spatial spread of the sound
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

41: TRIPLE TAP DELAY (MFX2 only)

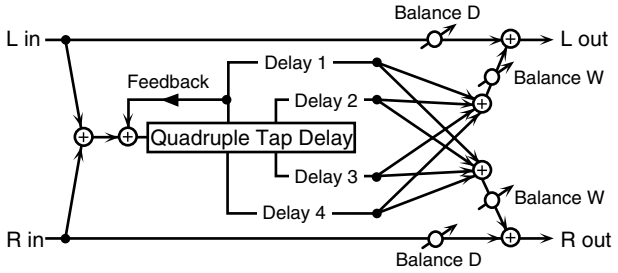
Produces three delay sounds; center, left and right.

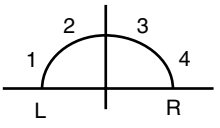


Parameter	Value	Description
Delay Left/ Right/Center	0–4000 ms, note	Adjusts the time until the delay sound is heard.
Feedback #1	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BY-PASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Left/Right/ Center Level	0–127	Volume of each delay
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

42: QUADRUPLE TAP DELAY (MFX2 only)

This effect has four delays.



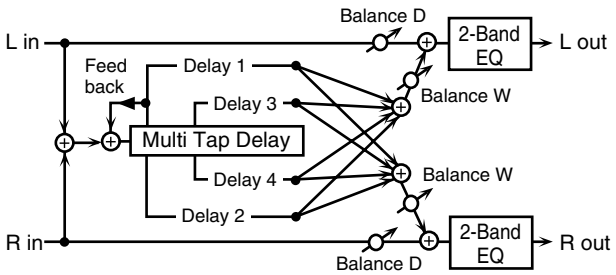


Stereo location of each delay

Parameter	Value	Description
Delay 1–4	0–4000 ms, note	Adjusts the time until the delay sound is heard.
Level 1–4	0–127	Volume of each delay
Feedback #1	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BY-PASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

43: MULTI TAP DELAY (MFX2 only)

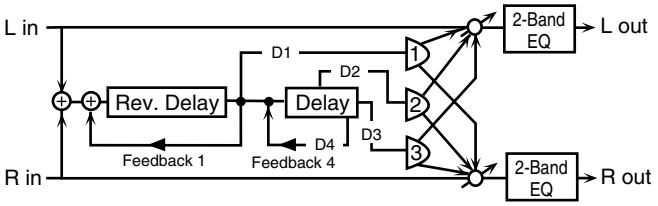
This effect provides four delays. Each of the Delay Time parameters can be set to a note length based on the selected tempo. You can also set the panning and level of each delay sound.



Parameter	Value	Description
Delay 1–4	0–4000 ms, note	Adjusts the time until Delays 1–4 are heard.
Pan 1–4	L64–63R	Stereo location of Delays 1–4
Level 1–4	0–127	Output level of Delays 1–4
Feedback #1	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any the high frequencies, set this parameter to BYPASS.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

44: REVERSE DELAY (MFX2 only)

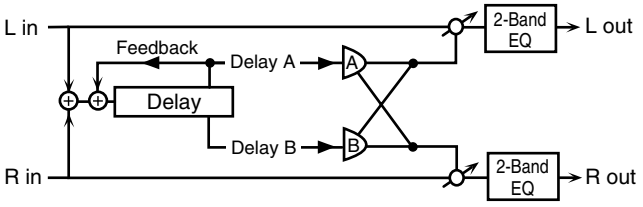
Adds the reverse of the input sound as a delay.



Parameter	Value	Description
Threshold	0–127	Volume level at which the reverse delay begins
Delay 1–4	0-2000 ms, note	Adjusts the time until Delays 1–4 are heard.
Feedback 1 #1 Feedback 4	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp 1 HF Damp 4	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Pan 1–3	L64–63R	Stereo location of Delays 1–3 sound
Level 1–3	0–127	Output level of Delays 1–3 sound
Balance #2	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

45: SHUFFLE DELAY (MFX2 only)

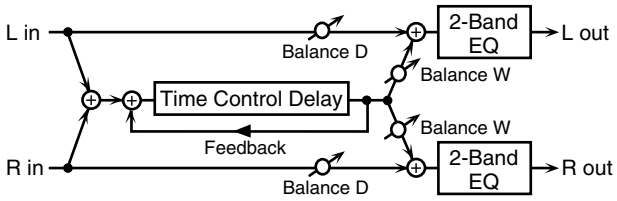
Adds a shuffle to the delay sound, giving the sound a bouncy delay effect with a swing feel.



Parameter	Value	Description
Delay #1	0–4000 ms, note	Adjusts the time until the delay sound is heard.
Shuffle Rate	0–100 %	Adjusts the ratio (as a percentage) of the time that elapses before Delay B sounds relative to the time that elapses before the Delay A sounds. When set to 100%, the delay times are the same.
Pan A/B	L64–63R	Stereo location of Delay A/B
Level Balance	A100:0B–A0:100B	Volume balance between Delay A and Delay B
Feedback #2	-98– +98 %	Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase.
Acceleration	0–15	Adjusts the time over which the Delay Time changes from the current setting to its specified new setting.
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.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

46: TIME CONTROL DELAY (MFX2 only)

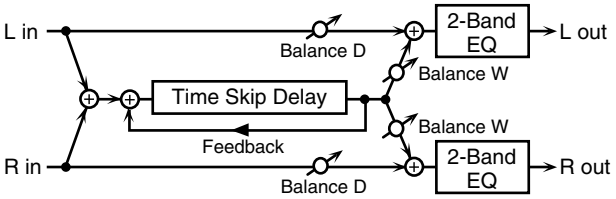
This lets you smoothly vary the delay time. As the delay time is varied, the pitch will change correspondingly; lengthening the delay time will lower the pitch, and shortening it will raise the pitch.



Parameter	Value	Description
Delay #1	0–4000 ms, note	Adjusts the time until the delay is heard.
Feedback #2	-98– +98 %	Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase.
Acceleration	0–15	Adjusts the time over which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Pan	L64–63R	Stereo location of the delay
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

47: TIME SKIP DELAY (MFX2 only)

A delay that changes the delay time in stair-step fashion.



Parameter	Value	Description
Delay #1	0–4000 ms, note	Adjusts the time until the delay is heard.
Skip Rate	0.05–10.0 Hz, note	Frequency at which the delay time will change
Feedback #2	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
Acceleration	0–15	Adjusts the time over which the Delay Time changes from the current setting to its specified new setting.
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.
Pan	L64–63R	Stereo location of the delay
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance	D100:0W–D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

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)

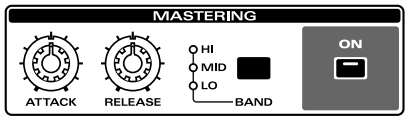
Mastering effect

This is a stereo compressor (limiter) that is applied to the final output of the MC-909. It has independent high, mid, and low ranges. By compressing sounds that exceed the specified volume level, it can be used to prevent the sound from distorting.



Parameter	Range	Explanation
ATTACK	0–100 ms	Time from when the volume goes up the threshold level until the compressor effect applies
RELEASE	50–5000 ms	Time from when the volume falls below the threshold level until the compressor effect no longer applies
THRESHOLD	-36–0 dB	Volume level at which compression begins
RATIO	1.00:1–INF:1	Compression ratio (INF: infinity)
LEVEL	0–24 dB	Output volume
Split Frequency High	2000–8000 Hz	Frequency at which the high-frequency (HI) and mid-frequency (MID) bands are split
Split Frequency Low	200–800 Hz	Frequency at which the low-frequency (LO) and mid-frequency (MID) bands are split

You can use the controls of the Mastering section (ATTACK and RELEASE) to adjust the mastering effect parametersin real time.



[ON]	Switches the mastering effect on/off
[BAND]	Selects the frequency band that you want to adjust

Function buttons

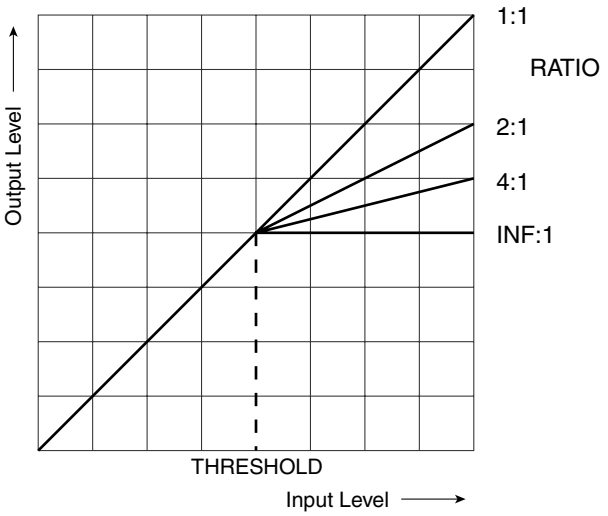
[F1 (Techno)]	Recall settings suitable for the corresponding style.
[F2 (Hip Hop)]	
[F3 (Break Beats)]	
[F4 (User)]	Recalls the user settings that you saved.
[F5 (Close)]	Returns to the previous screen.
[F6 (System Write)]	Saves the current settings as the user settings. Only one set of user settings can be saved.

NOTE

If you press [F1]–[F4], the settings you are editing will be lost. Press [F6] first to save them.

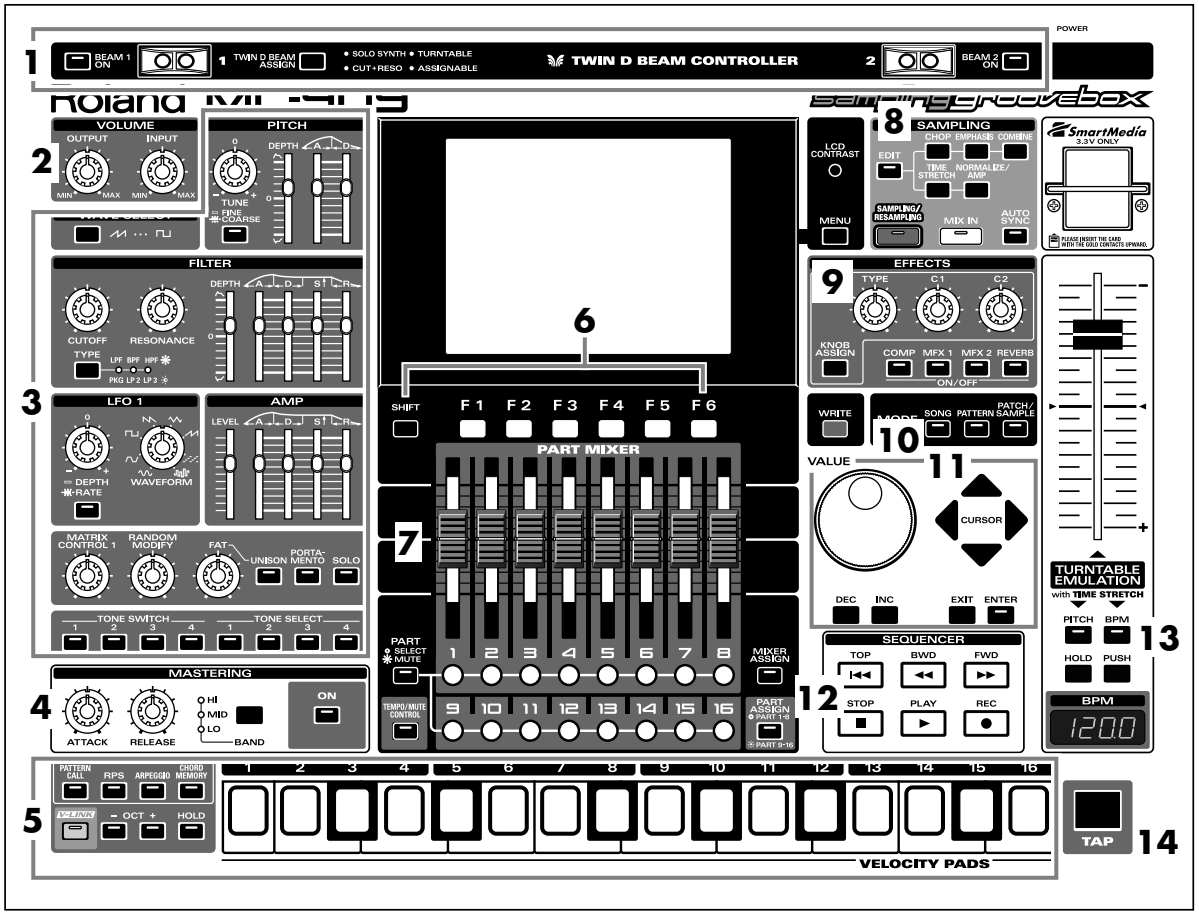
About THRESHOLD and RATIO

As shown in the diagram below, these parameters determine how the volume is to be compressed.



Sampling

How Things Work (in Sampling mode)



In the Sampling section of the panel, press [SAMPLING/ RESAMPLING] so the indicator is lighted. The Sampling Menu screen will appear.

During sampling, the panel controls have the following functions.

1. D Beam controllers

Pass your hand over these to modify the pattern (p. 35).

[BEAM 1 ON]	Turns the left D Beam controller (BEAM 1) on/off.
[BEAM 2 ON]	Turns the right D Beam controller (BEAM 2) on/off.
[D BEAM ASSIGN]	Selects the function of the D Beam controller.

2. Volume section

[OUTPUT]	Adjusts the output volume of the entire MC-909.
[INPUT]	Adjusts the input volume from the INPUT jacks.

3. Realtime Modify section

These controls modify the sound (p. 33).

4. Mastering section

[ON]	Switches the mastering effect (compressor) on/off.
[BAND]	Selects the frequency band to adjust.
[ATTACK]	Adjusts the attack time of the input sound.
[RELEASE]	Adjusts the time from when the volume falls below the threshold level until the effect disappears.

5. Velocity pads

Use these pads as a keyboard to play sounds or trigger phrases (p. 27).

6. Function buttons

These buttons access the function screens indicated in the bottom line of the display.

7. Part Mixer section

Here you can adjust the volume, pan, etc., of each part (p. 33).

[PART] (SELECT/MUTE)	Selects the function of the Part buttons [1]–[16]. The buttons work as Part Select buttons when the indicator is not lighted, and as Mute buttons when the indicator is lit.
[TEMPO/MUTE CONTROL]	Switches on/off the Tempo/Mute part (a part that records tempo changes and mute operations, p. 42).
[MIXER ASSIGN]	When you press this button so its indicator lights, the Mixer screen will appear.
[PART ASSIGN]	Selects the parts that are controlled by the sliders. The sliders will control parts 1–8 if this indicator is not lighted, or parts 9–16 if the indicator is lit.

8. Sampling section

[EDIT]	Displays the Sample Edit screen (p. 114).
[CHOP]	Divides a sample (p. 118).
[EMPHASIS]	Emphasize the sample's upper range (p. 120).
[COMBINE]	Combines multiple samples into a single sample (p. 120).
[TIME STRETCH]	Stretches or shrinks the sample to change the length or tempo (p. 121).
[NORMALIZE/AMP]	Boosts the level of the sample as high as possible (Normalize, p. 121), or boosts/cuts the level as specified (Amp, p. 122).
[SAMPLING/RESAMPLING]	Displays the Sampling menu screen (p. 112).
[MIX IN]	Mixes the sound from the INPUT jack into the output (p. 34).
[AUTO SYNC]	Synchronizes the sample to the pattern (p. 36).

9. Effect section

Applies special effects to the sound (p. 88).

[COMP]–[REVERB]	Switch each effect on/off (p. 88).
[KNOB ASSIGN]	Selects the effect to be controlled in real time (p. 91).
[TYPE]	Selects the type of effect.
[C1], [C2]	Modifies the assigned function in real time.

10. Mode section

Press the [PATTERN] button to enter Pattern mode.

Pressing one of the other two buttons will switch you to the corresponding mode.

11. Cursor/Value section

Use these buttons and dial to select patterns or input values (p. 18).

12. Sequencer section

[PLAY]	Plays a pattern (p. 24).
[STOP]	Stops playback/recording.
[FWD]	Advances to the next measure.
[BWD]	Returns to the previous measure.
[TOP]	Moves to the beginning of the pattern.
[REC]	Used when recording (p. 37).

13. Turntable emulation

Applies an effect that simulates increasing/decreasing the rotational speed of a turntable (p. 36).

14. TAP button

Lets you set the BPM (tempo) by pressing the button at the desired timing (p. 25).

Sampling procedure

1. Press [SAMPLING/RESAMPLING] to access the Sampling Menu screen.

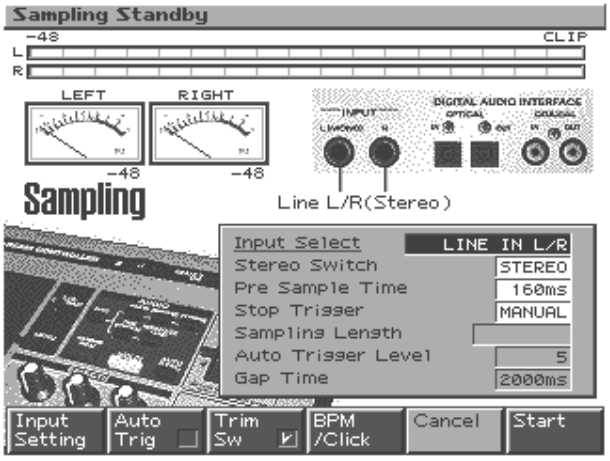


The upper part of the screen will show the amount of free memory. If the free memory reaches 0%, no further sampling is possible.

2. Press [F1 (Sampling)]–[F5 (Solo)] to select the sampling mode. The sampling-standby screen will appear.

[F1 (Sampling)]	Sample a sound from an external input source. * Operating the velocity pads or D Beam controllers will not play the internal sound generator.
[F2 (Re-Sampling)]	Resample the sound of the internal sound generator. * The sound of the external input will not be heard.
[F3 (Mix)] (Mix sampling)	Sample the combined sounds of the internal sound generator and an external input source.
[F4 (Auto Divide)] (Auto divide sampling)	Sample an extended source, and automatically divide it into several samples at silent regions. * Operating the velocity pads or D Beam controllers will not play the internal sound generator.
[F5 (Solo)] (Solo sampling)	While playing the internal sound generator as usual, sample only the sound from the external input. * Effects cannot be applied to the external input sound.
[F6 (Cancel)]	Return to the previous screen.

(Example) Standby screen for Sampling



3. Make the settings for things such as the input source of the sound to be sampled, and triggering.

Function buttons

[F1 (Input Setting)]	Make settings for the external input (p. 34).
[F2 (Auto Trig)] (Auto Trigger)	If this is on, sampling will begin automatically when the input sound is detected.
[F3 (Trim Sw)]	If this is turned on, the Start point and End point settings (p. 115) will be automatically adjusted after sampling is performed, so any silent portions at the beginning or end of the sampled sound are excluded.
[F4 (BPM/Click)]	Set the tempo, and turn the metronome on/off (p. 25).

Parameters

Parameter	Range	Explanation
Input Select	LINE IN L/R, LINE IN L, DIGITAL(OPT), DIGITAL(CO-AX), MICROPHONE	Input source to be sampled **LINE IN L/R:** INPUT jacks L/R (stereo) **LINE IN L:** INPUT jack L (mono) **DIGITAL(OPT):** Digital input (optical) **DIGITAL(CO-AX):** Digital input (coaxial) **MICROPHONE:** INPUT jack L (mono, mic level) * This cannot be set when resampling.
Stereo Switch	MONO, STEREO	Stereo/mono setting for sampling **MONO:** The sound will be sampled as one wave. If the sound is stereo, the left and right signals will be mixed. **STEREO:** The sound will be sampled as two waves, L and R. * Mono sampling uses half as much memory space.
Pre Sample Time	0–1000 ms	The length of sound preceding the moment at which sampling was manually or automatically initiated that will be captured in the sample This lets you prevent the attack portion of the sound from being omitted from the sample.
Stop Trigger	MANUAL, BEAT, TIME	How sampling will end **MANUAL:** Continue sampling until you press [F5 (STOP)]. **BEAT:** Sample the specified number of beats at the current tempo (BPM). **TIME:** Sample the specified length of time.

Parameter	Range	Explanation
Sampling Length	**When Stop Trigger is BEAT**	
	1–20000	Number of beats to continue sampling
	When Stop Trigger is TIME	
	00'00"010–50'00"000	length of time to continue sampling
	The maximum value will depend on the amount of memory. * This parameter cannot be specified if Stop Trigger is set to MANUAL.	
Auto Trigger Level	0–7	Volume level at which sampling will begin when Auto Trig is ON A setting of 0 is the minimum.
Gap Time	500, 1000, 1500, 2000 ms	Length of silence at which the sample will be divided Whenever there is a silent region longer than the specified time, the sample will be divided at that point, and the next sample number will be assigned to the sound that follows. * This parameter is valid only when you are using Auto Divide Sampling.

4. In the Volume section of the panel, use [INPUT] to adjust the input level of the external source.

* *If the input level is excessive, the word "CLIP" will appear at the lower right of the level meter in the screen, and the CLIP indicator at the upper right of the meter will light.*
* *Using a connection cable that contains a resistor can cause the sound level to be low. Use a connection cable that does not contain a resistor.*
* *The level meter shows the level after the signal has passed through the effects (compressor, multi-effects, reverb) and the mastering effect. If you want to see the actual input level, turn off all effects and the mastering effect (p. 88, p. 108).*
(During Solo sampling, effects cannot be applied to the external input sound.)

Cautions when using a microphone

Howling could be produced depending on the location of microphones relative to speakers. This can be remedied by:

1. Changing the orientation of the microphone(s).
2. Relocating microphone(s) at a greater distance from speakers.
3. Lowering volume levels.

* *If you use a microphone, connect the ground terminal to an electrical ground (p. 15).*

5. Press [F6 (Start)] to begin sampling.

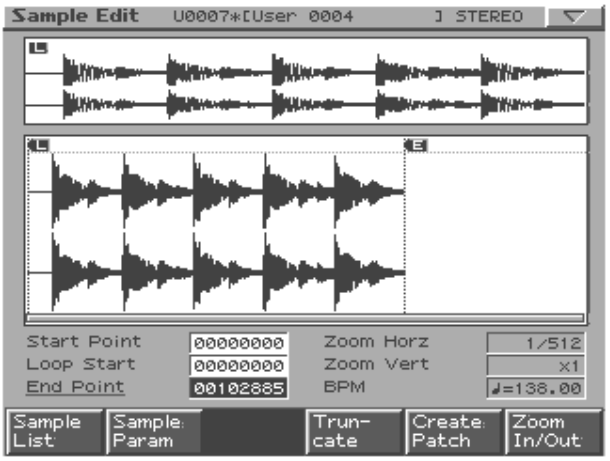
NOTE

You cannot save a sample that is larger than 128 MB (approximately 24 minutes of monaural or 12 minutes of stereo).
If you are not using a memory card, you cannot save a sample that is larger than 16 MB (approximately 180 seconds of monaural or 90 seconds of stereo).

* *Even if you expand the memory (DIMM), you cannot save a sample that is larger than 128 MB. (However, you can play it.)*

6. Press [F5 (Stop)] to stop sampling.

The Sample Edit (p. 114) screen will appear.



7. Press [EXIT] to go back to where you were before you entered the Sampling screen.

About the sample numbers chosen during sampling

The samples created when you execute the sampling operation are placed in an area where there are at least 256 consecutive unused numbers in the sample list.

* *You cannot perform sampling if there are not at least 256 consecutive unused numbers in the sample list. You will need to delete unneeded samples (p. 124) in order to allocate 256 or more consecutive free numbers.*

Dividing a sample during sampling

1. During sampling, press [F6 (Divide)].

The sample will be divided at the point where you pressed the button, and the subsequent material will be sampled as a sample of the next number.

* *When sampling in mono, you can divide the material into a maximum of 256 samples. When sampling in stereo, you can divide the material into a maximum of 128 samples (L/R total 256 samples).*

Samples that you load can be used in patches or rhythm sets in the same way as waves.

NOTE

Samples that you load will be lost when you turn off the power. If you want to keep them, you must Save them (p. 123).

About the volume when resampling

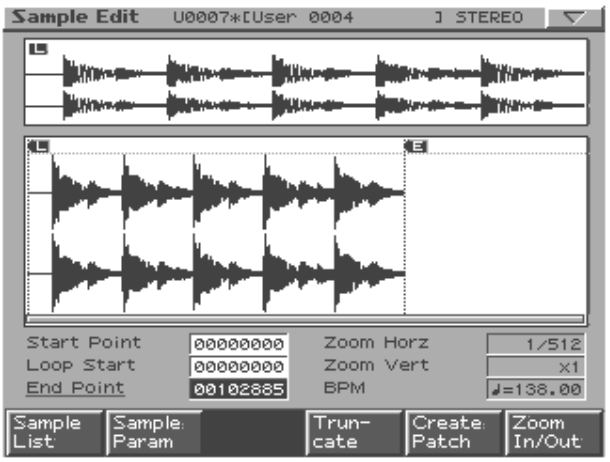
The volume of a phrase that you resample may be less than the volume of the original phrase. If necessary, execute the Normalize command (p. 121) to raise the volume.

Sample Edit

Use sample edit to modify a waveform (sample) that you sampled/loaded/imported.

Basic sample editing procedure

1. When you press [EDIT] in the sampling section, the Sample Edit screen will appear.



Function buttons

[F1 (Sample List)]	From a list, select the sample to edit (p. 115).
[F2 (Sample Param)]	Make various settings for the sample (p. 116).
[F4 (Truncate)]	Cut unwanted portions from the beginning/end of the sample (p. 117).
[F5 (Create Patch)]	Create a new patch that uses the sample (p. 117).
[F6 (Zoom In/Out)]	Change the magnification of the sample display (p. 114).

Panel buttons

[CHOP]	Divide the sample (p. 118).
[EMPHASIS]	Emphasize the sample's upper range (p. 120).
[COMBINE]	Combine multiple samples into a single sample (p. 120).
[TIME STRETCH]	Stretch or shrink the sample to change the length or tempo (p. 121).
[NORMALIZE/AMP]	Boosts the level of the sample as high as possible (Normalize, p. 121), or boosts/cuts the level as specified (Amp, p. 122).

MEMO

You can access the Chop–Amp screens by holding down [SHIFT] and pressing [F1]–[F6]. Alternatively, you can select these screens by pressing [MENU].

NOTE

Sample edit operations (Chop, Normalize, etc.) apply to the entire sample. Even if you specify a start point or end point, they will be ignored.
If you want to apply the operation only to the region between the start point and end point, use Truncate to delete unwanted portions of the sample, and then perform the sample editing operation.

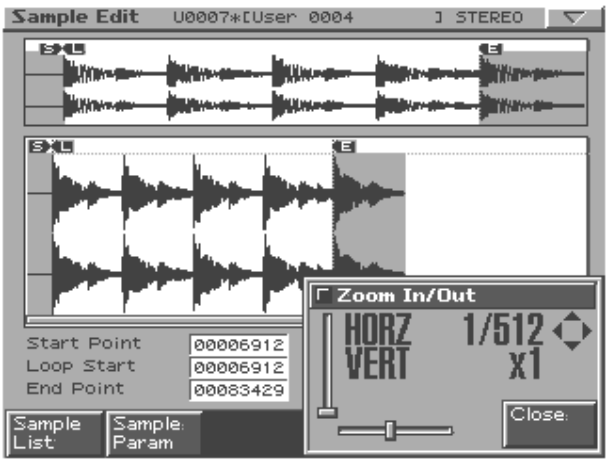
NOTE

Zoom In/Out

Here's how to change the magnification of the sample display.

1. In the Sample Edit screen, press [F6 (Zoom In/Out)].

The Zoom In/Out sub-window will appear.



2. Use [CURSOR] to change the magnification of the display.

- **Horizontal axis (time axis):** 1/1--1/65536
  Press [CURSOR (left)] to increase the display magnification.
  Press [CURSOR (right)] to decrease the display magnification.

* *You can also use [VALUE] or [INC/DEC] to adjust this setting.*

- Vertical axis (waveform amplitude axis): x1--x128
  Press [CURSOR (left)] to increase the display magnification.
  Press [CURSOR (right)] to decrease the display magnification.

3. Press [F6 (Close)] to close the sub-window.

HINT

Even without displaying the Zoom In/Out sub-window, you can press [CURSOR (right/left) to expand/shrink the horizontal axis, or hold down [SHIFT] and press [CURSOR (up/down)] to expand/shrink the vertical axis.

Setting the start/end points of the sample

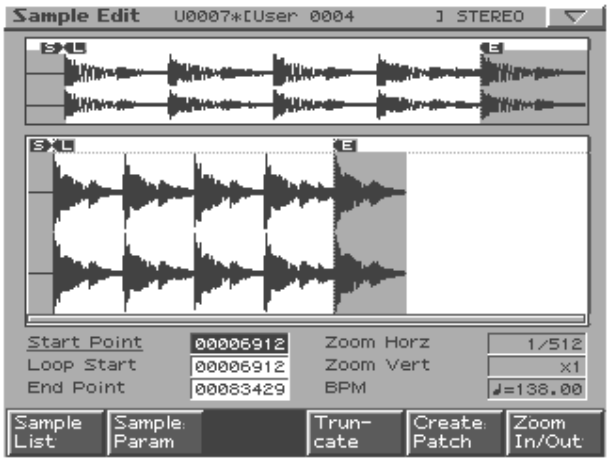
You can specify the portion of the sample that will actually sound. You can also specify the region that is to be looped.

1. Select the sample that you want to edit.

For details on how to select a sample, refer to Sample List (p. 115).

2. Use [CURSOR (up/down)] to select the point that you want to set.

- **Start Point:**
  This is the point at which playback will start. Set this so that any unwanted portion at the beginning of the sample will be skipped, and the sound will begin at the desired moment.
- **Loop Start:**
  This is the point at which loop playback (second and subsequent times) will start. Set this if you want to loop the sound from a point other than the start point.
- **End Point:**
  This is the point at which playback will end. Set this so that any unwanted portion at the end of the sample will not be heard.



3. Use [VALUE] or [INC/DEC] to move the point so it's where you want it to be.

HINT

You'll probably find it convenient to zoom-in when making fine adjustments, and zoom-out when making major adjustments (p. 114).

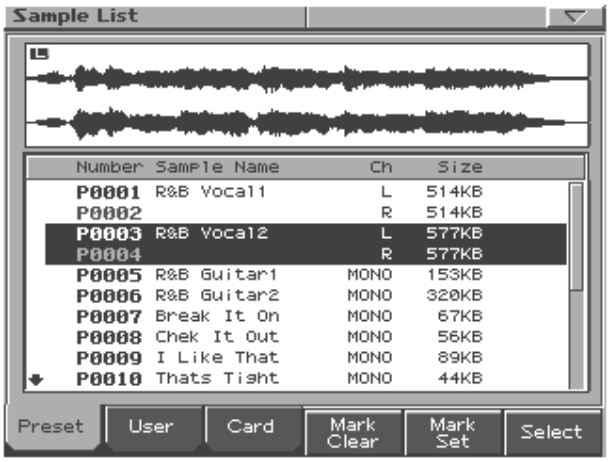
MEMO

After specifying the start point and end point, you can execute Truncate (p. 117) to delete unwanted portions at the beginning and end of the sample.

Sample List

Here's how to select a sample from a list.

1. In the Sample Edit screen, press [F1 (Sample List)].



2. Use [F1 (Preset)]–[F3 (Card)] to specify the bank from which you want to select a sample.

3. Use [VALUE], [INC/DEC], or [CURSOR (up/down)] to select a sample.

If you hold down [SHIFT] while you operate the above buttons, the sample number will change in steps of ten.

4. Press [F6 (Select)].

The edit screen for the selected sample will appear.

Function buttons

[F1 (Preset)]	Select from preset samples.
[F2 (User)]	Select from user samples.
[F3 (Card)]	Select from memory card samples.
[F4 (Mark Clear)]	Remove the check mark from the sample.
[F5 (Mark Set)]	Add a check mark to the sample.
[F6 (Select)]	Display the edit screen for the selected sample.
[SHIFT] + [F1 (Delete Sample)]	Delete all checked samples with their files. (p. 124) (*1)
[SHIFT] + [F2 (Erase)]	Erase all checked samples from memory (p. 124). (The files will not be deleted.) (*1)
[SHIFT] + [F3 (Load)]	Load the checked samples into memory. (p. 124) (*1)
[SHIFT] + [F4 (Mark Clear All)]	Clear the check marks from all samples in the folder.
[SHIFT] + [F5 (Mark Set All)]	Add a check mark to all samples in the folder.
[SHIFT] + [F6 (Create Rhythm)]	Execute "Create Rhythm" (p. 119) on all checked samples.

*1: If not even check mark is assigned, the operation will be executed on the sample selected by the cursor.

The status of each sample in the sample list

Icon	Sample status
NEW	Sample has just been sampled or imported
EDIT	Sample has been edited but not yet saved
UNLOAD	Sample has not been loaded
None	Sample has just been saved or loaded

Sample Parameters

Here you can make various settings for the sample.

1. In the Sample Edit screen, press [F2 (Sample Param)].



2. Use [CURSOR (up/down)] to select a parameter.

3. Use [VALUE] or [INC/DEC] to edit the value.

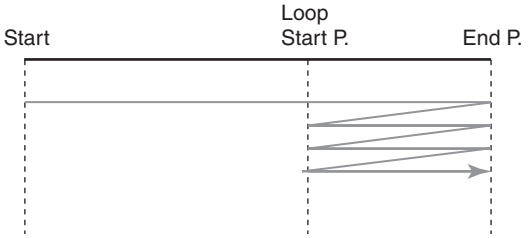
4. Press [F6 (Close)] when you are finished.

Parameter	Values	Explanation
Loop Mode	FWD, ONE-SHOT, REV, REV-ONE	How the sample will be played Refer to "About the Loop Mode" (p. 116)
Loop Tune	-50– +50	Pitch of the loop region Make fine adjustments in one-cent (1/100 semitone) increments.
Original Key	24 (C1)– 127 (G9)	Note number that will play the sample at the pitch at which it was sampled
BPM	5–300	Original BPM of the sample * You will need to edit this value when using Auto Sync.
Time Stretch Type	TYPE01– TYPE10	Auto sync method Decreasing this value will optimize the sound for more rapid phrases, and increasing this value will optimize the sound for slower phrases.
Start Fine	0–255	Fine adjustment of the Start point.
Loop Start Fine	0–255	Fine adjustment of the Loop Start point.
Loop End Fine	0–255	Fine adjustment of the End point.

About the Loop Mode

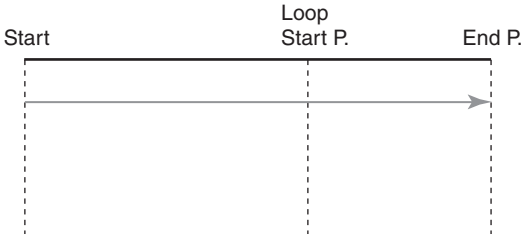
FWD (Forward)

After the Sample played back from the Start point to the End point, it will then be repeatedly played back in the forward direction, from the Loop Start point to the End point.



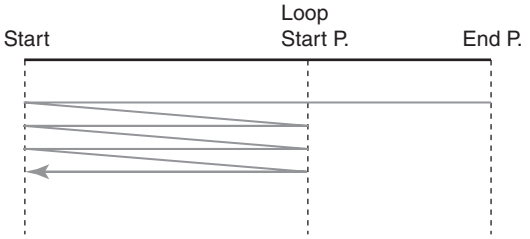
ONE-SHOT

The sample will be played back only once, from the Start point to the End point.



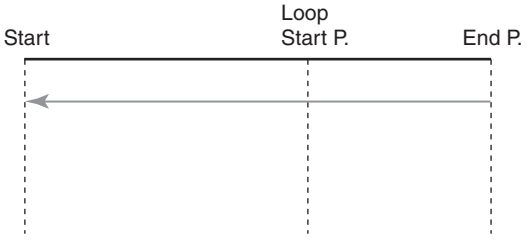
REV (Reverse)

When the sample has been played back from the End point to the Start point, it will be repeatedly played back in the reverse direction, from the Loop Start point to the Start point.



REV-ONE (Reverse One-shot)

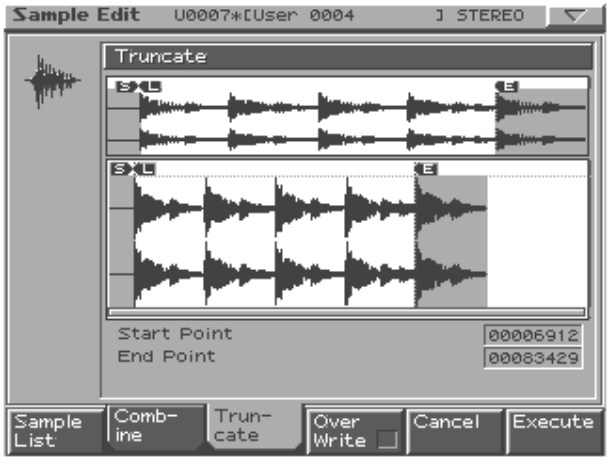
The sample will be played back only once from the End point to the Start point in the reverse direction.



Truncate

This operation cuts the portions of the sample that are earlier than the Start Point and later than the Loop End Point.

1. In the Sample Edit screen, press [F4 (Truncate)].



2. If you want to replace the current sample with the truncated sample, press [F4 (Over Write)] to display the "✔" symbol.

3. Press [F6 (Execute)].

A message will ask you for confirmation.

4. To execute the Truncate operation, press [F6 (Execute)].

* *If you want to cancel without executing, press [F5 (Cancel)].*

Create Patch

This operation creates a patch that uses the current sample as the wave for Tone 1.

If desired, the created patch can also be assigned to the current part.

1. In the Sample Edit screen, press [F5 (Create Patch)].

The patch name entry screen will appear.



2. Assign a name to the patch, and save it.

Refer to "Saving a Patch/Rhythm Set" (p. 77).

* *If you decide to cancel the Create Patch operation, press [F5 (Cancel)] to return to the previous screen.*

MEMO

When you execute Create Patch, a sample will be created at the same time.

When saving the patch, a message will ask you whether you want to assign the newly created patch to the current part.

3. If you want to assign the patch, press [F6 (Execute)].

The newly created patch will be assigned to the current part, and the Patch Edit screen (p. 56) will appear.

4. If you do not want to assign the patch, press [F5 (Cancel)].

You will return to the Sample Edit screen.

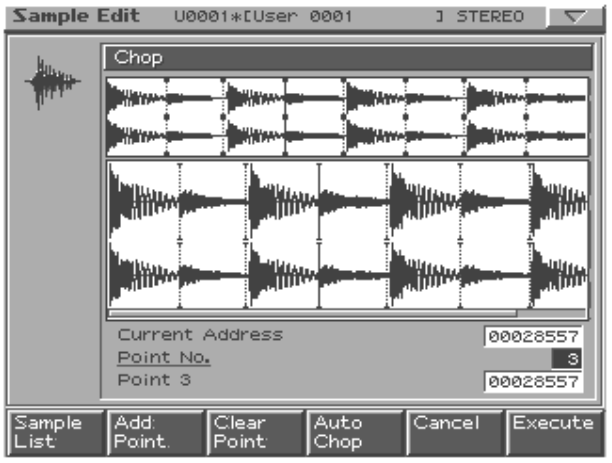
Chop

This operation divides the sample into two or more samples (a maximum of 16 samples).

1. In the Sample Edit screen, press [CHOP].

Alternatively, hold down [SHIFT] and press [F1 (Chop)].

2. Press [F1 (Sample List)] and select a sample.



Procedure for dividing a sample

You can freely specify the point(s) at which the sample is to be divided.

1. Press [CURSOR (up)] to move the cursor to "Current Address."

2. Use [VALUE] or [INC/DEC] to move the point.

3. At the location where you want to divide the sample, press [F2 (Add Point)].

The current location will be the dividing point.

4. Repeat steps 2 and 3 to specify other dividing points as desired.

The sample will be divided into a maximum of 16 samples.

5. Press [F6 (Execute)].

A message will ask you for confirmation.

6. To execute, press [F6 (Execute)].

The Chop operation will be executed, and the divided samples will be saved. (Normally, they will be saved in consecutive sample numbers.)

* *To cancel, press [F5 (Cancel)].*

When you execute the Chop operation, a message will ask whether you want to execute Create Rhythm.

7. If you want to execute Create Rhythm, press [F6 (Execute)].

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8. If you don't want to execute Create Rhythm, press [F5 (Cancel)].

You will return to the Sample Edit screen.

Automatically dividing a sample (Auto Chop)

Here's how you can automatically specify the points at which the sample is to be divided, and then divide the sample.

1. Press [F4 (Auto Chop)].

The Auto Chop sub-window will appear.

2. Press [CURSOR (up)] to move the cursor to "Chop Type."

3. Use [VALUE] or [INC/DEC] to select the method by which the sample is to be divided.

4. Press [CURSOR (down)].

5. Use [VALUE] or [INC/DEC] to set the value.

Parameter	Explanation
Chop Type	How the sample is to be divided **Level:** Divide according to volume. **Beat:** Divide at beats based on the BPM (p. 116) of the sample. **Divide x:** Divide into 'x' number of equal lengths.
If Chop Type is Level	
Level	Level at which the sample is to be divided Lower settings of this value will cause the sample to be divided more finely. **Range:** 1–10
If Chop Type is Beat	
Beat	Beat interval at which the sample is to be divided **Range:** 1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2, 1/1, 2/1
If Chop Type is Divide x	
Times	Number of samples into which the sample is to be divided **Range:** 2–16

6. Press [F6 (Auto Chop)].

The dividing points will be automatically specified according to the settings you made.

The sample will be divided into a maximum of 16 samples.

* *To cancel Auto Chop, press [F5 (Close)].*

7. Press [F6 (Execute)].

A message will ask you for confirmation.

8. To execute, press [F6 (Execute)].

The Chop operation will be executed, and the divided samples will be saved. (Normally, they will be saved in consecutive sample numbers.)

* *To cancel, press [F5 (Cancel)].*

When you execute the Auto Chop, a message will ask whether you want to execute Create Rhythm.

9. If you want to execute Create Rhythm, press [F6 (Execute)].

- Create Rhythm -> p. 119

10. If you don't want to execute Create Rhythm, press [F5 (Cancel)].

You will return to the Sample Edit screen.

Auditioning the divided samples

After dividing the sample, you can press the velocity pads to audition each of the divided samples.
From the sample nearest to the start point, the samples will be played by pads [1], [2], ...

Moving a dividing point

1. **Use [CURSOR (up/down)] to move the cursor to "Point No."**
2. **Turn [VALUE] to select the point that you want to move.**
   In order from the start point, the points are numbered 1, 2, ...15.
3. **Press [CURSOR (down)].**
4. **Turn [VALUE] to move the dividing point.**

Deleting a dividing point

1. **Use [CURSOR (up/down)] to move the cursor to "Point No."**
2. **Turn [VALUE] to select the point that you want to delete.**
3. **Press [F3 (Clear Point)].**
   The dividing point will be deleted, and the waveforms before and after that point will be connected.

Create Rhythm

This operation lets you create a rhythm set using the samples selected from the sample list, or the samples you created by the Chop operation.
Each of the divided samples will become a separate rhythm tone.

Create a Rhythm Set using the samples selected from the Sample List

1. **In the sample list, add a check mark to the samples that you want to use as a rhythm tone.**
   You can select up to sixteen samples. If you select seventeen or more samples, the rhythm set will be created from the sixteen lowest-numbered samples.
2. **Hold down [SHIFT] and press [F6 (Create Rhythm)].**
   A message will ask whether you want to execute Create Rhythm.
3. **To execute, press [F6 (Execute)].**
   The Rhythm Set Name input screen will appear.
4. **Assign a name to the rhythm set, and save it.**
   For details, refer to "Saving a Patch/Rhythm Set" (p. 77).

* *To cancel the Create Rhythm operation, press [F5 (Cancel)] to return to the previous screen.*

When you save a rhythm set, you will be asked whether you want to assign the newly created rhythm set to the current part.

5. **If you want to assign it, press [F6 (Execute)].**
   The newly created rhythm set will be assigned to the current part, and the Rhythm Edit screen (p. 70) will appear.
6. **If you don't want to assign it, press [F5 (Cancel)].**
   You will return to the sample edit screen.

Create a Rhythm Set using the samples created by the Chop operation

When the sample chop operation is completed (p. 118), you will be asked whether you want to execute Create Rhythm.

1. **If you want to execute Create Rhythm, press [F6 (Execute)].**
   The Rhythm Set Name input screen will appear.
2. **Assign a name to the rhythm set, and save it.**
   For details, refer to "Saving a Patch/Rhythm Set" (p. 77).

* *To cancel the Create Rhythm operation, press [F5 (Cancel)] to return to the previous screen.*

When you save a rhythm set, you will be asked whether you want to assign the newly created rhythm set to the current part.

3. **If you want to assign it, press [F6 (Execute)].**
   The newly created rhythm set will be assigned to the current part, and the Rhythm Edit screen (p. 70) will appear.
4. **If you don't want to assign it, press [F5 (Cancel)].**
   You will return to the sample edit screen.

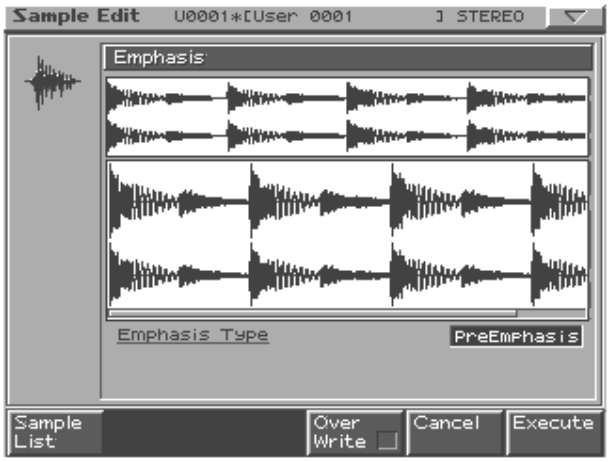
Emphasis

In some cases, the audio quality will be improved if you boost the high-frequency range of an imported sample. Also, the high-frequency range of the sample may be emphasized when you use a sampler made by another manufacturer. In this case, you can minimize the change in tonal character by attenuating the high-frequency range.

1. Press [EMPHASIS].

Alternatively, hold down [SHIFT] and press [F2 (Emphasis)].

2. Press [F1 (Sample List)] and select a sample.



3. Use [VALUE] or [INC/DEC] to select the emphasis type.

PreEmphasis: Emphasizes the high-frequency range.
DeEmphasis: Attenuates the high-frequency range.

4. If you want to replace the current sample with the emphasized sample, press [F4 (Over Write)] to display the "✔" symbol.

5. Press [F6 (Execute)].

A message will ask you for confirmation.

6. To execute, press [F6 (Execute)].

* *To cancel, press [F5 (Cancel)].*

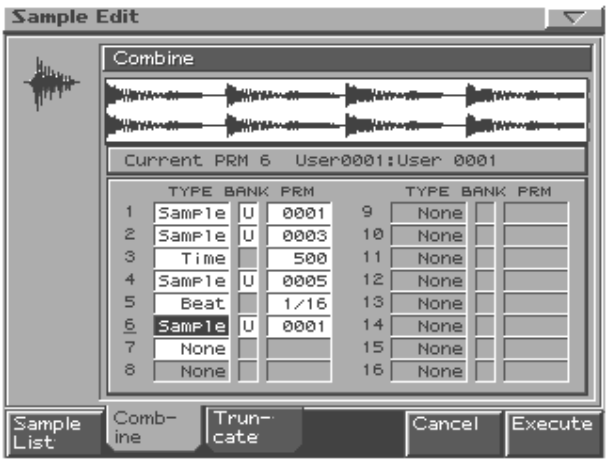
Combine

This operation combines multiple samples into a single sample. You can combine as many as sixteen samples. You can also place silent spaces between the samples.

1. Press [COMBINE].

Alternatively, hold down [SHIFT] and press [F3 (Combine)].

2. Press [F1 (Sample List)] and select a sample.



3. Use [CURSOR] to select a parameter.

4. Use [VALUE] or [INC/DEC] to set the value.

Parameter	Range	Explanation
1–16	The sample or silence to be combined	
TYPE	Sample, Time, Beat	**Sample:** sample **Time:** silent region (specified as time) **Beat:** silent region (specified as a note value)
BANK	U, C	Bank that contains the sample **U:** user **C:** card * This will be displayed only if TYPE is set to Sample.
PRM	1–10000 ms note value: 1/32,1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2, 1/1, 2/1	Sample number, or the duration/ note value of the silent region The note value is based on the BPM of the sample immediately before the silent region. * If there is no sample immediately before the silent region, the current BPM will be used.

5. Press [F6 (Execute)]

A message will ask you for confirmation.

6. To execute, press [F6 (Execute)].

* *To cancel, press [F5 (Cancel)].*

Edit Time Stretch

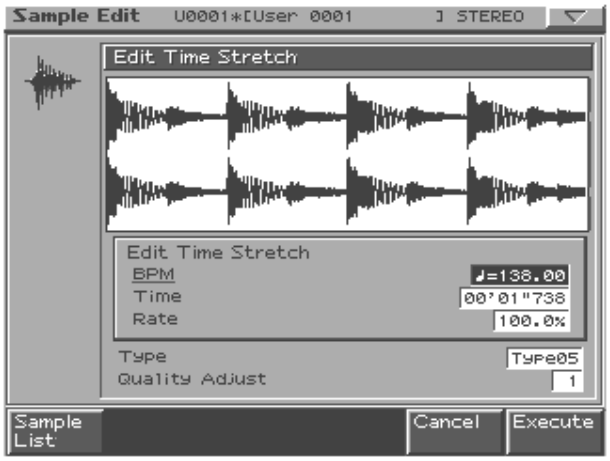
This operation stretches or shrinks the sample to modify the length or tempo.

You can stretch or shrink the sample by a factor of one half to double the original length.

1. Press [TIME STRETCH].

Alternatively, hold down [SHIFT] and press [F4 (Time Stretch)].

2. Press [F1 (Sample List)] and select a sample.



3. Press [CURSOR (up/down)] to select how you want to specify the tempo/length.

Edit Time Stretch	**BPM:** Change the BPM (p. 116) of the sample to the BPM you specify. **Time:** Specify the length of the sample as a time value. **Rate:** Specify the length relative to the current length of the sample. **Range:** 50.0–200.0%	
Type	TYPE01–TYPE10	Lower settings of this value will make the sound more suitable for faster phrases, and higher settings will make the sound more suitable for slower phrases.
Quality Adjust	1–10	Make fine adjustments to the tonal quality of the Time Stretch.

4. Use [VALUE] or [INC/DEC] to specify the tempo/length.

5. Press [F6 (Execute)].

The length of the sample will be changed as specified.

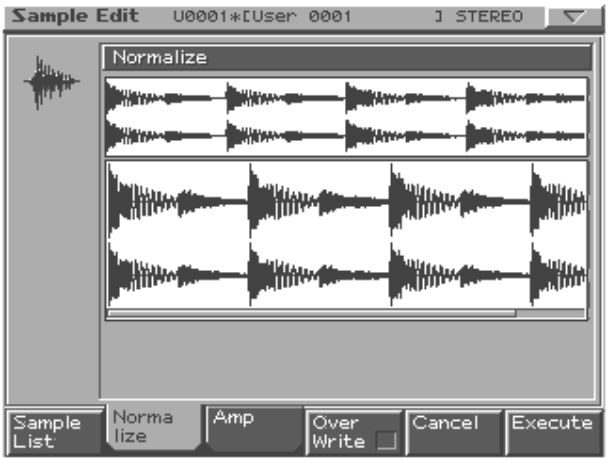
* *To cancel, press [F5 (Close)].*

Normalize

This operation raises the level of the entire sample as much as possible without exceeding the maximum level.

1. Press [NORMALIZE/AMP].

2. Press [F1 (Sample List)] and select a sample.



3. If you want to replace the current sample with the normalized sample, press [F4 (Over Write)] to display the "✔" symbol.

4. Press [F6 (Execute)].

A message will ask you for confirmation.

5. To execute, press [F6 (Execute)].

* *To cancel, press [F5 (Cancel)].*

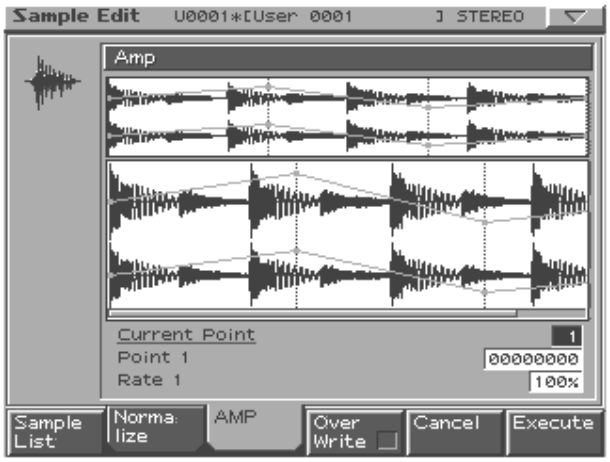
Amp

This operation applies an envelope (time-variant change) to the volume of the sample.

1. Press [NORMALIZE/AMP] and then press [F3 (Amp)].

Alternatively, hold down [SHIFT] and press [F6 (Amp)]).

2. Press [F1 (Sample List)] and select a sample.



3. Use [CURSOR (up/down)] to select a parameter.

4. Use [VALUE] or [INC/DEC] to set the value.

Current Point	Currently selected point Beginning near the start point, the points will be numbered 1, 2, 3, or 4.
Point 1–4	Location of the current point
Rate 1–4	Amplification ratio of the current point Specifies how the volume of each point is to be boosted relative to the current value. **Range:** 0–400%

5. If you want the edited sample to replace the current sample, press [F4 (Over Write)] to display the "✔" mark.

6. Press [F6 (Execute)].

A message will ask you for confirmation.

7. To execute, press [F6 (Execute)].

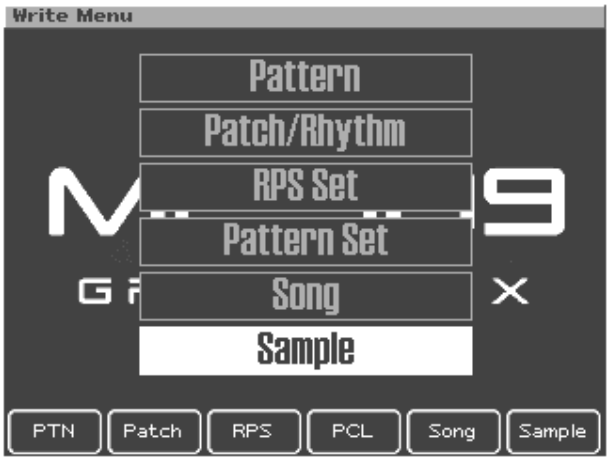
* *To cancel, press [F5 (Cancel)].*

Saving a sample

A newly loaded sample, as well as any changes you've made in the settings for a sample will be lost as soon as you turn off the power. If you want to keep such data, you must save it as follows.

1. Press [SAMPLING/RESAMPLING] to access the Sample Edit screen.

2. Select the sample that you want to save.



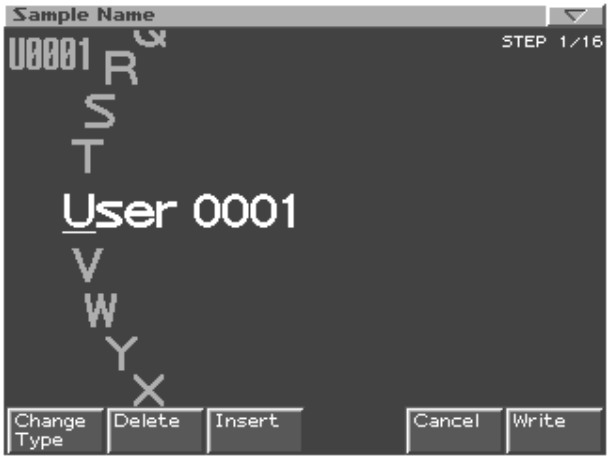
3. Press [WRITE].

The Write Menu screen will appear.

Make sure that "Sample" is highlighted.

4. Press [ENTER].

The Sample Name input screen will appear.

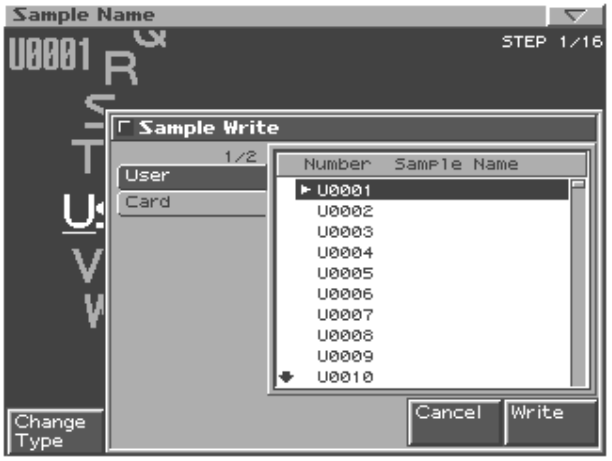


5. Assign a name to the sample.

[CURSOR (left/right)]	Moves the cursor (the location at which to enter/edit a character).
[CURSOR (up/down)]	Switches letters between uppercase and lowercase.
[VALUE] [INC/DEC]	Selects characters.
[F1 (Change Type)]	Selects the type of character. Each time you press this, you will alternately select the first character of the uppercase alphabet (A), lowercase alphabet (a), or numerals and symbols (0).
[F2 (Delete)]	Deletes the character at the cursor location, while shifting the following characters to the left, closing the gap.
[F3 (Insert)]	Inserts a space at the cursor location.

* *If you decide to discard your changes, press [F1 (Cancel)].*

6. When you have finished inputting the name, press [F6 (Write)].



7. Use [VALUE] or [INC/DEC] to select the write-destination sample.

Use [CURSOR (left/right)] to select the bank (User or Card).

8. Press [F6 (Write)].

A message will ask you for confirmation.

9. To write the sample, press [F6 (Execute)].

* *If you decide to cancel without writing, press [F5 (Cancel)].*

NOTE

- You cannot overwrite onto another sample.
- When saving a stereo sample, two consecutive sample numbers must be available.

Menu (in Sample Edit)

Using the menu

1. **In the Sample Edit screen, press [MENU].**
2. **Use [CURSOR (up/down)] or turn [VALUE] to select the function that you want to execute.**
3. **Press [ENTER].**
   A message will ask you for confirmation.
4. **To execute, press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

Sample List	View a list of samples (p. 115).
Sample Parameter	Make various settings for a sample (p. 116).
Load Sample	Load a sample.
Load All Sample	Load all samples from the user bank and card bank.
Import WAV/AIFF	Import WAV/AIFF files from an external device.
Create Patch	Create a patch using a sample (p. 117).
Delete Sample File	Completely delete a sample.
Erase Sample	Erase a sample from memory.

Loading a sample

Here's how a sample that you specify in the sample list (p. 115) can be loaded into memory.

1. **From the menu, choose "Load Sample."**
2. **Press [ENTER].**
   A message will ask you for confirmation.
3. **Press [F6 (Execute)] to execute.**

* *To cancel, press [F5 (Cancel)].*

Loading all samples

Here's how all samples in the user bank and card bank can be loaded.

NOTE

When you execute Load All Samples, all unsaved samples will be erased.

NOTE

If the total size of the data in the user bank and card bank exceeds the size of memory, the samples of the user bank will be loaded first. At this time, as many card bank samples as possible will be loaded, starting from the lowest-numbered sample.

1. **From the menu, choose "Load All Sample."**
2. **Press [ENTER].**
   A message will ask you for confirmation.
3. **Press [F6 (Execute)] to execute.**

* *To cancel, press [F5 (Cancel)].*

Importing WAV/AIFF data

Here's how to import an audio file (WAV/AIFF) as a sample.

1. **From the menu, choose "Import WAV/AIFF."**
2. **Press [ENTER].**
3. **Select the sample that you want to import.**

[CURSOR (right)]	Display the contents of a folder.
[CURSOR (left)]	Return to the folder above.
[VALUE] [INC/DEC] [CURSOR (up/down)]	Move the cursor upward or downward.
[F1 (User)]	Display the contents of the user area.
[F2 (Card)]	Display the contents of the memory card.
[F3 (Mark Clear)]	Remove the check mark from the file.
[F4 (Mark Set)]	Add a check mark to the file.
[F5 (Cancel)]	Return to the previous screen.
[F6 (Import)]	Import the checked files. (*1)
[SHIFT] + [F3 (Mark Clear All)]	Clear the check marks from all files in the folder.
[SHIFT] + [F4 (Mark Set All)]	Add a check mark to all files in the folder.

*1: If not even check mark is assigned, the operation will be executed on the file selected by the cursor.

4. **Press [F6 (Import Sample)].**
   A message will ask you for confirmation.
5. **To import, press [F6 (Execute)].**
   The file will be loaded as a sample.

* *To cancel, press [F5 (Cancel)].*

Deleting a sample

Here's how to completely delete a sample file.

1. **From the menu, choose "Delete Sample File."**
2. **Press [ENTER].**
   A message will ask you for confirmation.
3. **Press [F6 (Execute)] to execute.**

* *To cancel, press [F5 (Cancel)].*

Erasing a sample

Here's how to erase a sample from memory. The file will not be erased.

1. **From the menu, choose "Erase Sample."**
2. **Press [ENTER].**
   A message will ask you for confirmation.
3. **Press [F6 (Execute)] to execute.**

* *To cancel, press [F5 (Cancel)].*

MEMO

In the case of stereo samples, L and R will be loaded/deleted/erased simultaneously.

Menu

This section explains the system settings and the utility menu.

System

Here you can make settings that affect the entire system, such as those for tuning and synchronization.

1. **Press [MENU].**

2. **Press [CURSOR (up/down)] to select "System."**

   In Pattern mode/Song mode, you can also access this by holding down [SHIFT] and pressing [F5 (System)].



3. **Press [ENTER].**

   The System menu will appear.



4. **Press [F1]–[F6] to select the item that you want to set.**

[F1 (Panel/Control)] (Panel/Controller)	Make settings for the panel controllers and the screen.
[F2 (Seq/MIDI)] (Sequencer/MIDI)	Make sequencer and MIDI-related settings.
[F3 (Sound)]	Specify the tuning and how the sounds are to be produced.
[F4 (Sampling)]	Make sampling-related settings.
[F5 (D Beam)]	Make D Beam settings.
[F6 (System Info)] (System Information)	View the state of the MC-909.

5. **Press a function button to make further selections.**

6. **Use [CURSOR (up/down)] to select a parameter.**

7. **Use [VALUE] or [INC/DEC] to edit the value.**

   * *Settings made here will revert to their original value as soon as you turn off the power. If you want to keep your settings, press* ***[F6 (System Write)]****.*

8. **When you are finished making settings, press [EXIT].**

   You will return to the System menu.

9. **Press [EXIT] once again to exit the System menu.**

Panel/Controller

Here you can make settings for the panel controllers and the screen.

Parameter	Range	Explanation
[F1 (Pad Velocity)]		
Pad Velocity	REAL, 1–127	Strength of the note when you press a velocity pad If you set this to REAL, you can vary the dynamics of the sound by varying the strength with which you press the pad.
[F2 (TTE/Tap/DB)]		
TTE Slider Type	TTE, PITCH BEND, MODULATION	Function of the turntable emulation slider **TTE:** Standard turntable emulation **PITCH BEND:** Pitch bender **MODULATION:** Modulation
TTE Magnify	-1– +1 – -200– +200	Variable range of the turntable emulation slider
Tap Switch	OFF, ON	Tap button on/off
Tap Resolution	QUARTER, 8TH, 16TH	Tap tempo resolution The resolution (note value) to be used when using [TAP] to change the tempo **QUARTER:** Quarter note **8TH:** Eighth note **16TH:** Sixteenth note
D Beam ID	0–3	When using two or more MC-909 units together, you can specify a different ID for each unit so that the D Beam controllers of the units will not interfere with each other.
D Beam Sens L D Beam Sens R	0–127	Sensitivity of the D Beam controllers The sensitivity of the D Beam controller will change depending on the amount of light in the vicinity of the unit. If it does not function as you expect, adjust the sensitivity as appropriate for the brightness of your location. Increasing this value will raise the sensitivity.
[F3 (Screen Saver)]		
Screen Saver Type	1–10	Type of screen saver
Screen Saver Time	OFF, 5–60 min	Time (minutes) until the screen saver begins working If this is OFF, the screen saver will not appear.
[F4 (Back Ground)]		
Back Ground Picture	1–10	File that is to be displayed as the screen background Press [F5 (Import BMP)], and load a bitmap file from the TMP/BMP folder within USER/CARD.

Sequencer/MIDI

Here you can specify how the sequencer will operate, and make MIDI-related settings.

Parameter	Range	Explanation
[F1 (Seq Sync)]		
Sync Mode	MASTER, REMOTE, SLAVE	Specifies how the internal sequencer will operate and how MIDI Clock messages will be transmitted and received. **MASTER:** The internal sequencer will synchronize to the internal tempo clock. Any MIDI Clock messages received from an external device will be ignored. **REMOTE:** Operation will be essentially the same as "MASTER." However, Start/Stop messages from the external MIDI device will control playback/stop for the internal sequencer. **SLAVE:** The internal sequencer will synchronize to MIDI Clock messages received from an external device. If no MIDI Clock messages are being received, pattern/song playback will not occur even if you press the [PLAY] button.
Sync Output	OFF, ON	Determines whether synchronization-related MIDI messages will be transmitted. **OFF:** Messages will not be transmitted. **ON:** The following messages will be transmitted from the MIDI OUT connector. • Timing Clock: F8 • Start: FA • Continue: FB • Stop: FC • Song Position Pointer: F2
Arpeggio Sync Mode	OFF, MODE1, MODE2	Specifies how the arpeggio start timing will be synchronized to the pattern. **OFF:** The start timing will not synchronize. **MODE1:** When a pattern plays, the arpeggio will start in synchronization. When the pattern stops, the arpeggio will also stop. **MODE2:** In addition to the operation of MODE1, the arpeggio will start at the beginning of the next measure of the currently-playing pattern. * If the pattern is stopped, the arpeggio will start immediately, regardless of which of the above settings is selected.

Parameter	Range	Explanation
RPS Trigger Quantize	REAL, 16TH, 8TH, QUARTER, MEASURE	When using RPS during pattern playback, patterns and phrases may not play back in precise alignment, depending on the timing at which you press the velocity pads. On the MC-909 you can specify the playback timing of the phrase, so it will play back in precise synchronization with the pattern. **REAL:** The phrase will play back immediately, at the timing at which you pressed velocity pads. **16TH, 8TH, QUARTER:** The pattern will be divided into selected note units, and when you press the velocity pads, the phrase will begin playing at the beginning of the next note unit. **MEASURE:** The pattern will be divided into one-measure units, and when you press the velocity pads, the phrase will begin playing at the beginning of the next measure.
BPM Lock	OFF, ON	Specifies how the tempo will change when patterns are played back consecutively. **OFF:** When the pattern changes, the tempo will change at the same time. **ON:** The tempo of the first-played pattern will continue even when the pattern changes.
[F2 (Song/Pattern)]		
Song Loop Mode	OFF, LOOP1, LOOP2	Specifies how songs will be played back. **OFF:** The currently selected song will be played back only once. **LOOP1:** The currently selected song will be played back repeatedly. **LOOP2:** All songs will be played back repeatedly in sequence. * When using "LOOP2" to playback a song, we recommend that a pattern which mutes all parts (i.e., a silent pattern) be inserted at the end of the song, so that songs are joined smoothly.
Song Play Mode	MODE1, MODE2	Specifies whether or not the pattern setup parameters will be loaded when you move to the next step of the song. **MODE1:** The setup parameters, mute, and realtime modify settings will be loaded each time you move to the next step. **MODE2:** Setup parameters, mute, and realtime modify will be maintained during playback only if the next step plays a pattern that is the same as the currently playing pattern.
Song Step Switch	AUTO, MANUAL	Specifies whether playback will automatically advance to the next step of the song. **AUTO:** Automatically advance to the next step. **MANUAL:** Advance to the next step if in Song mode you press [F1 (Next Step)] to display the "✔" mark.
Startup Ptn Mode	LAST WRITTEN, USER DEFINABLE	Specifies how the pattern will be selected at power-on. **LAST WRITTEN:** The pattern that was most recently written prior to the last power-off will be selected. **USER DEFINABLE:** The pattern specified by the following parameters will be selected.
Startup Ptn Bank	Preset, User, Card	The pattern that will be selected at power-on
Startup Ptn Number	001–*** * Depends on the bank.	
[F3 (MIDI Tx)]		
Transmit Program Change	OFF, ON	Specifies whether or not program changes will be transmitted from MIDI OUT when the patch of each part is changed. When this setting is "OFF," program changes will not be transmitted.
Transmit Bank Select	OFF, ON	Specifies whether or not bank select messages will be transmitted from MIDI OUT when the patch of each part is changed. When this setting is "OFF," bank select messages will not be transmitted.
Transmit Active Sensing	OFF, ON	Specifies whether or not bank select messages will be transmitted from MIDI OUT when the patch of each part is changed. When this setting is "OFF," bank select messages will not be transmitted.
Transmit Patch Edit Type	TYPE-QUICK, TYPE-CC	Specifies the type of MIDI message that will be used to communicate with external devices when the panel knobs are moved. **TYPE-QUICK:** Knob/slider data will be transmitted and received as control changes and as system exclusive data. **TYPE-CC:** Knob/slider data will be transmitted and received as control changes. The amount of data will be smaller than for TYPE-QUICK.
Transmit Edit Data	OFF, ON	Specifies whether the modified settings will be transmitted as System Exclusive data (ON), or not (OFF).
Soft Through	OFF, ON	Specifies whether or not MIDI messages received at the MIDI IN will be re-transmitted without change from the MIDI OUT.When this setting is "OFF," MIDI messages received at the MIDI IN will not be re-transmitted.
[F4 (MIDI Rx)]		
Remote Keyboard Switch	OFF, ON	Set this parameter "ON" when you want to use an external MIDI keyboard instead of the MC-909's velocity pads. * This parameter is set to "ON' with the factory settings, enabling patches in the part selected on the MC-909 to be played back regardless of the transmission channels of the external MIDI keyboard. * Set it to "OFF" to control the MC-909 from an external sequencer, as a multi-timbre sound generator with sixteen parts. Patches can be played back by part, according to the channel used for sending MIDI data from the external sequencer.

Parameter	Range	Explanation
Device ID	17–32	Device ID number of a systemexclusive message on the MC-909 A system exclusive message can only be received if the device number included in the message matches the device ID number set up on the receiving MIDI equipment. Using this function enables different System Exclusive messages to be received by more than one MC-909 unit at the same time. * At the factory settings, the device ID number is set to "17."
Receive Program Change	OFF, ON	Specifies whether or not each part will receive program changes. When this is "OFF," program changes will not be received.
Receive Bank Select	OFF, ON	Specifies whether or not each part will receive bank select messages. When this is "OFF," bank select messages will not be received.
Receive Exclusive	OFF, ON	Specifies whether or not each part will receive system exclusive messages. When this setting is "OFF," system exclusive messages will not be received.

Sound

Here you can specify the tuning and how the sound is to be produced.

Parameter	Range	Explanation
[F1 (Sound/Tune)]		
Master Tune	415.3–466.2 Hz	Adjusts the overall tuning of the MC-909. The setting expressed as the frequency played by the A4.
Master Level	0–127	Adjusts the volume of the entire MC-909.
Output Gain	-12– +12 dB	Adjusts the output gain from the MC-909's Analog Out and Digital Out.
Metronome Level	0–10	Adjusts the volume of the metronome.
Master Key Shift	-24– +24	Shifts the overall pitch of the MC-909.
Patch Remain	OFF, ON	Specifies whether currently sounding notes will continue sounding when another patch or rhythm set is selected (ON), or not (OFF).
[F2 (Sound Control)]		
Rhythm Octave Switch	OFF, ON	Specifies the [OCT +/-] buttons will have effect when a rhythm set is assigned to current part (ON), or not (OFF).
Resonance Limiter	50–127	Specifies the range in which the [RESONANCE] knob can be adjusted. As this setting is increased, the variable range of the [RESNANCE] knob will increase.
LFO Morphing Switch	OFF, ON	Specifies whether LFO1 Waveform will be modified smoothly by the knob (ON) or not (OFF).

Sampling

Here you can make sampling-related settings.

Parameter	Range	Explanation
[F1 (Sampling)]		
Default File Type	WAV, AIFF	File format used when saving a sample
Preset Default Load	OFF, ON	Specifies whether the preset samples will be loaded into memory at power-on (ON) or not (OFF).
Sample Default Load	OFF, ON	Specifies whether the samples of the user area and memory card will be loaded into memory at power-on (ON) or not (OFF).
Pre Sample Time	0–1000 ms	The length of sound preceding the moment at which sampling was manually or automatically initiated that will be captured in the sample This lets you prevent the attack portion of the sound from being omitted from the sample.
Trigger Level	0–7	Volume level at which sampling will begin when Auto Trig is ON A setting of 0 is the minimum.
Gap Time	500, 1000, 1500, 2000 ms	Length of silence at which the sample will be divided Whenever there is a silent region longer than the specified time, the sample will be divided at that point, and the next sample number will be assigned to the sound that follows. * This parameter is valid only when you are using Auto Divide Sampling.
External Source Select	LINE-L-R, LINE-L, DIGI-OPT, DIGI-COAX, MIC	Input source of the external input sound **LINE-L-R:** INPUT jacks L/R (stereo) **LINE-L:** INPUT jack L (mono) **DIGI-OPT:** Digital Input (Optical) **DIGI-COAX:** Digital Input (Coaxial) **MIC:** INPUT jack (mono, mic level)
Trimming Switch	OFF, ON	If this is turned on, the Start point and End point settings will be automatically adjusted after sampling is performed, so any silent portions at the beginning or end of the sampled sound are excluded.

D Beam

Here you can make settings for the D Beam controller.

Parameter	Range	Explanation
[F1 (Solo Synth)]		
Solo Synth Patch Bank Solo Synth Patch No.	Refer to Patch List (p. 151)	Patch played by the solo synth
Solo Synth Note	0 (C-1)–127 (G9)	Reference note for the solo synth
Solo Synth Scale	FREE, CHROMATIC	Scale on/off **FREE:** Continuous (no steps) **CHROMATIC:** Semitone steps
Solo Synth Range	2OCTAVE, 4OCTAVE	Range of the solo synth
[F2 (Cut+Reso)]		
Cutoff Range Lower	0–127	Filter cutoff frequency when you move your hand away from the D Beam
Cutoff Range Upper	0–127	Filter cutoff frequency when you move your hand near the D Beam
Resonance Range Lower	0–127	Filter resonance when you move your hand away from the D Beam
Resonance Range Upper	0–127	Filter resonance when you move your hand near the D Beam
[F3 (Turntable)]		
Turntable BPM Type	DOWN, UP	How the tempo will change when you move your hand near the D Beam **DOWN:** The tempo will slow down as you move your hand nearer. **UP:** The tempo will speed up as you move your hand nearer.
Turntable Pitch Type	DOWN, UP	How the pitch will change when you move your hand near the D Beam **DOWN:** The pitch will fall as you move your hand nearer. **UP:** The pitch will rise as you move your hand nearer.
[F4 (User Assign)]		
Type	Control Change, Bend Up, Bend Down, Bend Up/Down, Ch Aftertouch, Start/Stop, Glissando, Adlib, Arp Octave Up, Arp Octave Down, Arp Octave Both, Arp Duration, BPM Up, BPM Down, Pitch UP, Pitch Down, Effects C1, Effects C2, All Mute	Parameter that will be controlled by the D Beam
Number	CC#1–CC#31, CC#33–CC#95	Control change number This can be set only if Type is set to "Control Change."
Range Lower	0–127	Value of the parameter when you move your hand away
Range Upper	0–127	Value of the parameter when you move your hand nearer

System Information

Here you can view the state of the MC-909.

Press [F6 (Close)] to return to the System menu screen.

- [F1 (Features)]
  Displays the main features of the MC-909.
- [F2 (Memory Info)]
  Displays the amount of memory installed.
- [F3 (SRX Exp Info)]
  Displays the name of the wave expansion board that is installed.
- [F4 (Version)]
  Displays the version of the internal program.

Utility

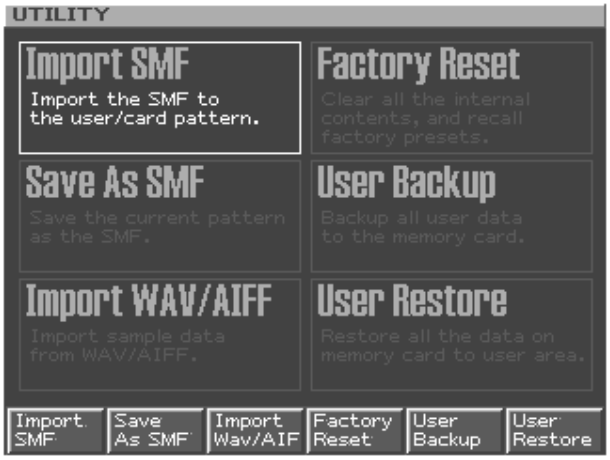
Here you can manage various types of data.

1. **Press [MENU].**
2. **Use [CURSOR (up/down)] to select "Utility."**



3. **Press [ENTER].**

   The Utility menu screen will appear.



4. **Press [F1]–[F6] to select the operation that you want to execute.**

[F1 (Import SMF)]	Load SMF data into a user pattern or memory card (p. 131).
[F2 (Save As SMF)]	Save the data of the current pattern in SMF format (p. 132).
[F3 (Import WAV/AIFF)]	Import sample data from a WAV/AIFF file (p. 132).
[F4 (Factory Reset)]	Restore the factory settings (p. 20).
[F5 (User Backup)]	Save user data to a memory card (p. 132).
[F6 (User Restore)]	Load user data from a memory card (p. 132).

Import SMF

Here's how to load SMF pattern data, and write it to a user pattern or memory card.

The MC-909 supports SMF formats 0 and 1.

NOTE

If the write-destination user pattern contains data, that data will be replaced by the data that is written.

1. **In the Utility menu screen, press [F1 (Import SMF)].**
2. **Select the SMF that you want to import.**

[F1 (User)]	Display the contents of the user area.
[F2 (Card)]	Display the contents of the memory card.
[F5 (Cancel)]	Return to the previous screen.
[F6 (Import)]	Import the selected file.
[CURSOR (right)]	Display the contents of a folder.
[CURSOR (left)]	Return to the folder above.
[VALUE] [INC/DEC] [CURSOR (up/down)]	Move the cursor upward or downward.

3. **Press [F6 (Import)].**

   A screen in which you can specify the write destination will appear.

4. **Use [CURSOR (left/right)] to specify the type of destination—either a user pattern or a memory card.**
5. **Use the [VALUE] dial, [INC/DEC], or [CURSOR (up/down)] to select the write-destination pattern.**
6. **Press [F6 (Write)].**

   A message will ask you for confirmation.

7. **To write the data, press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

Cautions when importing SMF

- Files with settings not supported by the MC-909's sequencer cannot be imported.
- SMF data created with multiple channels can not be imported correctly in some cases.
- Level data and program changes located earlier than the note data will be imported as setup data.
- On the MC-909, the channel number corresponds to the part number; e.g., channel 1 = part 1. Thus, data created on channel 1 will be imported into part 1.
- Setup data located earlier than the note data will be reflected in the Mixer screen as pattern setup data. Also, the first note message will be imported as the first beat of the first measure. If you import data that does not begin at the beginning of the first measure, use the pattern edit operation Shift Clock to move it.

<Setup Data>

- Program Change (PC)
- Bank Select (CC#0, CC#32)
- Level (CC#7)
- Pan (CC#10)
- Key Shift (CC#85)
- Reverb Send Level (CC#91)
- Various Effects (System Exclusive)

Save As SMF

Here's how to write the data of the current pattern to user memory or memory card as SMF data.
Format 1 SMF data will be created.

1. **In Pattern mode, select the pattern that you want to save as SMF data.**
2. **In the Utility menu screen, press [F2 (Save As SMF)].**
3. **Select the destination in which the SMF data is to be saved.**
   For details on the selection procedure, refer to "Import SMF" (p. 131).
4. **Press [F6 (Save As SMF)].**
   A message will ask you for confirmation.
5. **To save the data, press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

Import WAV/AIFF

Here's how to import a sample file (WAV/AIFF) as a user sample.

1. **In the Utility screen, press [F3 (Import WAV/AIF)].**
2. **Select the sample that you want to import.**

[CURSOR (right)]	Display the contents of a folder.
[CURSOR (left)]	Return to the folder above.
[VALUE] [INC/DEC] [CURSOR (up/down)]	Move the cursor upward or downward.
[F1 (User)]	Display the contents of the user area.
[F2 (Card)]	Display the contents of the memory card.
[F3 (Mark Clear)]	Remove the check mark from the file.
[F4 (Mark Set)]	Add a check mark to the file.
[F5 (Cancel)]	Return to the previous screen.
[F6 (Import)]	Import the checked files. (*1)
[SHIFT] + [F3 (Mark Clear All)]	Clear the check marks from all files in the folder.
[SHIFT] + [F4 (Mark Set All)]	Add a check mark to all files in the folder.

*1: If not even check mark is assigned, the operation will be executed on the file selected by the cursor.

3. **Press [F6 (Import)].**
   A message will ask you for confirmation.
4. **To import the sample, press [F6 (Execute)].**
   The data will be loaded into a user sample.

* *To cancel, press [F5 (Cancel)].*

Factory Reset

You can restore the settings of the MC-909 to their factory-set condition.
Refer to p. 20.

User Backup

Here's how all user data in the user area can be saved on a memory card.
The following user data will be saved.

- User Patterns
- User Patches
- User Rhythm sets
- Songs
- Samples
- Pattern sets
- RPS sets
- Arpeggio styles
- Chord forms
- System settings

MEMO
In order to execute User Backup, the memory card must have approximately 16 MB or more free area.

1. **Insert a memory card into the slot.**
2. **In the Utility screen, press [F5 (User Backup)].**
   A message will ask you for confirmation.
3. **To execute the backup, press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

User Restore

Here's how user data saved on a memory card by the User Backup operation can be reloaded back into the user memory of the MC-909.

NOTE
When you execute User Restore, the current contents of the user area will be completely erased.

1. **Into the slot, insert the memory card on which user data has been saved.**
2. **In the Utility screen, press [F6 (User Restore)].**
   A message will ask you for confirmation.
3. **To proceed with the restoration, press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

MIDI

Here you can make MIDI-related settings.

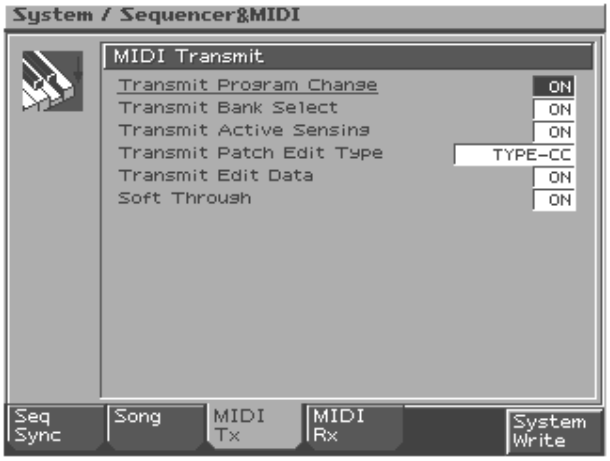
1. **Press [MENU].**
2. **Use [CURSOR (up/down)] to select “MIDI.”**



3. **Press [ENTER].**

   The MIDI Tx screen will appear.

   For details on the settings, refer to p. 128.



File Utility

Here you can perform file-handling operations.

1. **Press [MENU].**
2. **Use [CURSOR (up/down)] to select "File Utility."**



3. **Press [ENTER].**

   The File Utility screen will appear.



4. **Use [F3]–[F6] to select the operation you want to carry out.**

[CURSOR (right)]	Display the contents of a folder.
[CURSOR (left)]	Return to the folder above.
[VALUE] [INC/DEC] [CURSOR (up/down)]	Move the cursor upward or downward.
[F1 (User)]	Display the contents of the user area.
[F2 (Card)]	Display the contents of the memory card.
[F3 (Card Format)]	Format (initialize) a memory card.
[F4 (Mark Clear)]	Remove the check mark from the file.
[F5 (Mark Set)]	Add a check mark to the file.
[F6 (Move)]	Move the checked files to another folder. (*1)
[SHIFT] + [F3 (Delete)]	Delete the checked files. (*1)
[SHIFT] + [F4 (Mark Clear All)]	Clear the check marks from all files in the folder.
[SHIFT] + [F5 (Mark Set All)]	Add a check mark to all files in the folder.
[SHIFT] + [F6 (Copy)]	Copy the checked files to another folder. (*1)

*1: If not even check mark is assigned, the operation will be executed on the file selected by the cursor.

* *About the folder structure, refer to p. 135*

Initializing a memory card (Format)

Here's how to initialize a memory card.

NOTE

When you execute the Format operation, the contents of the memory card will be completely erased.

1. **Press [F3 (Format)].**

   A message will ask you for confirmation.

2. **To format the card, press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

Deleting a file (Delete)

Here's how you can delete an unwanted file from a folder.

1. **Select the file that you want to delete.**
2. **Press [F4 (Delete)].**

   A message will ask you for confirmation.

3. **To delete the file, press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

Moving a file (Move)

Here's how you can move a file to a different folder.

1. **Select the file that you want to move.**
2. **Press [F5 (Move)].**

   A screen will appear, allowing you to select the folder to which the file is to be moved.

3. **View the contents of the move-destination folder.**
4. **To move the file, press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

Copying a file

Here's how you can copy a file to a different folder.

1. **Select the file that you want to copy.**
2. **Press [F6 (Copy)].**

   A screen will appear, allowing you to select the folder to which the file is to be copied.

3. **View the contents of the copy-destination folder.**
4. **To copy the file, press [F6 (Execute)].**

* *To cancel, press [F5 (Cancel)].*

USB

Here's how USB communication with your computer can be switched on/off.

USB communication allows files in the user area or memory card of the MC-909 to be handled by your computer.

NOTE

USB communication with the MC-909 is possible only for Windows Me/2000/XP or later (Windows users), or Mac OS 9.04 or later (Macintosh users).

NOTE

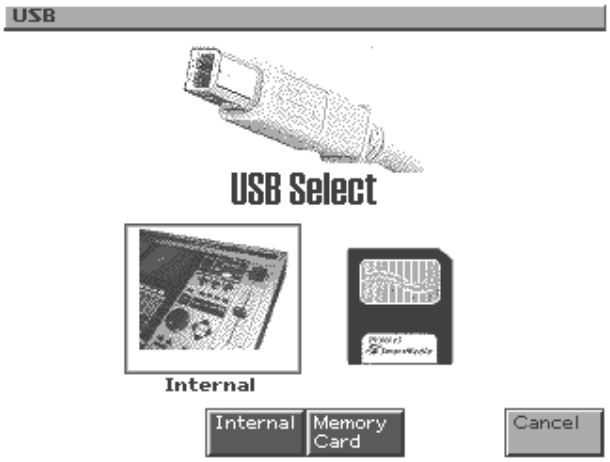
Connect or disconnect the USB cable only when the MC-909 is powered-off. Never connect or disconnect the USB cable or turn off the power while in USB mode or while data is being transferred.

USB communication procedure

* *Before you continue, you must use a USB cable to connect the MC-909 with your computer.*

1. **Press [MENU].**
2. **Press [CURSOR (up/down)] to select "USB."**
3. **Press [ENTER].**

   The USB screen will appear.



4. **Press [F3 (Internal)] or [F4 (Memory Card)] to establish the connection with your computer.**

- [F3 (Internal)]: Connect to the user memory.
- [F4 (Memory Card)]: Connect to the memory card.

* *To cancel the connection, press [F6 (Cancel)].*

Windows Me/2000/XP users

A drive named "Removable disk" will be displayed within My Computer.

This drive will contain a folder named "ROLAND."

Macintosh users

A drive icon named "MC-909 USER" will appear on the desktop.

This will contain a folder named "ROLAND."

Canceling USB communication

Windows Me/2000/XP users

1. **Use the device eject button shown in the taskbar at the lower right of the screen to cancel the connection with the MC-909.**
2. **Then press [F6 (Exit)] on the MC-909.**

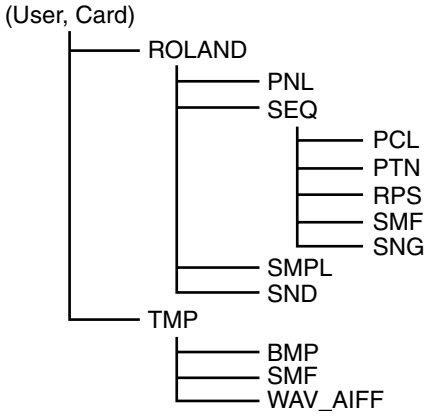
Macintosh users

1. **Drag the MC-909 drive icon into the trash.**
2. **Then press [F6 (Exit)] on the MC-909.**

IMPORTANT!

Cautions Regarding Folders and Files

The folder structure of the user area and memory card is as follows.



NOTE

Do not modify the folder structure from a computer that is connected to the MC-909 via USB.

The only files that can be transferred between the MC-909 and your computer are audio files (WAV/AIFF formats), Standard MIDI Files (SMF format 1), and bitmaps (320 x 240 pixels). Do not place any other format of file in the user area or memory card.

* *The MC-909 can only handle filenames that consist of single-byte, alphanumeric characters.*

When placing files from a USB-connected computer into the MC-909's user area or memory card, make sure to place them in the relevant folders inside the TMP folder.

- Bitmaps BMP folder
- SMFs SMF folder
- Audio files WAV_AIFF folder

NOTE

Do not use your computer to move/delete the files located within the ROLAND folder of the user area. Also, do not use your computer to format or optimize the user area.

Undo/Redo

Here's how you can cancel the results of editing or recording a pattern or song.

1. **Press [MENU].**
2. **Use [CURSOR (up/down)] to select "Undo/Redo."**
   The object of the Undo command will be displayed. For example if you are undoing a Microscope operation, the display will indicate "Undo Microscope."
3. **To execute, press [F6 (Execute)].**

* *To cancel, press [F6 (Cancel)].*

NOTE

Undo can be executed for a pattern (pattern editing, microscope, and recording) or a song (song editing and song recording). Undo cannot be used for sample editing or patch editing.

MEMO

After executing Undo, you can use Redo to revert to the previous state. After executing Undo, you can execute Redo by performing the above procedure once again.

V-LINK

About V-LINK

What is V-LINK?

V-LINK (V-LINK) is a function that provides for the play of music and visual material. By using V-LINK-compatible video equipment, visual effects can be easily linked to, and made part of the expressive elements of a performance.

(Examples)

By using the MC-909 and Edirol DV-7PR together, you can:

- Make Edirol DV-7PR playback settings remotely from the MC-909.
- Use the MC-909's sequencer to enjoy synchronized music and video.
- Use the MC-909's velocity pads to switch the Edirol DV-7PR's images (clips/palettes).
- Use the MC-909's knobs to adjust the brightness or color of the image.
- Use the MC-909's turntable emulation to control the video playback speed along with the music playback speed.

* *In order to use V-LINK with the MC-909 and Edirol DV-7PR, you will need to make connections using an Edirol UM1/UM-1S (sold separately).*

By using the MC-909 and Edirol V-4 together, you can:

- Make settings for remotely controlling the V-4 from the MC-909.
- Use the MC-909's sequencer to switch images on the V-4, creating video performances with synchronized music.
- Use the MC-909's velocity pads to control the V-4's input selector, switching between images from various source devices.
- Use the MC-909's knobs to specify the time for transition effects (e.g., overlap or wipe).

* *In order to use V-LINK with the MC-909 and Edirol V-4, you will need a commercially-available MIDI cable.*

Connection examples

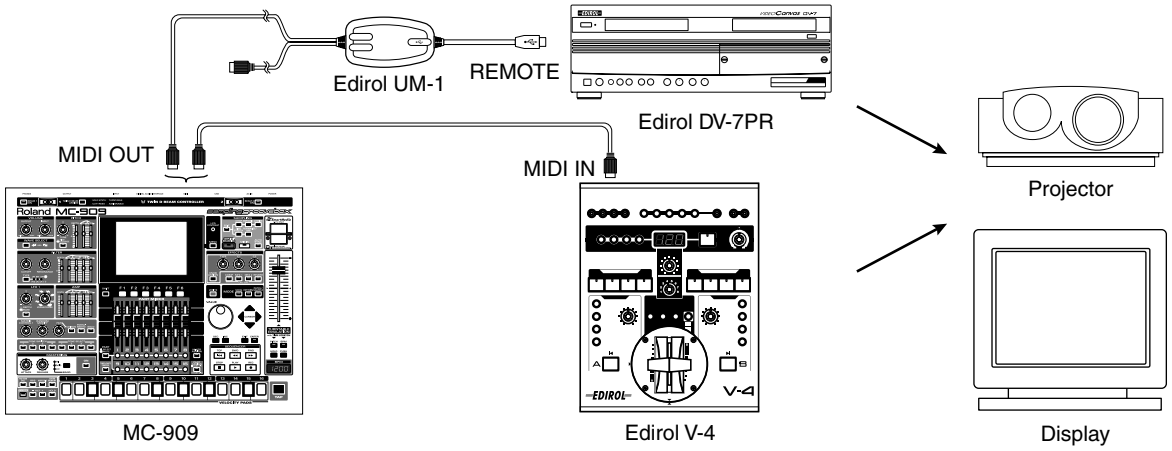
* *Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.*

Connection to Edirol DV-7PR

Use a UM-1 to connect the MC-909's MIDI OUT connector to the DV-7PR's remote jack.

Connection to Edirol V-4

Use a commercially-available MIDI cable to connect the MC-909's MIDI OUT connector to the Edirol V-4's MIDI IN connector.



Using V-LINK

Turning V-LINK on

1. In the lower left of the panel, press [V-LINK] so the indicator is lighted.

The V-LINK SETUP screen will appear.

2. Press [F6 (Close)] or [EXIT].

The [V-LINK] indicator will remain lit, and you're returned to the previous screen.

In this state, you can operate the velocity pads and turntable emulation slider to manipulate images in sync with the playback of the MC-909.

MEMO

Even when V-LINK is on, the panel will operate in the same way as usual for Pattern mode (p. 22), Patch/Sample mode (p. 52), and Song mode (p. 80).

Turning V-LINK off

1. Press [V-LINK] to access the V-LINK SETUP screen.

2. Press [V-LINK] again.

The [V-LINK] indicator goes out, and you're returned to the previous screen.

NOTE

You cannot turn V-LINK off from a screen other than the V-LINK SETUP screen.

V-LINK settings

Parameter	Range	Explanation
Note Tx Ch	1–16	MIDI channel that will switch Edirol DV-7PR clips/palettes and will control dissolve time.
Clip 1 Note No.	0(C-1)–127(G9)	Note number (velocity pad) that corresponds to Edirol DV-7PR clip 1 If this is set to 59 (B3), velocity pads 1–16 will correspond to clips 1–16.
Play Speed Ctrl	0.0–1.0–2.0, 0.5–1.0–2.0, 0.0–1.0–4.0, 0.5–1.0–4.0, 0.0–1.0–8.0, 0.5–1.0–8.0, 0.0–1.0–16.0, 0.5–1.0–16.0, 0.0–1.0–32.0, 0.5–1.0–32.0, 0.0–2.0–4.0, 0.0–4.0–8.0, 0.0–8.0–16.0, 0.0–16.0–32.0, -2.0–1.0–4.0, -6.0–1.0–8.0	Range of video playback speed The three values are the playback speeds (multiples of normal speed) at the negative, center, and positive positions of the turntable emulation slider.
Dissolve Time	OFF, CC1, CC5, CC7, CC10, CC11, CC71–74, CC91–93, Channel Aftertouch	Control change number that controls the dissolve time (time over which the image switches)
Ctrl Tx Ch	1–16	MIDI channel that will control the Edirol DV-7PR color Cb/Cr, brightness, and video effect switching
Color Cb Ctrl	OFF, CC1, CC5, CC7, CC10, CC11, CC71–74, CC91–93, Channel Aftertouch	Control change number that controls the Cb color of the image
Color Cr Ctrl		Control change number that controls the Cr color of the image
Brightness Ctrl		Control change number that controls the brightness of the image
VFX1–4 Ctrl		Control change number that controls the video effect * VFX2–4 are not supported by the Edirol DV-7PR.
Fade Ctrl		Control change number that controls the output fade
PAD MODE	CLIP, PALETTE	Selects whether the velocity pads will switch clips or palettes. **Press [F1 (Clip mode)]:** switch clips **Press [F2 (Palette)]:** switch palettes
Local Sw	OFF, ON	Specifies whether the internal sound generator is disconnected (OFF) from the velocity pads, or not (OFF).
Clip filter (check boxes 1–32)	(OFF), ✔ (ON)	Enable/disable switching for each clip Clips that are checked can be switched (see explanatory box below)

Using the Clip Filter

For example, suppose that of the rhythm set you input in the part used for V-LINK (i.e., the part of the same number as the Note Tx Channel), you want only the kick and snare to switch clips. In this case, check only the clips that correspond to the note numbers of the kick and snare. The clips will switch when the kick or snare plays.

Resetting the image

[F3 (Clip Reset)]	Turn off the image (solid black).
[F4 (All Reset)]	The effect applied to the image will be reset, and brightness, color difference, etc. will all return to the default value.

* *For details on clips/palettes, dissolve time, color difference signals (Cb/Cr), refer to the Edirol DV-7PR manual.*

NOTE

The MC-909 does not support the Edirol DV-7PR's dual stream mode.

MEMO

Appendices

Installing the Wave Expansion Board

An optional Wave Expansion Board (SRX series) can be installed in the MC-909.

Waveform data, patches and rhythm sets are stored on the Wave Expansion Board, so you can increase the number of available sounds by installing the board in the MC-909.

Cautions When Installing a Wave Expansion Board

- To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the board.
  - Before you touch the board, always first grasp a metal object (such as a water pipe), so you are sure that any static electricity you might have been carrying has been discharged.
  - When handling the board, grasp it only by its edges. Avoid touching any of the electronic components or connectors.
  - Save the bag in which the board was originally shipped, and put the board back into it whenever you need to store or transport it.
- Use a Philips screwdriver that is suitable for the size of the screw (a number 2 screwdriver). If an unsuitable screwdriver is used, the head of the screw may be stripped.
- To remove a screw, rotate the screwdriver counter-clockwise. To tighten the screws, rotate the screwdriver clockwise.

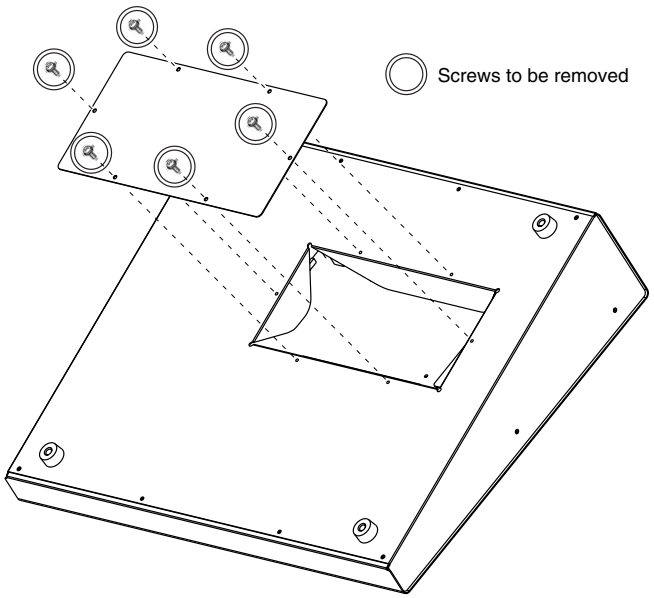


- Be careful that the screws you remove do not drop into the interior of the MC-909.
- Be careful not to cut your hand on the edge of the cover or the opening edge while removing the cover.
- Do not touch any of the printed circuit pathways or connection terminals.
- Never use excessive force when installing a circuit board. If it doesn't fit properly on the first attempt, remove the board and try again.
- When circuit board installation is complete, double-check your work.
- Always turn the unit off and unplug the power cord before attempting installation of the circuit board (SRX series; Quick Start p. 2).
- Install only the specified circuit board (SRX series). Remove only the specified screws (p. 142).
- When turning the unit upside-down, get a bunch of newspapers or magazines, and place them under the four corners or at both ends to prevent damage to the buttons and controls. Also, you should try to orient the unit so no buttons or controls get damaged.
- When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.
- Do not leave the bottom cover removed. After installation of the Wave Expansion Board is complete, be sure to replace the cover.

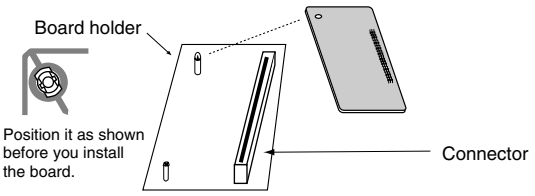
How to Install a Wave Expansion Board

Install the Wave Expansion Board after removing the bottom panel cover.

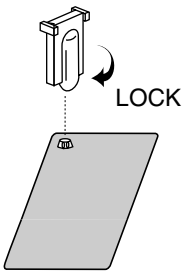
1. Before installing the Wave Expansion Board, turn off the power of the MC-909 and all connected devices, and disconnect all cables, including the Power cable, from the MC-909.
2. Turn the MC-909 over, remove the screws indicated in the following diagram, and remove the cover.



3. Plug the connector of the Wave Expansion Board into the connector on the unit, and at the same time insert the board holder through the hole of the Wave Expansion Board.



4. Use the Installation Tool supplied with the Wave Expansion Board to turn the holder in the LOCK direction, so the board will be fastened in place.



5. Use the screws that you removed in step **2** to fasten the cover back in place.

Checking that a wave expansion board is installed correctly

1. Turn on the power as described in "Turning On/Off the Power" (p. 16).
2. Press [MENU].
3. Use [CURSOR] to select [System].
4. Press [ENTER] to access the System Menu screen.



5. Press [F6 (System Info)].
6. Press [F3 (SRX Exp Info)].
   Verify that the screen shows the model number of the wave expansion board you installed.
7. Press [F6 (Close)] to return to the System Menu screen.
8. Press [EXIT] to exit the System Menu screen.

NOTE

If the model number of the board does not appear, it is possible that the wave expansion board is not being recognized properly. Turn off the power as described in "Turning On/Off the Power" (p. 16), and re-install the wave expansion board correctly.

NOTE

- If SRX-01 "Dynamic Drum Kits" or SRX-02 "Concert Piano" is installed, only the waves can be used. The patches/rhythm sets cannot be used.
- When using the rhythm sets included on an expansion board, the rhythm tones for the sixteen keys from note numbers 35 (B1) through 50 (D3) will correspond to velocity pad 1 (59: B3) through pad 16 (74: D5).
- For some of the patches/rhythm sets included on an expansion board, pitch-related settings and FXM-related settings (p. 57, p. 71) will be ignored.

Installation de la carte d'extension Wave

(French Language for Canadian Safety Standard)

French language
for Canadian Safety Standard

Une carte d'expansion Wave (modèle SRX) optionnelle peut être installée dans le MC-909.

Les données Waveform, les retouches et les groupes de rythme sont stockés sur la carte d'expansion Wave; vous pouvez donc augmenter le nombre de sons disponibles en installant la carte dans le MC-909.

Précautions à prendre lors de l'installation d'une carte d'expansion Wave

- Veuillez suivre attentivement les instructions suivantes quand vous manipulez la carte afin d'éviter tout risque d'endommagement des pièces internes par l'électricité statique.
  - Toujours toucher un objet métallique relié à la terre (comme un tuyau par exemple) avant de manipuler la carte pour vous décharger de l'électricité statique que vous auriez pu accumuler.
  - Lorsque vous manipulez la carte, la tenir par les côtés. Évitez de toucher aux composants ou aux connecteurs.
  - Conservez le sachet d'origine dans lequel était la carte lors de l'envoi et remettez la carte dedans si vous devez la ranger ou la transporter.
- Utilisez un tournevis de type Philips de la taille adaptée à celle des vis (tournevis numéro 2). Un tournevis inadéquat peut endommager la tête de la vis.
- Pour retirer une vis, tourner le tournevis dans le sens contraire des aiguilles d'une montre. Pour serrer les vis, tourner le tournevis dans le sens des aiguilles d'une montre.



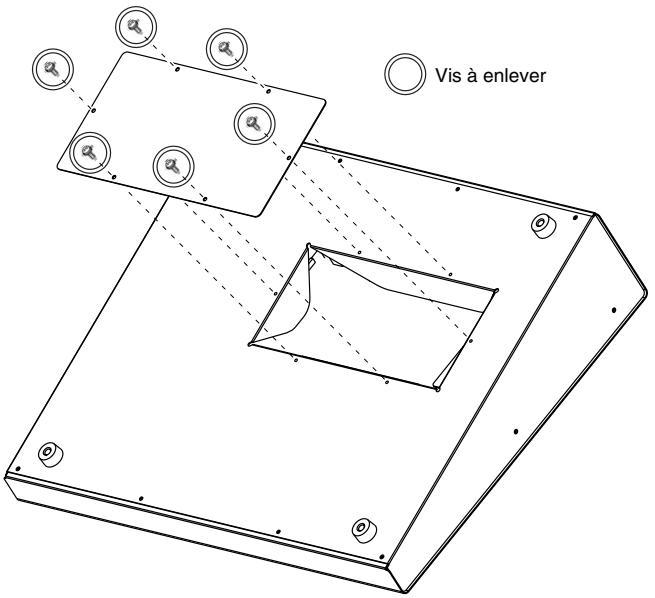
- Assurez-vous que les vis que vous retirez ne tombent pas à l'intérieur du MC-909.
- Faites attention de ne pas vous couper sur le bord du couvercle ou de l'ouverture lorsque vous retirez le couvercle.
- Ne pas toucher aux circuits imprimés ou aux connecteurs.
- Ne jamais forcer lors de l'installation de la carte de circuits imprimés. Si la carte s'ajuste mal au premier essai, enlevez la carte et recommencez l'installation.
- Quand l'installation de la carte de circuits imprimés est terminée, revérifiez si tout est bien installé.
- Toujours éteindre et débrancher l'appareil avant de commencer l'installation de la carte. (modèle SRX; Quick Start p. 2).
- N'installez que les cartes de circuits imprimes spécifiées (modèle SRX). Enlevez seulement les vis indiquées (p. 144).
- Lorsque vous déposez le MC-909 face vers le bas, placez des piles de journaux ou de magazines sous les quatre coins (ou des deux côtés) pour le soutenir. Ainsi, les boutons, manettes et autres pièces ne seront pas endommagés.
- En plaçant l'appareil sens dessus dessous, manipulez-le avec soin pour éviter de l'échapper, de le laisser tomber ou de se renverser.
- Ne pas laisser le panneau de protection avant detache. S'assurer de l'avoir rattacher apres avoir installe le disque dur.

Installation d'une carte d'expansion Wave

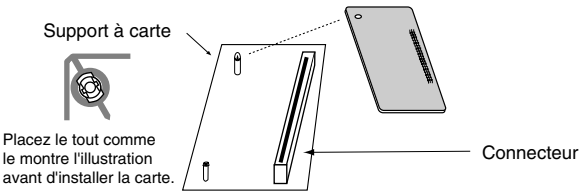
Avant d'installer la carte d'expansion Wave, retirez le panneau inférieur.

1. Avant d'installer la carte d'expansion Wave, coupez l'alimentation du MC-909 et de tous les appareils branchés, et débranchez tous les câbles du MC-909, y compris le cable d'alimentation.

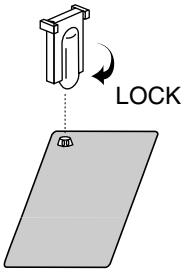
2. Tournez le MC-909 sens dessous dessus, retirez les vis indiquées dans le diagramme ci-dessous et retirez le couvercle.



3. Enfichez le connecteur de la carte d'expansion Wave dans le connecteur de l'unité et, en même temps, insérez le support de carte par l'ouverture de la carte d'expansion Wave.



4. Utilisez l'outil d'installation fourni avec la carte d'expansion Wave pour tourner les supports en position LOCK (verrouillé) afin de retenir la carte en place.



5. Remettez le couvercle en place à l'aide des vis retirées à l'étape **2**.

Vérifier que la carte d'expansion Wave est installée correctement

1. Mettre en marche tel que décrit sous « Turning On/Off the Power » (p. 16)
2. Appuyer sur [MENU].
3. Utiliser [CURSOR] pour choisir [System].
4. Appuyer sur [ENTER] pour atteindre la fenêtre du menu du système.



5. Appuyer sur [F6 (System Info)].
6. Appuyer sur [F3 (SRX Exp Info)].
   Le numéro du modèle de la carte d'expansion Wave que vous avez installée devrait apparaître dans la fenêtre.
7. Appuyer sur [F6 (Close)] pour revenir dans la fenêtre du menu du système.
8. Appuyer sur [EXIT] pour quitter la fenêtre du menu du système.

NOTE

Si le numéro du modèle de la carte n'apparaît pas, il est possible qu'elle n'ait pas été détectée correctement. Fermer tel que décrit sous « Turning On/Off the Power » (p. 16), et réinstaller la carte d'expansion Wave conformément aux instructions.

NOTE

- Si SRX-01 «Dynamic Drum Kits» ou SRX-02 «Concert Piano» est installé, seules les ondulations peuvent être utilisées. Il n'est pas possible d'utiliser les groupes patch/rythme.
- Lorsque les groupes de rythme inclus sur une carte d'expansion sont utilisés, les rythmes d'accompagnement des seize touches allant de la note 35 (B1) à 50 (D3) correspondent aux touches de vélocité 1 (59: B3) à 16 (74: D5).
- Pour certains des groupes patch/rythme inclus sur une carte d'expansion, les réglages de tonie et FXM (p. 57, p. 71) ne sont pas pris en compte.

Expanding the Memory

The MC-909 comes with 16 MB of memory into which audio samples can be loaded. However, in some cases, 16 MB of memory will be insufficient for loading large amounts of data. In such a case, you will have to add separately sold memory (DIMM). Memory can be expanded up to 256 MB.

Before expanding the memory, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor.

Precautions for Expanding Memory

- To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the board.
  - Before you touch the board, always first grasp a metal object (such as a water pipe), so you are sure that any static electricity you might have been carrying has been discharged.
  - When handling the board, grasp it only by its edges. Avoid touching any of the electronic components or connectors.
  - Save the bag in which the board was originally shipped, and put the board back into it whenever you need to store or transport it.
- Use a Philips screwdriver that is suitable for the size of the screw (a number 2 screwdriver). If an unsuitable screwdriver is used, the head of the screw may be stripped.
- To remove a screw, rotate the screwdriver counter-clockwise. To tighten the screws, rotate the screwdriver clockwise.

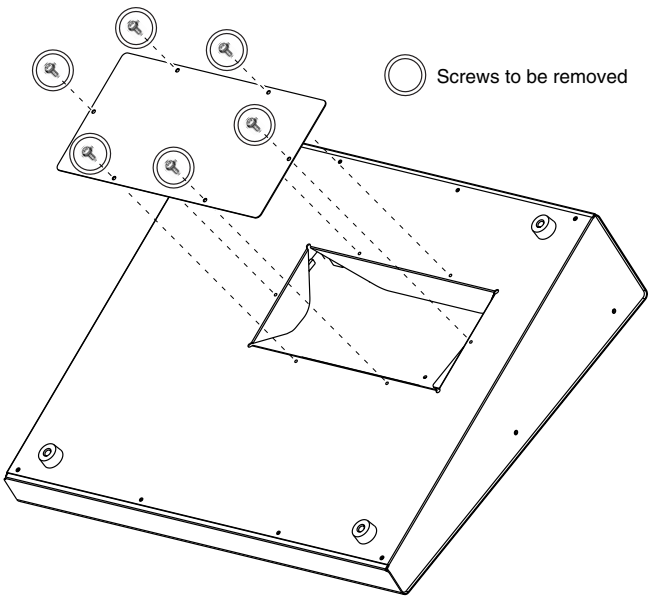


- Be careful that the screws you remove do not drop into the interior of the MC-909.
- Be careful not to cut your hand on the edge of the cover or the opening edge while removing the cover.
- Do not touch any of the printed circuit pathways or connection terminals.
- Never use excessive force when installing a circuit board. If it doesn't fit properly on the first attempt, remove the board and try again.
- When circuit board installation is complete, double-check your work.
- Always turn the unit off and unplug the power cord before attempting installation of the memory DIMM board.
- Install only the specified memory DIMM board. Remove only the specified screws (p. 146).
- When turning the unit upside-down, get a bunch of newspapers or magazines, and place them under the four corners or at both ends to prevent damage to the buttons and controls. Also, you should try to orient the unit so no buttons or controls get damaged.
- When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.
- Do not leave the bottom cover removed. After installation of the memory module is complete, be sure to replace the cover.

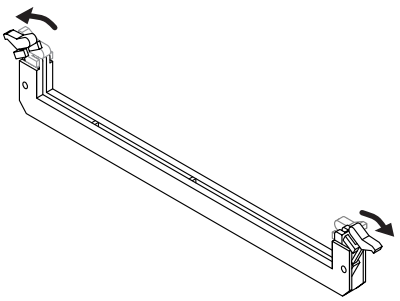
How to Expand the Memory

Install the memory module after removing the bottom panel cover.

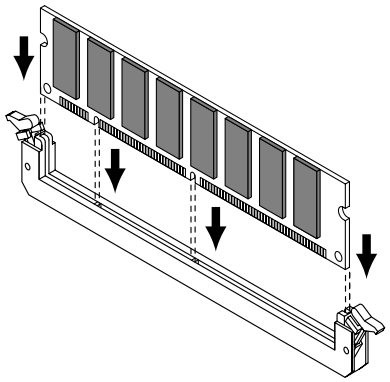
1. Before expanding the memory, turn off the power of the MC-909 and all connected devices, and disconnect all cables, including the Power cable, from the MC-909.
2. Turn the MC-909 over, remove the screws indicated in the following diagram, and remove the cover.



3. Press outward the white clips at either end of the socket should be in the downward position.



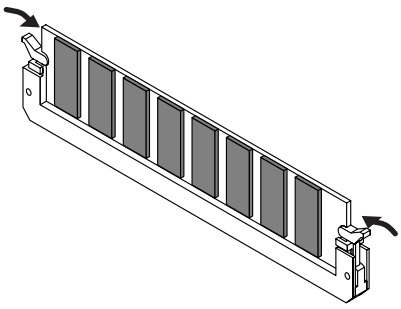
4. Paying attention to the location of the notch on the memory module and the orientation, insert it vertically within the guides at either side of the socket.



HINT

If you have difficulty inserting the memory module, try tilting it a bit and inserting one end at a time.

5. Move the white clips upward, and press them until the memory module is locked in place.

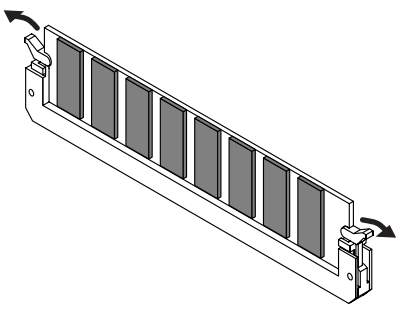


6. Use the screws that you removed in step **2** to fasten the cover back in place.

Removing the Memory

To remove the memory module, reverse the installation procedure.

1. Simultaneously press outward the white clips located at either end of the socket.



2. Remove the memory module from the socket.

Checking that memory is installed correctly

1. Turn on the power as described in "Turning On/Off the Power" (p. 16).
2. Press [MENU].
3. Use [CURSOR] to select [System].
4. Press [ENTER] to access the System Menu screen.



5. Press [F6 (System Info)].
6. Press [F2 (Memory Info)].
   Verify that the screen correctly shows the amount of memory you installed.
7. Press [F6 (Close)] to return to the System Menu screen.
8. Press [EXIT] to exit the System Menu screen.

* *If the correct amount of memory is not shown, it is possible that the memory is not being recognized properly. Turn off the power as described in "Turning On/Off the Power" (p. 16), and re-install the memory correctly.*

Specifications of the expansion memory (DIMM) that can be used

Number of pins:	168-pin
Speed:	100 MHz (PC100 CL=2)
	133 MHz (PC133 CL=3)
Voltage:	3.3 V
Capacity:	128 MB
	256 MB
Board height:	38 mm or less

NOTE

The MC-909 has been confirmed to work with standard memory that meets the above specifications. However, we cannot guarantee that all memory of these specifications will work correctly. Please be aware that even with identical specifications, differences in the design of the memory module or the conditions of use may mean that a memory module may not be usable.

Ajouter de la mémoire

French language
for Canadian Safety Standard

(French Language for Canadian Safety Standard)

Précautions à prendre lors de l'ajout de mémoire

- Veuillez suivre attentivement les instructions suivantes quand vous manipulez la carte afin d'éviter tout risque d'endommagement des pièces internes par l'électricité statique.
  - Toujours toucher un objet métallique relié à la terre (comme un tuyau par exemple) avant de manipuler la carte pour vous décharger de l'électricité statique que vous auriez pu accumuler.
  - Lorsque vous manipulez la carte, la tenir par les côtés. Évitez de toucher aux composants ou aux connecteurs.
  - Conservez le sachet d'origine dans lequel était la carte lors de l'envoi et remettez la carte dedans si vous devez la ranger ou la transporter.
- Utilisez un tournevis de type Philips de la taille adaptée à celle des vis (tournevis numéro 2). Un tournevis inadéquat peut endommager la tête de la vis.
- Pour retirer une vis, tourner le tournevis dans le sens contraire des aiguilles d'une montre. Pour serrer les vis, tourner le tournevis dans le sens des aiguilles d'une montre.

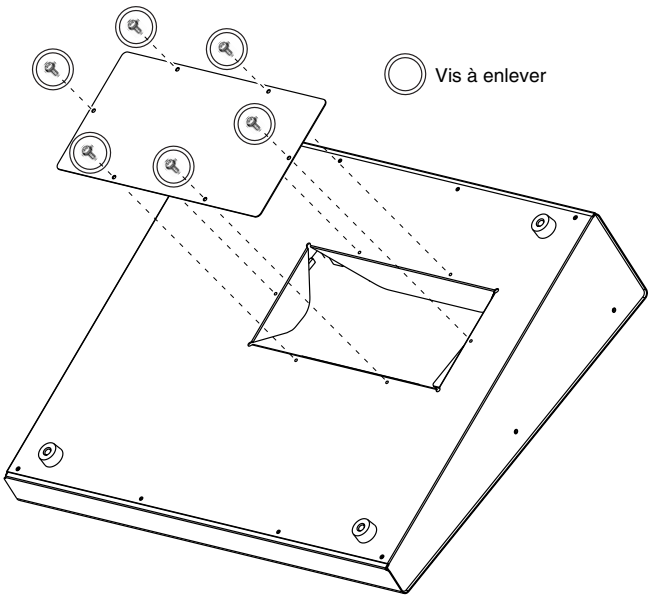


- Assurez-vous que les vis que vous retirez ne tombent pas à l'intérieur du MC-909.
- Faites attention de ne pas vous couper sur le bord du couvercle ou de l'ouverture lorsque vous retirez le couvercle.
- Ne pas toucher aux circuits imprimés ou aux connecteurs.
- Ne jamais forcer lors de l'installation de la carte de circuits imprimés. Si la carte s'ajuste mal au premier essai, enlevez la carte et recommencez l'installation.
- Quand l'installation de la carte de circuits imprimés est terminée, revérifiez si tout est bien installé.
- Avant de procéder à l'installation d'un module DIMM, il faut toujours mettre l'unité hors tension et débrancher le câble d'alimentation.
- Installez uniquement le module DIMM spécifié. Retirez uniquement les vis spécifiées (p. 148).
- Lorsque vous déposez le MC-909 face vers le bas, placez des piles de journaux ou de magazines sous les quatre coins (ou des deux côtés) pour le soutenir. Ainsi, les boutons, manettes et autres pièces ne seront pas endommagés.
- En plaçant l'appareil sens dessus dessous, manipulez-le avec soin pour éviter de l'échapper, de le laisser tomber ou de se renverser.
- Une fois l'installation du module terminée, remettez le couvercle en place.

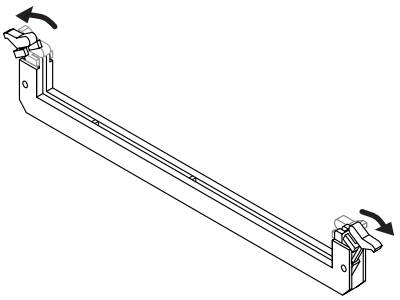
Installation du module de mémoire

Installez le module de mémoire après avoir retiré le couvercle inférieur.

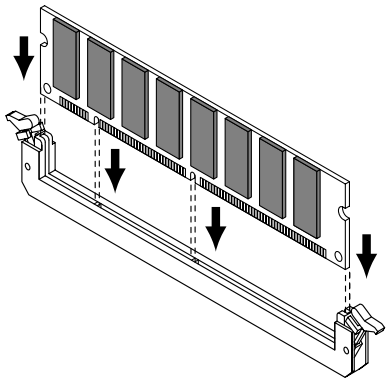
1. Avant d'installer la mémoire additionnelle, mettez hors tension le MC-909 et tous les périphériques connectés et débranchez tous les câbles, y compris le câble d'alimentation du MC-909.
2. Tournez le MC-909 sens dessous dessus, retirez les vis indiquées dans le diagramme ci-dessous et retirez le couvercle.



3. Appuyez sur les clips blancs à l'extrémité de la prise qui devraient être orientés vers le bas.

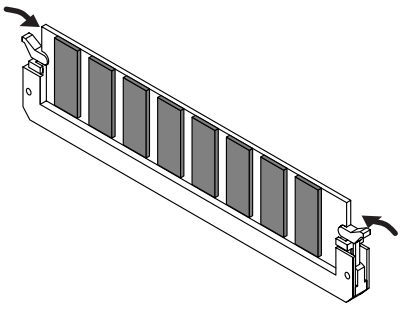


4. Prenez bien note de l'emplacement et de l'orientation de l'encoche du module de mémoire et insérez-le verticalement à l'intérieur des guides qui se trouvent de chaque côté de la prise.



* *Si vous éprouvez de la difficulté à insérer le module de mémoire, inclinez-le légèrement et insérez une extrémité à la fois.*

5. Ramenez les clips blancs vers le haut et appuyez dessus jusqu'à ce que le module de mémoire soit verrouillé en place.

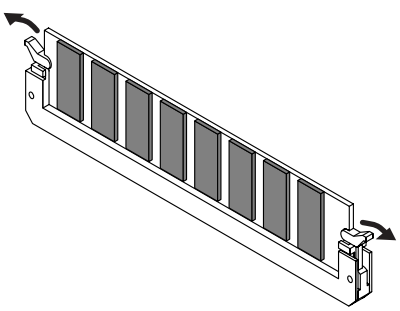


6. À l'aide des vis retirées à l'étape 2, remettez le couvercle en place.

Retrait du module de mémoire

Pour retirer le module de mémoire, procédez à l'inverse de la procédure d'installation.

1. Appuyez simultanément, vers l'extérieur, sur les clips blancs situés aux extrémités de la prise.



2. Retirez le module de mémoire de la prise.

Vérifier que la mémoire est installée correctement

1. Mettre en marche tel que décrit sous « Turning On/Off the Power » (p. 16).

2. Appuyer sur [MENU].

3. Utiliser [CURSOR] pour choisir [System].

4. Appuyer sur [ENTER] pour atteindre la fenêtre du menu du système.



5. Appuyer sur [F6 (System Info)].

6. Appuyer sur [F2 (Memory Info)].
S'assurer de lire dans la fenêtre la taille de la mémoire que vous avez installée.

7. Appuyer sur [F6 (Close)] pour revenir dans la fenêtre du menu du système.

8. Appuyer sur [EXIT] pour quitter la fenêtre du menu du système.

* *Si la taille de la mémoire dans la fenêtre n'est pas exacte, il est possible que la mémoire n'ait pas été détectée correctement. Éteindre tel que décrit sous « Turning On/Off the Power » (p. 16), et réinstaller la mémoire conformément aux instructions.*

Spécifications de la mémoire d'expansion (DIMM) qui peuvent être utilisées

Nombre de broches :	168 broches
Vitesse :	100 MHz (PC100 CL=2)
	133 MHz (PC133 CL=3)
Tension :	3.3 V
Capacité :	128 Mo
	256 Mo
Hauteur de la carte :	38 mm ou moins

NOTE

Il a été confirmé que le MC-909 fonctionne avec la mémoire standard possédant les spécifications ci-dessus. Nous ne pouvons toutefois pas certifier que toutes les mémoires possédant ces spécifications fonctionneront correctement. Il faut se rappeler que même si les spécifications sont identiques, des différences dans la conception du module de mémoire ou les conditions d'utilisation peuvent faire en sorte qu'il n'est pas possible d'utiliser le module de mémoire.

Waveform List

No.	Name
001	MC SuperSawA
002	MC SuperSawB
003	MC SuperSawC
004	SuperSawSlwA
005	SuperSawSlwB
006	SuperSawSlwC
007	Trance Saw A
008	Trance Saw B
009	Trance Saw C
010	Alpha Rave
011	MG Big Lead
012	JUNO Rave
013	Blaster
014	Sync Sweep
015	TB Natural
016	TB303Saw HD
017	106 Saw HD
018	CustomSawAHD
019	JP8000 Saw
020	MG Reso Saw
021	MGSaw HD
022	Synth Saw
023	JP-8 Saw
024	P5Saw HD
025	P5 Saw
026	OB2Saw HD
027	OB Saw
028	Digital Saw
029	OSC Saw
030	OSC Reso Saw
031	Air Wave
032	DistTB Sqr
033	DistTBSqr Lp
034	TB Dst Sqr
035	TB303Sqr HD
036	TB Square 1
037	TB Square 2
038	JP-6 Square
039	MGSqr HD
040	MG Square
041	P5Sqr HD
042	P5 Square
043	OB2Sqr HD
044	CustomSquAHD
045	PureSqr1kHz
046	PureSqr440Hz
047	106 SubOscHD
048	JP8PLS05 HD
049	JP8PLS25 HD
050	JP8PLS40 HD
051	JP8PLS45 HD
052	JP-8 Pulse
053	MG Pulse
054	260 Pulse
055	Frog Wave
056	FM Pulse
057	JP8000 PWM
058	JP8000 FBK
059	260 Sub OSC
060	MGTri HD
061	MG Triangle
062	ARPSin HD
063	Sine
064	PureSine1kHz
065	PureSin440Hz
066	700SynthBass
067	Mini Bs 1A
068	Mini Bs 1B
069	Mini Bs 1C
070	Syn Bass 1
071	Syn Bass 2
072	Syn Bass 3
073	Mini Bs 2
074	Mini Bs 2 Lp
075	MG Big Bass
076	Garage Bass
077	Delta Bass
078	Jungle Bass
079	SH-101 Bass
080	MC-202 Bass
081	Poly Bass
082	Organ Bass
083	Voco Bass
084	Reso Bass 1A
085	Reso Bass 1B
086	Reso Bass 2A
087	Reso Bass 2B
088	FM Bass f
089	Solid Bass
090	Fingered Bs
091	Stick Bass
092	P.Bass
093	Slap Bass
094	Bass Slide
095	FretlessSoft
096	Fretless Bs
097	UprightBs
098	Ac Bass
099	Piano EQ
100	EP MkI mf
101	Stage p A
102	Stage f A
103	Lo-Fi Wurly
104	FM EP mf
105	D-50 EP
106	Clavi
107	E.Organ 1
108	E.Organ 2
109	Full Stop
110	FM Club Org
111	Old Organ
112	Church Org
113	Tubular
114	Glockenspiel
115	Vibraphone
116	FantabellSub
117	DIGI Bell
118	Steel Dr
119	FM Mallet mf
120	Marimba
121	Balaphone
122	Kalimba
123	Soft NylonGt
124	Steel Guitar
125	Clean TC
126	Funk Gt
127	Funk Gt Mute
128	Overdrive
129	D.MuteGt mp
130	DistGtrChord
131	CleanGtrCut
132	Gtr Trill
133	Gtr Cut
134	DistGtrRiff1
135	DistGtrRiff2
136	Wah Gtr Riff
137	GtrShtSlide
138	FullStr mf A
139	FullStr mf B
140	FullStr mf C
141	JV Strings
142	Tron Strings
143	JP Strings
144	Tremolo sfz
145	STR Attack
146	StrChord Maj
147	StrChord Min
148	VlnPizzicato
149	Pizzy Techno
150	FemChoirOosA
151	FemChoirOosB
152	FemChoirOosC
153	Brass Sect A
154	Brass Sect B
155	Brass Sect C
156	BrsShortFall
157	Solo Trumpet
158	Mute Trumpet
159	Soft AltoSax
160	Blow Tnr Sax
161	Wild Tnr Sax
162	Afro Flute
163	Pure Flute
164	Tron Flute
165	Pan Flute
166	Flute Gliss
167	Shamisen
168	Sitar
169	Hit Menu 1
170	Hit Menu 2
171	Hit Menu 3
172	OrangeHit 1
173	OrangeHit 2
174	OrangeHit 3
175	OrangeHit 4
176	OrangeHit 5
177	OrangeHit 6
178	OrangeHit 7
179	OrangeHit 8
180	Ambience
181	7th Hit
182	Minor Hit
183	Drive Hit
184	Brassy Hit
185	6th Hit
186	Filtered Hit
187	Mild Hit
188	Bright Hit
189	5th StackHit
190	Euro Hit
191	Dist Hit
192	Tekno Hit
193	Back Hit
194	Techno Chord
195	Thin Beef
196	Tao Hit
197	Philly Hit
198	ClassicHseHt
199	Smear Hit 1
200	Smear Hit 2
201	LoFi MinorHt
202	OrchPrc Hit
203	Sitar Gliss
204	Scratch Menu
205	Scratch 16
206	Scratch 17
207	Scratch 18
208	Scratch 19
209	Scratch 20
210	Scratch 21
211	Scratch 22
212	Scratch 23
213	Scratch 24
214	Scratch 25
215	Scratch 26
216	Tape Rewind
217	Vox Menu 1
218	Vox Menu 2
219	One M
220	Two M
221	Three M
222	Four M
223	Aah! M
224	Hou! M
225	Ha! M
226	Hi! M
227	Hi2 M
228	Wow M
229	Yeah2 M
230	You Know M
231	Get It Up M
232	Come On M
233	Ah Hah M
234	Ah M
235	Ah2 M
236	Uuh Yeah! M
237	ComeOn F
238	Ha F
239	Woow F
240	MetalVoiceW1
241	MetalVoiceW2
242	MetalVoiceW3
243	Aah Formant
244	Eeh Formant
245	Iih Formant
246	Ooh Formant
247	Uuh Formant
248	MetalVoiceL1
249	MetalVoiceL2
250	MetalVoiceL3
251	VoxPerc Menu
252	Vox Kick 1
253	Vox Kick 2
254	VoxKickSweep
255	Vox Snare 1
256	Vox Snare 2
257	Vox Hihat 1
258	Vox Hihat 2
259	Vox Hihat 3
260	Vox Cymbal
261	Pa!
262	Chiki!
263	Punch
264	AahVoice Maj
265	AahVoice Min
266	Auh Voice
267	Breath
268	Feedbackwave
269	Atmosphere
270	MG White Nz
271	MG Pink Nz
272	DigiAtkNoise
273	P5 Noise
274	106 Noise
275	Noise AGG
276	Noise TMBR
277	Noise GIS
278	ThroatWind
279	Metal Wind
280	FX Menu 1
281	FX Menu 2
282	FX Menu 3
283	FX Menu 4
284	Euro Fx
285	LoFi Beep 1
286	LoFi Beep 2
287	LoFi Beep 3
288	Hardhock
289	Orbit
290	Density
291	LoFi Beep 4
292	LoFi Beep 5
293	LoFi Beep 6
294	Metal Bar 1
295	Metal Press
296	Sand Hit
297	Metal Bar 2
298	BPF Fx
299	Artful Perc1
300	Artful Perc2
301	MG Noise Fx
302	Beep
303	DarkSteam
304	MG Zap 1
305	MG Zap 2
306	MG Zap 3
307	MG Zap 4
308	MG Zap 5
309	MG Zap 6
310	MG Zap 7
311	MG Zap 8
312	MG Zap 9
313	MG Zap 10
314	MG Zap 11
315	MG Zap 12
316	MG Zap 13
317	MG Zap 14
318	MG Zap 15
319	MG Blip
320	Beam HiQ
321	MG Attack
322	MG Sweep 1
323	MG Sweep 2
324	MG Sweep 3
325	MG Sweep 4
326	MG Sweep 5
327	MG Sweep 6
328	Space FX Swp
329	SFX Menu 1
330	SFX Menu 2
331	Dial
332	Door Knob
333	Vinyl burst
334	Water Cock 1
335	Water Cock 2
336	Bomb Noise
337	Sea
338	Brush Noise
339	Space Noise
340	Scream
341	Jet Plane
342	Toy Gun 1
343	Toy Gun 2
344	Emergency
345	Buzzer
346	Insect
347	Tonality
348	Ring OSC
349	Reso FX
350	Vinyl Noise
351	Vinyl Stop
352	Construct.
353	Jack Hammer
354	Turbine
355	Sawing
356	Firebomb
357	Applause
358	Thunderbolt
359	Dolphin Hi 1
360	Dolphin Hi 2
361	Dolphin Md
362	Dolphin Lo
363	MetallicShot
364	Siren
365	Drill Hit
366	Clap Menu 1
367	Clap Menu 2
368	Disc Clap
369	Dist Clap
370	PD Clap
371	Old Clap
372	R8 Clap
373	TR909 Clap 1
374	TR909 Clap 2
375	TR808 Clap
376	TR707 Clap
377	Cheap Clap
378	Real Clap 2
379	Hip Clap
380	Group Clap
381	Claptail
382	Planet Clap
383	Royal Clap
384	Happy Clap
385	Club Clap
386	Funk Clap
387	Perc Menu 1
388	Perc Menu 2
389	Perc Menu 3
390	Perc Menu 4
391	R8 Cowbell
392	TR808Cowbell
393	CR78 Cowbell
394	R8 Hi Agogo
395	R8 LowAgogo
396	R8 HiCongaMt
397	R8 HiCongaOp
398	R8 LoCongaOp
399	Reg HiCng Mt
400	Reg HiCng Op
401	Reg LoCng Op
402	Reg HiBng Mt
403	Reg HiBng Op
404	Reg LoBng Op
405	TablaBayam 1
406	TablaBayam 2
407	TablaBayam 3
408	TablaBayam 4
409	TablaBayam 5
410	TablaBayam 6
411	TablaBayam 7
412	Udo
413	Udu Pot1 Hi
414	Udu Pot1 Slp
415	Cajon 1
416	Cajon 2
417	Cajon 3
418	AfroDrum Rat
419	Chenchen
420	Op Pandeiro
421	Mt Pandeiro
422	Timpani
423	Tambourine1
424	Tambourine2
425	Tambourine3
426	Tambourine4
427	CR78 Tamb
428	CR78 Beat
429	Timbale Hi
430	Timbale Lo
431	808 Maracas
432	Maracas
433	R8 Shaker A
434	R8 Shaker B
435	R8 Cabasa
436	Triangle 1
437	Triangle 2
438	CR78 Guiro
439	Reg Guiro A
440	Reg Guiro B
441	Reg Guiro C
442	Whistle Shrt
443	Whistle
444	TR727Quijada
445	TR808 Claves
446	R8 ClavesCmp
447	Club FinSnap
448	Single Snap
449	Snap
450	Kick Menu 1
451	Kick Menu 2
452	Kick Menu 3
453	Kick Menu 4
454	Click Kick 1
455	Pick Kick
456	Mild Kick
457	Back Kick
458	Vinyl Kick 1
459	Low Kick 1
460	Click Kick 2
461	Boys Kick
462	Hippie Kick
463	Frenzy Kick
464	PlasticKick1
465	Artful Kick
466	Swallow Kick
467	Neck Kick
468	Skool Kick
469	Dance Kick 1
470	HipHop Kick1
471	HipHop Kick2
472	Rap Kick
473	Low Kick 2
474	Pin Kick
475	Low Kick 3
476	Low Kick 4
477	AnalogKick 3
478	PlasticKick2
479	TR909 Kick 1
480	TR909 Kick 2
481	TR909 Kick 3
482	AnalogKick 4
483	TR909 Kick 4
484	Gabba Kick 1
485	AnalogKick 5
486	AnalogKick 6
487	AnalogKick 7
488	AnalogKick 8
489	AnalogKick 9
490	AnalogKick10
491	PlasticKick3
492	TR606 Dst BD
493	AnalogKick11
494	Sweep Kick
495	TR808 Kick
496	TR606 Kick
497	Jive Kick
498	TR909 Kick 5
499	TR909 Kick 6
500	Lo-Fi Kick 2
501	Wet Kick
502	Tight Kick
503	TR707 Kick 1
504	TR909 Kick 7
505	Regular Kick
506	Lite Kick 1
507	Roll Kick
508	Snare Menu 1
509	Snare Menu 2
510	Snare Menu 3
511	Snare Menu 4
512	Snare Menu 5
513	Snare Menu 6
514	Snare Menu 7
515	Sizzle Snr 1
516	LowDownSnr 1
517	Jngl Tiny SD
518	Tiny Snr 1
519	DJ Snare
520	R8 Brush Tap
521	Phat Snare
522	Lo-Hard Snr
523	ElectroSnr 1
524	RaggaTightSD
525	Flange Snr
526	Slap Snr 1
527	Analog Snr 1
528	Analog Snr 2
529	Analog Snr 3
530	Modern Snr 1
531	Swallow Snr
532	Jam Snr
533	Back Snr
534	Keen Snr 1
535	Boys Snr 1
536	Slap Snr 2
537	Neck Snr
538	Artful Snr
539	Pin Snr
540	Chemical Snr
541	Sizzle Snr 2
542	Antigua Snr
543	Tiny Snr 2
544	Real Snare
545	R&B Snr 1
546	R&B Snr 2
547	Cross Snr
548	Grave Snr
549	Boys Snr 2
550	Boys Snr 3
551	LowDownSnr 2
552	TR909 SD 1
553	TR909 SD 2
554	TR909 SD 3
555	TR909 SD 4
556	TR909 SD 5
557	TR909 SD 6
558	TR909 DstSD
559	TR808 SD 1
560	TR808 SD 2
561	TR808 SD 3
562	TR808 SD 4
563	Lite Snare
564	TR808 SD 5
565	TR808 SD 6
566	TR808 SD 7
567	DanceHall SD
568	TR606 SD 1
569	TR606 SD 2
570	CR78 Snare
571	Sim Snare
572	Rap Snr 2
573	Frenzy Snr 1
574	Frenzy Snr 2
575	Frenzy Snr 3
576	Jngl Rim 1
577	Jngl Rim 2
578	R8 Snr 1
579	R8 Snr 1cmp
580	R8 Snr 2
581	Slap Snr 3
582	Keen Snr 2
583	Reagae Snr
584	DR660 Snr
585	RegularSnrMP
586	RegularSnrMF
587	RegularSnr F
588	RegularSnrR1
589	RegularSnrR2
590	RegularSnrG1
591	RegularSnrG2
592	RegularSnrG3
593	R&B RegSnr 1
594	R&B RegSnr 2
595	R&B RegSnr 3
596	R&B RegSnr 4
597	R&B RegSnrG1
598	Funk Snr 1
599	Picc. Hrd Sn
600	Picc. Rol Sn
601	SnareWithCym
602	R8 BrshSwill
603	R8 BrushRoll
604	Urban RollSD
605	Roll Snare
606	RimShot Menu
607	TR909 Rim
608	TR808 Rim
609	R&B Rim 1
610	R&B Rim 2
611	R&B Rim 3
612	Neck Rim
613	Swag Rim
614	Step Rim
615	R&B Rim 4
616	Street Rim
617	Regular Rim
618	R8 Comp Rim
619	Tom Menu
620	R8 Comp Tom1
621	R8 Comp Tom2
622	R8 Comp Tom3
623	R8 Comp Tom4
624	Natural Tom
625	TR909 Tom
626	TR909 DstTom
627	TR808 Tom
628	TR606 Tom
629	Deep Tom
630	CHH Menu 1
631	CHH Menu 2
632	Modern CHH
633	Hipping CHH
634	Urban CHH
635	Regular CHH1
636	Regular CHH2
637	Regular CHH3
638	Bristol CHH
639	R8 Brush CHH
640	Bang CHH
641	LowDownCHH
642	Disc CHH
643	Club CHH 1
644	HipHop CHH
645	TR909 CHH 1
646	TR909 CHH 2
647	Shaky CHH
648	Club CHH 2
649	Swallow CHH
650	TR808 CHH 1
651	TR808 CHH 2
652	TR606 CHH 1
653	TR606 CHH 2
654	TR606 DstCHH
655	Lite CHH
656	CR78 CHH
657	DR55 CHH 1
658	Neck CHH
659	Jungle Hat
660	PHH Menu
661	Hip PHH
662	Pedal Hat 1
663	Street PHH
664	Swallow PHH
665	TR909 PHH 1
666	TR909 PHH 2
667	TR808 PHH 1
668	TR606 PHH 1
669	TR606 PHH 2
670	OHH Menu
671	Neck OHH
672	Regular OHH
673	Pop Hat Open
674	HipHop OHH
675	Bang OHH
676	TR909 OHH 1
677	TR909 OHH 2
678	TR808 OHH 1
679	TR808 OHH 2
680	TR606 OHH
681	Lite OHH
682	CR78 OHH
683	Cymbal Menu
684	TR909 Crash
685	NaturalCrash
686	Jungle Crash
687	Asian Gong
688	RAMA Cymbal
689	Analog Cym
690	TR606 Cym
691	Regular Ride
692	TR909 Ride
693	TR707 Ride

Preset Patch List

Preset A (CC#0 = 81, CC#32 = 64)

No.	Name
001	Trance Chord
002	UltimateEuro
003	JP OctAttack
004	DstTBSQR Atk
005	DistTB SQR
006	Traveler
007	BreathingPad
008	Lonely Heart
009	STR Attack
010	DistGtrChord
011	Detune Saw
012	Pressyn
013	BooSoloBoo
014	JUNO Rave 2
015	SuperSawSlow
016	Trance Wave
017	SuperSawFast
018	Powerline
019	Detune Saws
020	Bustranza
021	Cyber Lead
022	Noisey
023	RAVtune
024	Blaster
025	Detuned Pad
026	Clean?
027	DelayStrings
028	DOC Stack
029	Syn Stack
030	Saw Stack
031	Trancy Synth
032	ScreaminLead
033	World Anthem
034	Houze Clav
035	PlayLow Dark
036	Digitaless
037	You know?
038	Moon Synth
039	Innercross
040	MultiDance02
041	Brand X
042	Sweep Lead
043	SweepPad w/D
044	Remix Stack
045	Def Filter
046	Freedom
047	Fast Detune
048	DenMrk Lead
049	Squeepy
050	Xtatic
051	SaturnHolida
052	Anna Harp
053	Hyperactiver
054	Syn Lead
055	RetroRave 2
056	RAVE w/me
057	HouseParty02
058	Rave Party
059	Rave It Up
060	BPF Sweeper
061	Alpha Time
062	Alphat
063	Electricity
064	Bend Rave
065	Alpha Rave
066	Club Classic
067	Rubbery
068	Polychords
069	Atmorave
070	MG Big Lead
071	Tech Lead
072	NRG Synthe 1
073	High Five
074	Noise Punch
075	OB M6 Saw
076	Organ Stack
077	SftFatPolyOB
078	SftPolyPfive
079	Poly Key
080	Pulse Komp
081	NRG Synthe 2
082	OB Shinethru
083	KeyRand Saw
084	RndClaviator
085	Deowah Saw
086	PKG Key
087	forSequence1
088	Shrtpin
089	PsycoActive
090	SMILE :-)
091	OB Raindrops
092	5th Saw
093	PlasmaFields
094	HeavenlySine
095	FM Harp
096	Syn Harp
097	Glow Bugs
098	Dust Rave
099	Klangosaurus
100	Grandiosity
101	12th Planet
102	NoisePeaker
103	Cave Tone
104	106 Saw
105	Kiss My Grts
106	Lone Prpht
107	W-Side Saw
108	Basic Mg
109	Legato Saw
110	QuackyPfive
111	LPassRzSawMg
112	The Prpht OB
113	The Prpht TB
114	Q DualSaws
115	Dual Profs
116	DualP
117	BandSawMg
118	BandSawMg2
119	Slow Mg
120	Freaky Fry
121	The Brothers
122	Mosquito
123	Digital BPF
124	HPF Sweep
125	Pulse Line
126	ArtifFrog
127	Metal Frog
128	Waspy Lead

Preset B (CC#0 = 81, CC#32 = 65)

No.	Name
001	RetroSynLead
002	Warm SawLead
003	Kickin'Synth
004	Buzz Saw
005	HiPass Mg
006	LateFlapSqr
007	DualRateSqr
008	QuackyPSqr
009	Some Squares
010	Zooba Dooba
011	Pure Square
012	Voyage Mg
013	PortaSynLead
014	Jupiter6Sqr2
015	BandSqrMg
016	My OneOSix
017	DCOs4ever
018	Dist Lead 2
019	Griggley
020	Buzz Sucker
021	SonicVampire
022	Electrovox
023	Beep Mod
024	MosquitoLead
025	Destroyed Ld
026	HC Solo Lead
027	Synkronizor
028	Sync Dink
029	Da Sync
030	Sync Sweep
031	Elect Shock
032	Qube Sync
033	See a Chance
034	Splatter
035	Nasty Blade
036	Criminal
037	Syncing Sand
038	Uranus
039	Play with ME
040	IRobot
041	3rd Pulse Mg
042	GumbyBot
043	Vibrato Saw
044	Arpness TB
045	Dist TB
046	headHit Lead
047	Too Pure
048	Old Synth
049	Basic 1
050	ResoLFO LD
051	Similar Lead
052	Air Wave
053	Mew Lead
054	Cue Tip
055	Basic 2
056	PeakArpSine
057	PekingTriMg
058	TubbyTriangl
059	Square Lead
060	Sine Mallet
061	SQR Diamond
062	Classy Pulse
063	Eat Skip
064	NRG Synthe 3
065	Rave Stack
066	Line S&H
067	Yellow
068	Strobe 909
069	Comptron
070	JPpulsingPWM
071	Dot16LFO Mg
072	Ray
073	Galaxy
074	Mars
075	Blurp
076	Bottle Clown
077	909 Waltz
078	Slice Choir
079	Fashion
080	Sync'ed Pass
081	909 Racer
082	MetroPoly 2
083	Sands of LFO
084	PanningFrmnt
085	Bells of Q
086	TempoLFO OB
087	SlicedBread2
088	Bass Engine
089	GuitarGroove
090	Twang Woo
091	Flow
092	ClassicRaver
093	Mission time
094	Small_Groove
095	OB M6 x2
096	Dub Tales
097	Plus3 4 Bob
098	Venus
099	Timed Hit
100	.16 Orch
101	EchoResoPizz
102	TB Trancer
103	Doink
104	Seq.Synth 1
105	Saw SEQ
106	NY83 SEQ
107	Sqr SEQ
108	PortaSqr SEQ
109	Seq.Synth 2
110	Reso Bass 2
111	Detune Bass
112	JunoWotImean
113	Dust Bass
114	TechnoTribal
115	Glide-iator
116	Pop JunkBass
117	New Acid Grv
118	WoodenGroove
119	RubberBass
120	Reso TB Bs
121	TB Legato
122	Robot
123	Loco Voco
124	Vel-o-TB
125	Gate Me Buzz
126	eRobot Bass
127	Metalic Bass
128	Goldon Bass

Preset C (CC#0 = 81, CC#32 = 66)

No.	Name
001	SynBs 4 Seq
002	StabSaw Bass
003	Now Bass
004	Poly Bass
005	D9 Trcker
006	TB + Sine
007	Low Downer
008	Basstrap
009	Foundation
010	Thick Bass 2
011	Home Baze
012	Atk Syn Bs
013	TB Tra Bass
014	Electro Rubb
015	Smoothbass
016	MC-404 Bass
017	MC-202 Bs
018	R&B Bass 1
019	R&B Bass 2
020	Enorjizor
021	MG Bass
022	MC-TB Bass
023	ArpeggioBass
024	HipHop Bs 1
025	Voco Bass 1
026	Voco Bass 2
027	Alter Bass
028	Farmer Joe
029	MG Big Bass
030	SH-101 Bs 2
031	Big Bass
032	Mini Bs
033	MiniMoe Bass
034	Chordpatch
035	Kickin'Bass
036	Phat bass
037	Super-G DX
038	Syn Bass 1
039	Pong
040	R&B Bass 3
041	R&B Bass 4
042	Syn Bass 2
043	OctSaw Bass
044	R&B Bass 5
045	Monster TB
046	TB Clone
047	NU-NRG Bass
048	Inside Bass
049	Rezo Bass
050	R&B Bass 6
051	FuzzBlockHed
052	Tracore Bass
053	Bau Bass
054	Acdg Bass
055	RingerBass
056	SQ Pan
057	LFO Bass
058	AcidMoon
059	Jungle Bass
060	Sine Bass
061	R&B Bass 7
062	LFO SqrBs 2
063	SQR+Sub Bs
064	Square Bass

Preset Patch List

No.	Name
065	FallDown Bs
066	PeakOfTEBE
067	Dub Bass
068	Bass it
069	Basic SynBs
070	R&B Bass 8
071	808 Bass 2
072	Organ Bass 2
073	Org Atk Bs
074	Sqr Atk Bs
075	FM Bass
076	Front 909
077	FM Super Bs2
078	Univ Studies
079	Buum Bass
080	Solid Bass
081	T Nite Bass
082	Solid Goa
083	Solid Bottom
084	Dark Bass 1
085	Dark Bass 2
086	Dark Bass 3
087	HipHop Bs 2
088	HipHop Bs 3
089	HipHop Bs 4
090	ConcreteBass
091	AfterHoursMx
092	Delta Bass
093	Basstar
094	Tabla Bass
095	Pizz Bass
096	Destroyed Bs
097	FXM Bass
098	Dendo Bass
099	XL Too
100	NY83 Bass
101	Velo fingers
102	P.Bass
103	All Round
104	Nice P /
105	Stick Bass
106	NiceStick /
107	Heavy Bass
108	Upright Bs
109	Acousta Bass
110	LoFiAtk Bass
111	Downright
112	E.Ac.Bass
113	Acid Jazz Bs
114	Fretless Bs1
115	FretlessBs P
116	Fretless Bs2
117	Warm LeadG
118	Slap Bass
119	Bass Slide
120	V-BassHarm
121	MeanNoHarmBs
122	Tempest
123	Sweep Pad 1
124	Sweep Pad 2
125	Size Rizer
126	Juno Sweep
127	BPF Syn Pad
128	SmoothChange

Preset D (CC#0 = 81, CC#32 = 67)

No.	Name
001	Morphed Silk
002	Hy Synstring
003	OB Rezo Pad
004	Rev Sweep
005	Phat Pad
006	DCO Stack
007	Rise Pad
008	Penta Pad
009	Juno Waves
010	Mod Pad
011	Slow Gear
012	DeepForest2
013	HPF Ensemble
014	Steamed Sawz
015	AiRye Bread-
016	Analogscape
017	The Pad
018	JP Str Pad
019	Saw Pad
020	Palm Pad
021	909 Sweep
022	Undulate Pad
023	Sweet Vocode
024	Double Morph
025	Floating Pad
026	Juno Waves 2
027	Cosmosis
028	Metal Pad
029	Warm Pad
030	Soft Pad
031	Phaedra
032	Sine Pad
033	Heavenly Pad
034	HauntedStars
035	Female Oos
036	Floor Choir
037	Windy Vox
038	Digi Voices
039	SmoothGroove
040	Auh Luv Rave
041	JungleFever
042	Cheesy Stab
043	AahVoiceMaj
044	Sample Age
045	Sun Shower
046	CalifnSunset
047	AahVoiceMin
048	Right&Left
049	Hit Chorus
050	VOCOclavinet
051	Aah Formant
052	Eeh Formant
053	Iih Formant
054	Ooh Formant
055	Uuh Formant
056	MetalVoice1L
057	MetalVoice2L
058	MetalVoice3L
059	Vox Menu 1
060	Vox Menu 2
061	MetalVoice 1
062	MetalVoice 2
063	MetalVoice 3
064	Try This

No.	Name
065	With ME
066	1 Get Up^_^)
067	Puwa
068	Dance Grand
069	64voicePiano
070	Hard Piano
071	Epic House
072	Honktonkhous
073	Piano Trance
074	NY Piano+Str
075	Sine EP+
076	Soul Vibe
077	Talkin EP
078	Psychic EP
079	Wah EP
080	Noir
081	StageEP w/Tr
082	Back2the60s
083	Creep
084	Analog EP
085	Old EP X
086	Str8Up Wurly
087	Wirle EeePee
088	Gentle Wurly
089	Dist Wurly
090	Trem EP Mod
091	Cool EP
092	FM E.Piano
093	EppEEppE
094	SuperLushMod
095	Clavi
096	Funky D
097	Pulse Clav
098	Analog Clavi
099	Harpsichord
100	Pulse Key 2
101	Digi Key
102	Cold Key
103	E.Organ 1
104	E.Organ 2
105	Organic
106	Percs Organ
107	Fake Organ
108	Vade Retro 2
109	Club Organ
110	Continential
111	Hippy Organ
112	Bright Organ
113	Clubless Org
114	Happy Organ
115	Plastic
116	Remix Organ
117	Cheese Organ
118	Church Org
119	Rave Organ
120	Vibraphone
121	Vibrarimba
122	CTA Bell
123	Marimba
124	FM Mallet
125	Balaphone
126	Ethno Keys 1
127	Seq Fodder
128	Mu Island

Preset E (CC#0 = 81, CC#32 = 68)

No.	Name
001	Glockenspiel
002	Steel Drums
003	Sweep Mallet
004	Toy Jungle
005	FantabellSub
006	Small Bell
007	Synth Bell
008	Kalimbells
009	DIGI Bell
010	TribellDance
011	NitrousDragn
012	Tubular-Bell
013	Gigoloid
014	Ring Sine
015	Steel Guitar
016	Steel-Str.Gt
017	HipHop Gtr
018	Twin Aco Gtr
019	PureAcoustic
020	Bright Nylon
021	Fake Guitar
022	Clean TC
023	CleanEG w/Tr
024	Clean&String
025	Lo-Fi Gtr
026	BPF Guitar
027	Funk Gtr
028	FnkDittyMute
029	JAMIn' 01
030	Jazzin
031	CleanGtrCut
032	VeloWahDMute
033	ReTrigDsMute
034	RockinMuteGt
035	AutoWahMute
036	Wah Gtr Riff
037	Tripled8 Wah
038	GtrShtSlide
039	MuteFall /
040	Gtr Cut
041	DistGtrRiff1
042	DistGtrRiff2
043	Gtr Trill
044	909 Strings
045	Hybrid Str 1
046	Hybrid Str 2
047	JV Strings
048	Lo-FiStrings
049	Vinyl Strngs
050	Odd Strings
051	Melo Tapes
052	Mellody
053	Swim Strings
054	GloryOfCaesr
055	BunVox&Str
056	Tremolo SFZ
057	Finale
058	NostalgicOrc
059	ScaryStringz
060	DrkTrem Orch
061	IfIKingDaFst
062	Radio 30's
063	Ping
064	Queasy

No.	Name
065	Golem
066	StrChord Maj
067	StrChord Min
068	SynStrings
069	OB Slow Str
070	Super SynStr
071	Contrabass
072	VlnPizzicato
073	Pizz Orch
074	Wet
075	Piezzo
076	E-piz
077	Pizzicato
078	Pizz It
079	Techno Pitz
080	AfricanFlute
081	Jazzy Flute
082	McFlute Atk
083	FluteSoloist
084	Faked Flute
085	TronM Flute
086	TronFlute5th
087	Lonely Ghost
088	Strangefruit
089	Casals dream
090	Flute Pipe
091	Pan Flute
092	ACIDJdynaflt
093	Flute Gliss
094	Dr. Bellows
095	Whistle
096	Wide SynBrs
097	Special Saw
098	Silk Pad
099	Silky JP
100	Detuned DCOs
101	Cheap SynBrs
102	Synth Brass
103	Brass Stack
104	St Sfz Brass
105	30's Tpt
106	Stereo Brass
107	ThunderBrass
108	Solo Tpt
109	LitlNapolian
110	Grit Brassh
111	Soft Brass
112	MuteTrumpet
113	KingApprochz
114	Brass Fall 1
115	Brass Fall 2
116	Mercury Fall
117	AltoSoftSax
118	Breathy Sax
119	Slow BlowSax
120	LatinTnr Sax
121	Sax Section
122	Bombay
123	Real Sitar
124	Sitar LFO
125	FarOutSGliss
126	Tripn'Bombay
127	Cheep Lead
128	Maharagna

Preset F (CC#0 = 81, CC#32 = 69)

No.	Name
001	Tsugaru Road
002	TribalRitual
003	It Began in
004	Duel Ethno
005	Ethno Keys 2
006	FX Menu 1
007	FX Menu 2
008	FX Menu 3
009	FX Menu 4
010	Hi?
011	Weird Snare
012	BreathingArp
013	Chiki /
014	Underground
015	Ambitech
016	ModtheGong
017	Breath Hit
018	Smooth Jet
019	Lazer Points
020	Mod Hit 1
021	Stopper
022	We'r d'ROBOZ
023	Orbit Mod
024	Affects
025	LogicalSweep
026	BullsEye
027	DownThePitch
028	DnB Fall
029	Let it beep
030	Mousey Kick
031	Strange
032	Fear
033	Touch EF
034	NoFXrequired
035	Feedbackwave
036	Noise Voice
037	In The Mist
038	MagneticStrm
039	Take Effect
040	Random LFO
041	S&H Voc
042	RubbrBandSaw
043	Nasty Filt
044	Lipple Ring
045	2Matt Colors
046	Flag Flash
047	Metalythm
048	Sync Tone
049	Down The Hit
050	MetallicShot
051	Kick Da Lion
052	Boost Tom
053	Perk Breath
054	WaitnOutside
055	GogSign
056	DingDong
057	Transport
058	GK Ready
059	to the stars
060	Dusted
061	Destructo
062	RockNSleestk
063	3D Flanger
064	Pacifica
065	Home Sweep
066	Sub Atmosphe
067	Breeze
068	Liquid Air
069	Rev Cord
070	Trancer
071	Autovox
072	Randooom
073	Mod Hit 2
074	Mod Hit 3
075	Mad Mod
076	Q Jet FX 01
077	Abduction
078	Scratch Menu
079	SFX Menu 1
080	SFX Menu 2
081	Bomb Noise
082	Hit Menu 1
083	Hit Menu 2
084	Hit Menu 3
085	Bliss Sweepz
086	Maj7+11 Hit
087	Agent Orange
088	DfloorOrch
089	Blue Ice
090	Sweet Garage
091	Orch Hit 1
092	Orch Hit 2
093	Rave Hit
094	Chunky
095	Tekno ChdHit
096	Happy Hit
097	Dly Rls Stab
098	Classic Hit
099	RevHouse Hit
100	Smear Hit 1
101	Smear Hit 2
102	Dark Hit
103	Vinyl Brass
104	Funk Chank
105	Cheezy Movie
106	Mojo Man
107	Philly Hit
108	Power Hit
109	Neo Hit
110	HardHitnHous
111	Goto Europe
112	Dis The Bass
113	Bright Hit
114	Disminished
115	Tribal Song
116	Industrial02
117	Clap Menu 1
118	Clap Menu 2
119	Perc Menu 1
120	Perc Menu 2
121	Perc Menu 3
122	Perc Menu 4
123	Tablabaya
124	Hip Pluck
125	Udu/Udo
126	Asian Gong
127	Timpani
128	VoxPerc Menu

Preset G (CC#0 = 81, CC#32 = 70)

No.	Name
001	Kick Menu 1
002	Kick Menu 2
003	Kick Menu 3
004	Kick Menu 4
005	TR808 Kick
006	Snare Menu 1
007	Snare Menu 2
008	Snare Menu 3
009	Snare Menu 4
010	Snare Menu 5
011	Snare Menu 6
012	Snare Menu 7
013	NY83 SD
014	TR909 Snare
015	Blip SD
016	RimShot Menu
017	Tom Menu
018	CHH Menu 1
019	CHH Menu 2
020	PHH Menu
021	OHH Menu
022	Cymbal Menu
023	AirWave Solo
024	TronFlt Solo
025	TronStr Solo
026	JP8 Saw Solo
027	SuperSawSolo
028	Trumpet Solo
029	E.Organ Solo
030	RealStr Solo
031	MTLVoiceSolo
032	E.Voice Solo

User: 001–128 (CC#0 = 81, CC#32 = 0)

User: 129–256 (CC#0 = 81, CC#32 = 1)

Card: 001–128 (CC#0 = 81, CC#32 = 32)

Card: 129–256 (CC#0 = 81, CC#32 = 33)

Preset Rhythm Set List

(Preset: FCC#0 = 82, CC#32 = 64 User: CC#0 = 82, CC#32 = 0 Card: CC#0 = 82, CC#32 = 32)

Note No.	001: 909 TR-909 1	004: 909 TR-909 3	007: 909 Techno 1	010: 909 Techno 4	013: 909 Trance 3	016: 909 House 2
59	PlasticKick1	TR909 Kick 1	TR808 Kick	TR909 Kick 6	AnalogKick 9	Neck Kick
C4 60	TR909 Kick 1	TR909 Kick 2	TR606 Dst BD	Pick Kick	AnalogKick 5	Back Kick
61	TR909 Kick 7	TR909 Kick 3	TR808 Kick	AnalogKick 9	PlasticKick3	Tight Kick
62	TR909 SD 1	TR909 SD 1	TR808 SD 1	Tiny Snr 1	TR909 SD 3	Tiny Snr 1
63	TR909 SD 2	TR909 SD 2	TR808 SD 2	Jngl Tiny SD	Boys Snr 2	Rap Snr 2
64	TR909 SD 3	TR909 SD 3	TR808 SD 3	Slap Snr 1	Analog Snr 1	Tiny Snr 2
65	TR909 Rim	TR909 Rim	TR808 Rim	Aah Formant	R&B Rim 4	R&B Rim 4
66	TR909 Clap 1	TR909 Clap 2	TR808 Clap	R8 ClavesCmp	Claptail	Old Clap
67	TR909 Tom	TR909 Tom	TR606 Tom	MG Attack	Deep Tom	GtrShtSlide
68	TR909 Tom	TR909 Tom	TR606 Tom	Beam HiQ	Deep Tom	Tambourine4
69	TR909 Tom	TR909 DstTom	TR808 Claves	MG Blip	Deep Tom	AahVoice Maj
70	TR909 CHH 1	TR909 CHH 1	TR606 CHH 1	TR808 CHH 1	Urban CHH	LowDownCHH
71	TR909 PHH 2	TR909 PHH 1	TR606 PHH 1	TR808 PHH 1	TR808 PHH 1	Swallow PHH
C5 72	TR909 OHH 2	TR909 OHH 1	TR606 OHH	TR808 OHH 1	Regular OHH	Regular OHH
73	TR909 Crash	TR909 Crash	TR606 Cym	TR606 OHH	TR909 Crash	NaturalCrash
74	TR909 Ride	TR909 Ride	TR909 Ride	NaturalCrash	TR707 Ride	Regular Ride

Note No.	002: 909 TR-808 1	005: 909 TR-909 4	008: 909 Techno 2	011: 909 Trance 1	014: 909 Minimal	017: 909 House 3
59	TR808 Kick	TR909 Kick 4	Back Kick	AnalogKick 8	TR808 Kick	TR909 Kick 5
C4 60	TR808 Kick	TR909 Kick 5	PlasticKick1	AnalogKick 6	TR909 Kick 1	Pick Kick
61	TR808 Kick	TR909 Kick 6	PlasticKick1	AnalogKick 7	AnalogKick10	PlasticKick3
62	TR808 SD 2	TR909 SD 4	Real Snare	Analog Snr 2	TR909 SD 1	LowDownSnr 1
63	TR808 SD 4	TR909 SD 5	Lo-Hard Snr	Analog Snr 3	TR808 SD 4	Jngl Tiny SD
64	TR808 SD 5	TR909 SD 6	Swallow Snr	Analog Snr 1	TR909 SD 3	Tiny Snr 1
65	TR808 Rim	TR909 Rim	R&B Rim 3	Picc. Rol Sn	Snap	TR808 Rim
66	TR808 Clap	TR909 Clap 2	R8 Clap	Dist Clap	TR909 Clap 1	Club FinSnap
67	TR808 Tom	TR909 Tom	TablaBayam 1	R8 Shaker A	Disc Clap	MG Attack
68	TR808 Tom	TR909 Tom	TablaBayam 2	BPF Fx	Claptail	MG Blip
69	TR808 Tom	TR909 DstSD	TablaBayam 3	Density	CR78 Tamb	Beam HiQ
70	TR808 CHH 1	TR909 CHH 2	Regular CHH1	TR909 CHH 2	TR909 OHH 2	TR808 CHH 1
71	TR808 CHH 2	TR909 PHH 2	Street PHH	TR909 PHH 2	Neck OHH	TR808 PHH 1
C5 72	TR808 OHH 1	TR909 OHH 2	Regular OHH	TR909 OHH 2	TR909 OHH 2	TR808 OHH 1
73	TR606 Cym	TR909 Crash	NaturalCrash	TR909 Crash	TR909 Crash	TR606 Cym
74	TR606 Cym	TR909 Ride	TR707 Ride	TR909 Ride	TR909 Ride	NaturalCrash

Note No.	003: 909 TR-909 2	006: 909 TR-808 2	009: 909 Techno 3	012: 909 Trance 2	015: 909 House 1	018: 909 BrkBts 1
59	AnalogKick 6	TR808 Kick	AnalogKick 9	Wet Kick	Wet Kick	Density
C4 60	AnalogKick 7	TR808 Kick	AnalogKick11	AnalogKick10	Low Kick 1	MG Zap 4
61	AnalogKick 8	TR808 Kick	TR909 Kick 1	Frenzy Kick	Skool Kick	Pick Kick
62	Analog Snr 1	TR808 SD 1	TR909 SD 4	TR909 SD 1	TR909 SD 3	Analog Snr 1
63	Analog Snr 2	TR808 SD 2	Pin Snr	Frenzy Snr 1	LowDownSnr 1	Swallow Snr
64	Analog Snr 3	TR808 SD 3	Flange Snr	TR808 SD 4	Tiny Snr 2	Tiny Snr 2
65	TR909 Rim	TR808 Rim	Street Rim	Swag Rim	R&B Rim 4	R&B Rim 2
66	TR909 Clap 2	TR808 Clap	Old Clap	TR707 Clap	R8 Clap	TR909 Clap 2
67	TR909 Tom	TR808 Tom	Deep Tom	Deep Tom	Reg HiBng Mt	TR909 DstTom
68	TR909 Tom	TR808 Tom	TR808 Tom	Deep Tom	Reg LoBng Op	TR909 DstTom
69	TR909 DstTom	TR808Cowbell	Deep Tom	Deep Tom	Reg HiBng Op	TR909 DstTom
70	TR909 CHH 1	TR808 CHH 1	Shaky CHH	TR606 CHH 1	Regular CHH1	Hipping CHH
71	TR909 PHH 1	TR808 PHH 1	Hip PHH	TR606 PHH 1	TR606 PHH 1	Street PHH
C5 72	TR909 OHH 1	TR808 OHH 1	Pop Hat Open	TR909 OHH 2	Regular OHH	Bang OHH
73	TR909 Crash	TR606 Cym	TR909 Crash	Analog Cym	NaturalCrash	TR909 Crash
74	TR909 Ride	TR808 OHH 2	TR606 Cym	TR808 OHH 1	TR707 Ride	TR707 Ride

Note No.	019: 909 BrkBts 2	022: 909 DnB 1	025: 909 2Step 1	028: 909 HipHop 2	031: 909 G-Funk 1	034: 909 R&B 1
59	Vinyl Kick 1	Jive Kick	TR808 Kick	Mild Kick	TR606 Kick	Mild Kick
C4 60	Skool Kick	Pick Kick	Jive Kick	HipHop Kick1	Low Kick 3	HipHop Kick1
61	Click Kick 1	AnalogKick10	Wet Kick	Low Kick 4	Low Kick 4	Low Kick 4
62	R8 Brush Tap	Jngl Tiny SD	Cross Snr	Tiny Snr 1	Back Snr	Jngl Tiny SD
63	Real Snare	Jngl Tiny SD	R&B Snr 1	Analog Snr 3	Sizzle Snr 1	LowDownSnr 1
64	Chemical Snr	DJ Snare	R&B RegSnr 1	TR909 SD 6	Chemical Snr	DanceHall SD
65	R8 Comp Rim	TR808 Rim	Swag Rim	R&B Rim 1	R&B Rim 2	R&B Rim 2
66	TR909 Clap 1	Funk Clap	Snap	Group Clap	TR808 Clap	Royal Clap
67	R8 Comp Tom3	MG Attack	Ah M	Scratch 17	TR606 Tom	Scratch 17
68	R8 Comp Tom2	MG Blip	Triangle 1	Scratch 20	TR606 Tom	LoFi MinorHt
69	R8 Comp Tom1	Beam HiQ	Uuh Yeah! M	Sand Hit	TR606 Tom	Scratch 17
70	Hipping CHH	TR808 CHH 1	Bristol CHH	Hipping CHH	HipHop CHH	Urban CHH
71	Hip PHH	TR808 PHH 1	Hip PHH	Hip PHH	TR808 PHH 1	Hip PHH
C5 72	Neck OHH	TR808 OHH 1	Pop Hat Open	Pop Hat Open	TR808 OHH 2	Pop Hat Open
73	TR909 OHH 2	TR606 Cym	Analog Cym	NaturalCrash	NaturalCrash	NaturalCrash
74	NaturalCrash	Analog Cym	TR606 Cym	Regular Ride	Regular Ride	Regular Ride

	020: 909 BrkBts 3	023: 909 DnB 2	026: 909 2Step 2	029: 909 HipHop 3	032: 909 G-Funk 2	035: 909 R&B 2
59	Pick Kick	TR909 Kick 5	Pick Kick	Mild Kick	Low Kick 3	Low Kick 3
C4 60	HipHop Kick2	Pick Kick	Jive Kick	Skool Kick	Low Kick 1	Low Kick 1
61	AnalogKick 3	AnalogKick10	AnalogKick10	Low Kick 3	Skool Kick	Skool Kick
62	Flange Snr	Tiny Snr 1	Tiny Snr 1	LowDownSnr 1	Back Snr	Back Snr
63	Tiny Snr 1	Jngl Tiny SD	Boys Snr 3	Jngl Tiny SD	Slap Snr 1	Slap Snr 1
64	RegularSnrMF	R8 Brush Tap	R8 Snr 1cmp	DanceHall SD	Boys Snr 2	Grave Snr
65	R&B Rim 4	R&B Rim 1	R8 Comp Rim	R&B Rim 2	Swag Rim	Swag Rim
66	Group Clap	Hip Clap	TR909 Clap 2	Claptail	Planet Clap	Planet Clap
67	Euro Fx	MG Attack	R8 Comp Tom4	Scratch 19	R8 Comp Tom3	Snap
68	Scratch 23	MG Blip	R8 Comp Tom2	Ha! M	R8 Comp Tom2	R8 Hi Agogo
69	LoFi Beep 6	Beam HiQ	R8 Comp Tom1	Dial	R8 Comp Tom1	Snap
70	Urban CHH	TR808 CHH 1	Neck CHH	TR909 CHH 1	Bang CHH	Hipping CHH
71	Hip PHH	TR808 PHH 1	Pedal Hat 1	Hip PHH	TR808 CHH 1	TR808 CHH 1
C5 72	Pop Hat Open	TR808 OHH 1	Regular OHH	TR808 OHH 1	Regular OHH	HipHop OHH
73	NaturalCrash	NaturalCrash	TR909 Crash	TR909 Crash	TR909 Crash	NaturalCrash
74	Regular Ride	TR606 Cym	Analog Cym	Regular Ride	Regular Ride	TR707 Ride

	021: 909 BrkBts 4	024: 909 DnB 3	027: 909 HipHop 1	030: 909 HipHop 4	033: 909 G-Funk 3	036: 909 R&B 3
59	Artful Kick	Jive Kick	Mild Kick	Mild Kick	Pin Kick	Swallow Kick
C4 60	TR707 Kick 1	Mild Kick	HipHop Kick1	HipHop Kick1	Skool Kick	Back Kick
61	TR909 Kick 7	PlasticKick3	Low Kick 4	TR909 Kick 1	Click Kick 1	Tight Kick
62	Real Snare	Jngl Tiny SD	Jngl Tiny SD	RaggaTightSD	Keen Snr 1	Tiny Snr 1
63	DanceHall SD	LowDownSnr 1	LowDownSnr 1	RaggaTightSD	Boys Snr 1	Rap Snr 2
64	TR808 SD 7	RegularSnr F	DanceHall SD	DanceHall SD	Slap Snr 1	Tiny Snr 2
65	R&B Rim 4	R&B Rim 1	R&B Rim 2	Swag Rim	Regular Rim	Street Rim
66	TR808 Clap	Disc Clap	Claptail	Cheap Clap	Hip Clap	Old Clap
67	TablaBayam 7	MG Sweep 5	Scratch 16	Scratch 25	CR78 Tamb	Tape Rewind
68	TR909 DstTom	MG Sweep 1	Scratch 19	Scratch 21	R8 Shaker B	Tambourine4
69	Maracas	MG Sweep 3	Metal Press	ThroatWind	R8 Cabasa	Vox Cymbal
70	Bristol CHH	Swallow CHH	Hipping CHH	Modern CHH	Bang CHH	LowDownCHH
71	TR606 PHH 1	TR606 PHH 2	Hip PHH	Street PHH	Street PHH	Swallow PHH
C5 72	TR606 OHH	HipHop OHH	Pop Hat Open	HipHop OHH	Bang OHH	Regular OHH
73	NaturalCrash	NaturalCrash	NaturalCrash	TR909 Crash	TR606 Cym	NaturalCrash
74	TR707 Ride	Jungle Crash	Regular Ride	Regular Ride	Analog Cym	Regular Ride

Preset Rhythm Set List

Note No.	037: 909 Human 1	040: 909 80's 2	043: 909 Elctrnca	046: 909 Regge 2	049: 909 Real 2	052: 909 World
59	Vox Kick 1	PlasticKick1	AnalogKick 9	Vinyl Kick 1	Low Kick 4	Cajon 3
C4 60	Vox Kick 2	Artful Kick	TR808 Kick	Low Kick 3	Mild Kick	TablaBayam 1
61	VoxKickSweep	AnalogKick 5	TR808 Kick	Back Kick	Dance Kick 1	TablaBayam 2
62	Vox Snare 1	Artful Snr	R&B RegSnr 1	Analog Snr 1	Back Snr	TablaBayam 3
63	Vox Snare 2	Analog Snr 3	R8 Snr 2	Real Snare	Slap Snr 1	TablaBayam 4
64	Vox Snare 1	Analog Snr 1	TR606 SD 1	Antigua Snr	Cross Snr	TablaBayam 5
65	Chiki!	R&B Rim 2	Scratch 20	R&B Rim 2	Swag Rim	TablaBayam 6
66	Pa!	Disc Clap	Happy Clap	Real Clap 2	Hip Clap	Club Clap
67	Chiki!	TR808 Tom	Snap	Deep Tom	R8 Comp Tom3	Udo
68	Ah M	TR606 Tom	TablaBayam 3	Deep Tom	R8 Comp Tom2	Udu Pot1 Hi
69	Ah2 M	Deep Tom	Udu Pot1 Hi	Deep Tom	R8 Comp Tom1	Udu Pot1 Slp
70	Vox Hihat 2	TR606 CHH 1	CR78 CHH	Hipping CHH	Hipping CHH	Chenchen
71	Vox Hihat 1	TR606 PHH 1	CR78 OHH	Hip PHH	TR808 CHH 1	Op Pandeiro
C5 72	Vox Hihat 3	TR808 OHH 2	CR78 OHH	Neck OHH	TR606 PHH 1	Mt Pandeiro
73	Vox Cymbal	TR606 Cym	Analog Cym	TR909 OHH 2	NaturalCrash	Asian Gong
74	Vox Hihat 3	TR707 Ride	Regular Ride	NaturalCrash	Regular Ride	RAMA Cymbal

	038: 909 Human 2	041: 909 80's 3	044: 909 Cheap	047: 909 Regge 3	050: 909 Jazz	053: 909 Perc 1
59	Vox Kick 1	PlasticKick2	Lite Kick 1	TR909 Kick 7	Pick Kick	R8 Cowbell
C4 60	Vox Kick 2	AnalogKick10	Artful Kick	Skool Kick	Low Kick 1	TR808Cowbell
61	VoxKickSweep	PlasticKick3	TR606 Kick	Jive Kick	TR707 Kick 1	CR78 Cowbell
62	Vox Snare 1	TR808 SD 5	Lite Snare	DanceHall SD	Real Snare	R8 Hi Agogo
63	Vox Snare 2	TR808 SD 3	CR78 Snare	TR909 SD 5	Cross Snr	R8 LowAgogo
64	Ah M	TR808 SD 7	TR808 SD 1	TR808 SD 3	R&B RegSnr 4	Noise AGG
65	Woow F	TR808 Rim	TR808 Rim	TR808 Claves	Neck Rim	Triangle 1
66	Funk Clap	TR808 Clap	PD Clap	Hip Clap	R8 Clap	Triangle 1
67	Scratch 20	TR808Cowbell	CR78 Tamb	Udo	R8 Comp Tom3	Triangle 2
68	Pa!	MG Zap 9	CR78 Beat	Udu Pot1 Hi	R8 Comp Tom2	Triangle 2
69	Chiki!	Beam HiQ	CR78 Guiro	Udu Pot1 Slp	R8 Comp Tom1	Tambourine1
70	Vox Hihat 2	TR808 CHH 1	Lite CHH	TR606 CHH 2	Regular CHH1	Tambourine2
71	Vox Hihat 1	CR78 CHH	Lite OHH	Hip PHH	Pedal Hat 1	Tambourine3
C5 72	Vox Cymbal	TR606 OHH	Lite OHH	TR909 OHH 2	Regular OHH	Tambourine4
73	Asian Gong	TR606 OHH	TR606 Cym	NaturalCrash	NaturalCrash	CR78 Tamb
74	Scratch 24	TR909 Ride	Analog Cym	TR707 Ride	Regular Ride	CR78 Beat

	039: 909 80's 1	042: 909 Electro	045: 909 Regge 1	048: 909 Real 1	051: 909 Brash	054: 909 Perc 2
59	HipHop Kick2	Low Kick 3	Rap Kick	Boys Kick	Jive Kick	808 Maracas
C4 60	PlasticKick3	PlasticKick2	Neck Kick	Low Kick 1	TR707 Kick 1	Maracas
61	TR909 Kick 1	AnalogKick10	Vinyl Kick 1	Regular Kick	Regular Kick	R8 Shaker A
62	TR909 SD 5	DanceHall SD	Frenzy Snr 2	RegularSnrMP	R8 BrushRoll	R8 Cabasa
63	Tiny Snr 1	Lite Snare	Reagae Snr	RegularSnr F	R8 BrshSwill	CR78 Guiro
64	Analog Snr 1	RegularSnr F	Urban RollSD	RegularSnrMF	R&B RegSnr 4	Reg Guiro A
65	R&B Rim 3	TR808 Rim	Modern CHH	Regular Rim	R&B Rim 3	Reg Guiro B
66	TR909 Clap 1	Dist Clap	R8 Clap	R&B RegSnrG1	Real Clap 2	Reg Guiro C
67	Deep Tom	TR606 Tom	TR909 DstTom	R8 Comp Tom4	Natural Tom	Whistle Shrt
68	Deep Tom	TR606 Tom	TR909 Tom	R8 Comp Tom2	Natural Tom	Whistle
69	Deep Tom	TR606 Tom	TR808 Tom	R8 Comp Tom1	Natural Tom	TR727Quijada
70	Modern CHH	TR909 CHH 2	Swallow CHH	Urban CHH	Regular CHH2	R8 ClavesCmp
71	Swallow PHH	TR606 CHH 1	Street PHH	Pedal Hat 1	Street PHH	TR808 Claves
C5 72	Regular OHH	TR606 OHH	Neck OHH	Regular OHH	Regular OHH	Single Snap
73	NaturalCrash	TR909 Crash	Jungle Crash	NaturalCrash	NaturalCrash	Snap
74	Regular Ride	TR707 Ride	Dist Clap	Regular Ride	Regular Ride	Club FinSnap

* *Numbers 065–072 are sets to which the sample data used by patterns 1–5 have been assigned.*

Note No.	055: 909 Perc 3	058: 909 Scratch	061: 909 Vox Perc	064: 909 Sound FX	067: G-Funk Voice	070: House Guitar
59	R8 HiCongaMt	Scratch 16	Vox Kick 1	Dial	Break It On	House Gtr1
C4 60	R8 HiCongaOp	Scratch 17	Vox Kick 2	Door Knob	Check It Out	House Gtr2
61	R8 LoCongaOp	Scratch 18	VoxKickSweep	Water Cock 2	I Like That	
62	Reg HiCng Mt	Scratch 19	Vox Snare 1	Sea	Thats Tight	
63	Reg HiCng Op	Scratch 20	Vox Snare 2	Dolphin Md		
64	Reg LoCng Op	Scratch 21	Vox Hihat 1	Dolphin Lo		
65	Reg HiBng Mt	Scratch 24	Vox Hihat 2	Applause		
66	Reg HiBng Op	Scratch 25	Vox Hihat 3	Thunderbolt		
67	Reg LoBng Op	Scratch 26	Vox Cymbal	Vinyl burst		
68	Timbale Hi	Scratch 22	Pa!	Bomb Noise		
69	Timbale Lo	Scratch 22	Chiki!	Firebomb		
70	Cajon 1	Scratch 23	Punch	Jack Hammer		
71	Cajon 2	Scratch 23	Vox Cymbal	Turbine		
C5 72	Cajon 3	Tape Rewind	Pa!	Sawing		
73	Op Pandeiro	Vinyl Stop	Chiki!	Siren		
74	Mt Pandeiro	Vinyl Noise	Punch	Drill Hit		

	056: 909 Perc 4	059: 909 Voice 1	062: 909 Zap	065: R&B Vocal	068: Trance Vocal	071: Breath
59	TablaBayam 1	One M	MG Zap 1	R&B Vocal1	All Right1	Breath1
C4 60	TablaBayam 2	Two M	MG Zap 2	R&B Vocal2	All Right2	Breath2
61	TablaBayam 3	Three M	MG Zap 3			
62	TablaBayam 4	Four M	MG Zap 4			
63	TablaBayam 5	Aah! M	MG Zap 5			
64	TablaBayam 6	Hou! M	MG Zap 6			
65	TablaBayam 7	Ha! M	MG Zap 7			
66	Udo	Hi! M	MG Zap 8			
67	Udu Pot1 Hi	Hi2 M	MG Zap 9			
68	Udu Pot1 Slp	Wow M	MG Zap 10			
69	AfroDrum Rat	Yeah2 M	MG Zap 11			
70	Sitar Gliss	You Know M	MG Zap 12			
71	Sitar Gliss	Get It Up M	MG Zap 13			
C5 72	Chenchen	Come On M	MG Zap 14			
73	RAMA Cymbal	Ah Hah M	MG Zap 15			
74	Asian Gong	Ah M	MG Blip			

	057: 909 Hit&Stab	060: 909 Voice 2	063: 909 Synth FX	066: R&B Guitar	069: House Vocal	072: Techno Voice
59	OrangeHit 1	Ah2 M	LoFi Beep 1	R&B Guitar1	Set Me Free	Yah
C4 60	OrangeHit 3	Uuh Yeah! M	LoFi Beep 2	R&B Guitar2	Uhh	What I Want
61	OrangeHit 4	ComeOn F	LoFi Beep 3			
62	OrangeHit 7	Ha F	LoFi Beep 4			
63	7th Hit	Woow F	LoFi Beep 5			
64	Minor Hit	Aah Formant	LoFi Beep 6			
65	Dist Hit	Eeh Formant	Hardhock			
66	Tekno Hit	Iih Formant	Euro Fx			
67	Back Hit	Ooh Formant	Orbit			
68	Thin Beef	Uuh Formant	Density			
69	Tao Hit	MetalVoiceW1	Metal Bar 1			
70	Philly Hit	MetalVoiceW2	Metal Bar 2			
71	ClassicHseHt	MetalVoiceW3	Metal Press			
C5 72	Smear Hit 1	AahVoice Maj	Sand Hit			
73	Smear Hit 2	AahVoice Min	DarkSteam			
74	LoFi MinorHt	Auh Voice	Ambience			

Preset Pattern List

No.	Pattern Name	BPM	Mes.	Programmer
001	R&B 1	65	4	Shinichiro Murayama
002	G-Funk 1	77	4	Kazuhiko Maeda
003	Euro Trance 1	138	8	B.U.S
004	Garage 1	130	4	B.U.S
005	Minimal 1	137	4	grogman
006	Techno 1	132	8	Q'HEY
007	Techno 2	130	4	Heigo Tani
008	Techno 3	128	4	Heigo Tani
009	Techno 4	132	4	Heigo Tani
010	Techno 5	137	4	grogman
011	Techno 6	135	8	Roland Corporation
012	Techno 7	133	8	Nick Tidy
013	Techno 8	130	4	Takatoshi Nishibu
014	Techno 9	130	8	Heigo Tani
015	Techno 10	130	4	Heigo Tani
016	Techno 11	128	4	Q'HEY
017	Techno 12	130	8	Kunihiro Ueno
018	Techno 13	130	8	Kunihiro Ueno
019	Techno 14	128	4	Kunihiro Ueno
020	Techno 15	127	8	Cappadocia Productions
021	Techno 16	125	4	Heigo Tani
022	Techno 17	132	4	Q'HEY
023	Techno 18	140	8	Nick Tidy
024	Techno 19	132	4	Q'HEY
025	Techno 20	135	8	Q'HEY
026	Techno 21	127	8	Nick Tidy
027	Techno 22	138	8	Nick Tidy
028	Minimal 2	140	4	Heigo Tani
029	Minimal 3	140	4	Heigo Tani
030	Minimal 4	141	4	Daishiro Minami
031	Minimal 5	138	4	Roland Corporation
032	Minimal 6	137	4	grogman
033	Minimal 7	135	8	Q'HEY
034	Minimal 8	135	8	Q'HEY
035	Minimal 9	135	4	Q'HEY
036	Minimal 10	135	8	Q'HEY
037	Minimal 11	135	8	Q'HEY
038	Minimal 12	135	8	Q'HEY
039	Minimal 13	135	8	Q'HEY
040	Hardcore 1	180	8	NEURON
041	Hardcore 2	180	8	NEURON
042	Hardcore 3	180	8	NEURON
043	Hardcore 4	150	8	NEURON
044	Hardcore 5	150	8	NEURON
045	Ambient 1	89	8	Cappadocia Productions
046	Ambient 2	89	8	Cappadocia Productions
047	Ambient 3	82	8	Roland Corporation U.S.
048	Ambient 4	100	4	Roland Corporation
049	Ambient 5	120	4	MASA
050	Ambient 6	130	4	Q'HEY
051	Drum'n'Bass 1	180	8	Kunihiro Ueno
052	Drum'n'Bass 2	180	8	Kunihiro Ueno
053	Drum'n'Bass 3	175	4	Heigo Tani
054	Drum'n'Bass 4	166	8	Nick Tidy
055	Drum'n'Bass 5	180	8	Nick Tidy
056	Drum'n'Bass 6	170	4	Roland Corporation
057	Drum'n'Bass 7	175	8	Roland Corporation
058	Drum'n'Bass 8	170	8	Heigo Tani
059	Drum'n'Bass 9	180	8	Kunihiro Ueno
060	Drum'n'Bass 10	180	8	Kunihiro Ueno
061	Drum'n'Bass 11	170	8	Kunihiro Ueno
062	Drum'n'Bass 12	180	8	Kunihiro Ueno
063	Drum'n'Bass 13	180	4	Kunihiro Ueno
064	Break Beats 1	140	4	Heigo Tani
065	Break Beats 2	140	4	Heigo Tani
066	Break Beats 3	136	8	Kunihiro Ueno
067	Break Beats 4	126	8	Nick Tidy
068	Break Beats 5	110	4	Kunihiro Ueno
069	Break Beats 6	128	8	Nick Tidy
070	Break Beats 7	120	8	Kunihiro Ueno
071	Break Beats 8	120	8	Nick Tidy
072	Break Beats 9	154	8	Kunihiro Ueno
073	Break Beats 10	170	8	Heigo Tani
074	Break Beats 11	175	4	Heigo Tani
075	Break Beats 12	138	4	Heigo Tani
076	Break Beats 13	127	4	B.U.S
077	Break Beats 14	144	8	Nick Tidy
078	Euro Trance 2	140	8	Roland Corporation
079	Euro Trance 3	135	8	Roland Corporation
080	Euro Trance 4	140	8	Hans-Joerg Scheffler
081	Euro Trance 5	140	8	B.U.S
082	Euro Trance 6	138	4	B.U.S
083	Euro Trance 7	136	4	B.U.S
084	Euro Trance 8	138	8	Roland Corporation U.S.
085	Euro Trance 9	145	8	NEURON
086	Hard Trance 1	140	8	Hans-Joerg Scheffler
087	Hard Trance 2	150	8	NEURON
088	Hard Trance 3	150	8	NEURON
089	Hard Trance 4	140	8	Hans-Joerg Scheffler
090	Hard Trance 5	145	8	Roland Corporation
091	Hard Trance 6	136	4	Takatoshi Nishibu
092	Hard Trance 7	140	8	Hans-Joerg Scheffler
093	Hard Trance 8	134	4	Roland Corporation U.S.
094	Hard Trance 9	140	4	MASA
095	Hard Trance 10	138	4	MASA
096	Hard Trance 11	140	4	MASA
097	Psy. Trance 1	140	4	MASA
098	Psy. Trance 2	140	4	MASA
099	Psy. Trance 3	138	4	MASA
100	Psy. Trance 4	138	4	MASA
101	Psy. Trance 5	138	8	MASA
102	Psy. Trance 6	143	8	NEURON
103	Psy. Trance 7	140	8	NEURON
104	UK HardHouse 1	150	8	Roland Corporation
105	UK HardHouse 2	145	8	Roland Corporation
106	UK HardHouse 3	142	4	B.U.S
107	UK HardHouse 4	142	8	Roland Corporation U.S.
108	UK HardHouse 5	142	8	Roland Corporation U.S.
109	UK HardHouse 6	140	4	Roland Corporation U.S.
110	UK HardHouse 7	140	8	B.U.S
111	US HardHouse 1	133	4	Roland Corporation U.S.
112	US HardHouse 2	125	4	Roland Corporation
113	US HardHouse 3	125	4	Roland Corporation
114	US HardHouse 4	129	4	Roland Corporation U.S.
115	US HardHouse 5	130	4	Kazuhiko Maeda
116	US HardHouse 6	130	4	Kazuhiko Maeda
117	US HardHouse 7	130	4	Kazuhiko Maeda
118	Progressive 1	133	8	Roland Corporation
119	Progressive 2	130	8	Roland Corporation
120	Progressive 3	132	8	Roland Corporation U.S.

No.	Pattern Name	BPM	Mes.	Programmer
121	Progressive 4	136	4	B.U.S
122	Progressive 5	136	4	B.U.S
123	Progressive 6	138	4	B.U.S
124	Progressive 7	137	8	Nick Tidy
125	Garage 2	128	4	Roland Corporation U.S.
126	Garage 3	132	4	B.U.S
127	Garage 4	130	4	B.U.S
128	Garage 5	125	8	Hans-Joerg Scheffler
129	Garage 6	129	8	Hans-Joerg Scheffler
130	Garage 7	134	8	Hans-Joerg Scheffler
131	Garage 8	142	8	Naoki Matsuura
132	Garage 9	134	8	Naoki Matsuura
133	Garage 10	138	8	Naoki Matsuura
134	Disco 1	132	8	B.U.S
135	Disco 2	132	8	B.U.S
136	Disco 3	135	4	Roland Corporation U.S.
137	House 1	135	4	MASA
138	House 2	124	4	Hans-Joerg Scheffler
139	House 3	134	4	Hans-Joerg Scheffler
140	House 4	127	8	Nick Tidy
141	House 5	128	8	Hans-Joerg Scheffler
142	House 6	126	8	Hans-Joerg Scheffler
143	R&B 2	104	4	Shinichiro Murayama
144	R&B 3	99	4	Kazuhiko Maeda
145	R&B 4	89	4	Kazuhiko Maeda
146	R&B 5	66	8	Shinichiro Murayama
147	R&B 6	70	4	Kazuhiko Maeda
148	R&B 7	80	4	Kazuhiko Maeda
149	R&B 8	92	4	Kazuhiko Maeda
150	R&B 9	96	8	Shinichiro Murayama
151	R&B 10	97	4	Kazuhiko Maeda
152	R&B 11	100	8	Shinichiro Murayama
153	R&B 12	90	8	Shinichiro Murayama
154	R&B 13	90	8	Shinichiro Murayama
155	R&B 14	105	8	Shinichiro Murayama
156	R&B 15	100	8	Shinichiro Murayama
157	R&B 16	98	8	Shinichiro Murayama
158	R&B 17	100	8	Shinichiro Murayama
159	R&B 18	102	8	Shinichiro Murayama
160	Hip Hop 1	84	8	Kazuhiko Maeda
161	Hip Hop 2	93	4	Kazuhiko Maeda
162	Hip Hop 3	113	8	Roland Corporation U.S.
163	Hip Hop 4	108	8	Roland Corporation U.S.
164	Hip Hop 5	116	8	Roland Corporation U.S.
165	Hip Hop 6	71	4	Roland Corporation
166	Hip Hop 7	98	8	Roland Corporation
167	Hip Hop 8	95	4	Roland Corporation
168	Hip Hop 9	89	4	Cappadocia Productions
169	Hip Hop 10	89	4	Cappadocia Productions
170	Hip Hop 11	87	8	Roland Corporation U.S.
171	Hip Hop 12	91	8	Roland Corporation U.S.
172	Hip Hop 13	89	4	Cappadocia Productions
173	G-Funk 2	97	4	Kazuhiko Maeda
174	G-Funk 3	96	4	Kazuhiko Maeda
175	G-Funk 4	97	8	Roland Corporation U.S.
176	G-Funk 5	94	8	Roland Corporation U.S.
177	G-Funk 6	91	8	Roland Corporation U.S.
178	G-Funk 7	97	8	Roland Corporation U.S.
179	G-Funk 8	91	8	Roland Corporation U.S.
180	G-Funk 9	91	8	Roland Corporation U.S.
181	G-Funk 10	95	4	Roland Corporation
182	G-Funk 11	90	4	Roland Corporation
183	Abstract 1	95	4	Roland Corporation
184	Abstract 2	80	4	Roland Corporation
185	Abstract 3	60	4	Roland Corporation
186	Abstract 4	95	4	Roland Corporation
187	Abstract 5	92	8	Roland Corporation U.S.
188	Abstract 6	96	8	Roland Corporation U.S.
189	Electro 1	124	4	Cappadocia Productions
190	Electro 2	135	8	Cappadocia Productions
191	Electro 3	127	8	Cappadocia Productions
192	Electro 4	100	4	Cappadocia Productions
193	Electro 5	133	8	Nick Tidy
194	Electro 6	113	8	Roland Corporation U.S.
195	Electronica 1	120	4	Roland Corporation
196	Electronica 2	120	4	Roland Corporation
197	Electronica 3	110	4	Roland Corporation
198	Electronica 4	110	4	Roland Corporation
199	Electronica 5	120	4	Roland Corporation
200	Electronica 6	120	4	Roland Corporation
201	Electronica 7	130	8	Roland Corporation
202	Electronica 8	128	8	Q'HEY
203	Electronica 9	130	4	Q'HEY
204	Reggae 1 (Dance Hall)	90	4	Roland Corporation
205	Reggae 2 (Dance Hall)	90	4	Roland Corporation
206	Reggae 3 (Dance Hall)	85	4	Naoki Matsuura
207	Reggae 4 (Dance Hall)	85	4	Naoki Matsuura
208	Reggae 5 (Dance Hall)	93	4	Roland Corporation
209	Reggae 6 (Lovers)	90	4	Roland Corporation
210	Reggae 7 (Lovers)	89	4	Kazuhiko Maeda
211	Reggae 8 (Lovers)	78	8	Naoki Matsuura
212	Reggae 9 (Lovers)	68	8	Naoki Matsuura
213	Reggae 10 (Roots)	80	4	Naoki Matsuura
214	Reggae 11 (Roots)	65	4	Naoki Matsuura
215	Reggae 12 (Dub)	71	8	Naoki Matsuura

* *Depending on the country in which you purchased your MC-909, the first five preset patterns may be in a different order.*

001	Euro Trance 1	138	8	B.U.S
002	Garage 1	130	4	B.U.S
003	Minimal 1	137	4	grogman
004	R&B 1	65	4	Shinichiro Murayama
005	G-Funk 1	77	4	Kazuhiko Maeda

No.: Pattern Number / Mes.: Measure Length

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RPS Pattern List

No.	Pattern Name
216	Techno Drums 1
217	Techno Drums 2
218	Techno Drums 3
219	Techno Drums 4
220	Techno Drums 5
221	Techno Drums 6
222	Techno Drums 7
223	Techno Drums 8
224	Techno Drums 9
225	Techno Drums 10
226	Techno Drums 11
227	Techno Drums 12
228	Techno Drums 13
229	Techno Drums 14
230	Trance Drums 1
231	Trance Drums 2
232	Trance Drums 3
233	Trance Drums 4
234	Trance Drums 5
235	Trance Drums 6
236	Trance Drums 7
237	Trance Drums 8
238	House Drums 1
239	House Drums 2
240	House Drums 3
241	House Drums 4
242	House Drums 5
243	House Drums 6
244	House Drums 7
245	House Drums 8
246	2Step Drums 1
247	2Step Drums 2
248	Dnb Drums 1
249	Dnb Drums 2
250	Dnb Drums 3
251	Dnb Drums 4
252	B.Beats Drums 1
253	B.Beats Drums 2
254	B.Beats Drums 3
255	B.Beats Drums 4
256	HipHop Drums 1
257	HipHop Drums 2
258	HipHop Drums 3
259	HipHop Drums 4
260	HipHop Drums 5
261	HipHop Drums 6
262	HipHop Drums 7
263	HipHop Drums 8
264	HipHop Drums 9
265	HipHop Drums 10
266	Reggae Drums 1
267	Reggae Drums 2
268	Human Beat 1
269	Human Beat 2
270	Techno Bass 1

No.	Pattern Name
271	Techno Bass 2
272	Techno Bass 3
273	Techno Bass 4
274	Techno Bass 5
275	Techno Bass 6
276	Techno Bass 7
277	Techno Bass 8
278	Techno Bass 9
279	Techno Bass 10
280	Techno Bass 11
281	Techno Bass 12
282	Techno Bass 13
283	Techno Bass 14
284	Trance Bass 1
285	Trance Bass 2
286	Trance Bass 3
287	Trance Bass 4
288	Trance Bass 5
289	Trance Bass 6
290	Trance Bass 7
291	Trance Bass 8
292	House Bass 1
293	House Bass 2
294	House Bass 3
295	House Bass 4
296	House Bass 5
297	House Bass 6
298	House Bass 7
299	House Bass 8
300	2Step Bass 1
301	2Step Bass 2
302	Dnb Bass 1
303	Dnb Bass 2
304	Dnb Bass 3
305	Dnb Bass 4
306	B.Beats Bass 1
307	B.Beats Bass 2
308	B.Beats Bass 3
309	B.Beats Bass 4
310	HipHop Bass 1
311	HipHop Bass 2
312	HipHop Bass 3
313	HipHop Bass 4
314	HipHop Bass 5
315	HipHop Bass 6
316	HipHop Bass 7
317	HipHop Bass 8
318	HipHop Bass 9
319	HipHop Bass 10
320	Reggae Bass 1
321	Reggae Bass 2
322	Kick Fill 1
323	Kick Fill 2
324	Kick Fill 3
325	Kick Fill 4

No.	Pattern Name
326	Kick Fill 5
327	Kick Fill 6
328	Kick Fill 7
329	Kick Fill 8
330	Kick Fill 9
331	Kick Fill 10
332	Kick Fill 11
333	Kick Fill 12
334	Kick Fill 13
335	Snare Fill 1
336	Snare Fill 2
337	Snare Fill 3
338	Snare Fill 4
339	Snare Fill 5
340	Snare Fill 6
341	Snare Fill 7
342	Snare Fill 8
343	Snare Fill 9
344	Snare Fill 10
345	Snare Fill 11
346	Snare Fill 12
347	Snare Fill 13
348	Snare Fill 14
349	Snare Fill 15
350	Snare Fill 16
351	Snare Fill 17
352	Snare Fill 18
353	Snare Fill 19
354	Snare Fill 20
355	Hi-hat Fill 1
356	Hi-hat Fill 2
357	Hi-hat Fill 3
358	Hi-hat Fill 4
359	Hi-hat Fill 5
360	Hi-hat Fill 6
361	Hi-hat Fill 7
362	Hi-hat Fill 8
363	Hi-hat Fill 9
364	Hi-hat Fill 10
365	Hi-hat Fill 11
366	Hi-hat Fill 12
367	Hi-hat Fill 13
368	Hi-hat Fill 14
369	Hi-hat Fill 15
370	Hi-hat Fill 16
371	Hi-hat Fill 17
372	Hi-hat Fill 18
373	Hi-hat Fill 19
374	Hi-hat Fill 20
375	Hi-hat Fill 21
376	Cymbal Fill 1
377	Cymbal Fill 2
378	Cymbal Fill 3
379	Cymbal 1
380	Cymbal 2

No.	Pattern Name
381	Cymbal 3
382	Cymbal 4
383	Clap Fill 1
384	Clap Fill 2
385	Clap Fill 3
386	Clap Fill 4
387	Clap Fill 5
388	Clap Fill 6
389	Clap Fill 7
390	Clap Fill 8
391	Tom Fill 1
392	Tom Fill 2
393	Perc. Fill 1
394	Perc. Fill 2
395	Perc. Fill 3
396	Perc. Fill 4
397	Perc. Fill 5
398	Perc. Fill 6
399	Perc. Fill 7
400	Perc. Fill 8
401	Perc. Fill 9
402	Perc. Fill 10
403	Perc. Fill 11
404	Perc. Fill 12
405	Perc. Fill 13
406	Perc. Fill 14
407	Perc. Fill 15
408	Perc. Fill 16
409	Perc. Fill 17
410	Perc. Fill 18
411	Perc. Fill 19
412	Perc. Fill 20
413	Perc. Fill 21
414	Perc. Fill 22
415	Perc. Fill 23
416	Perc. Fill 24
417	Perc. Fill 25
418	Perc. Fill 26
419	Perc. Fill 27
420	Cowbell 1
421	Human Fill 1
422	Human Fill 2
423	Human Fill 3
424	Human Fill 4
425	Human Fill 5
426	Human Fill 6
427	Scratch 1
428	Scratch 2
429	Scratch 3
430	Scratch 4
431	Scratch 5
432	Scratch 6
433	Scratch 7
434	Scratch 8
435	Scratch 9

No.	Pattern Name
436	Scratch 10
437	Scratch 11
438	Scratch 12
439	Scratch 13
440	Scratch 14
441	Scratch 15
442	Scratch 16
443	Scratch 17
444	Piano 1
445	Piano 2
446	Piano 3
447	Piano 4
448	Piano 5
449	Piano 6
450	Piano 7
451	E.Piano 1
452	E.Piano 2
453	E.Piano 3
454	E.Piano 4
455	E.Piano 5
456	E.Piano 6
457	Organ 1
458	Organ 2
459	Organ 3
460	Guitar Riff 1
461	Guitar Riff 2
462	Guitar Riff 3
463	Guitar Riff 4
464	Guitar Riff 5
465	Guitar Riff 6
466	Guitar Riff 7
467	Guitar Riff 8
468	Guitar Riff 9
469	Guitar Riff 10
470	Guitar Riff 11
471	Guitar Riff 12
472	Strings 1
473	Strings 2
474	Strings 3
475	Strings 4
476	Strings 5
477	Strings 6
478	Strings 7
479	Vox 1
480	Vox 2
481	Vox 3
482	Vox 4
483	Vox 5
484	Vox 6
485	Vox 7
486	Brass 1
487	Brass 2
488	Brass 3
489	Brass 4
490	Brass 5

No.	Pattern Name
491	Flute 1
492	Flute 2
493	Flute 3
494	Ethnic Riff 1
495	Ethnic Riff 2
496	Balaphone 1
497	Balaphone 2
498	Bass Riff 1
499	Bass Riff 2
500	Synth Lead 1
501	Synth Lead 2
502	Synth Lead 3
503	Synth Lead 4
504	Synth Lead 5
505	Synth Lead 6
506	Synth Lead 7
507	Synth Lead 8
508	Synth Lead 9
509	Synth Pad 1
510	Synth Pad 2
511	Synth Pad 3
512	Synth Pad 4
513	Synth Pad 5
514	Synth Pad 6
515	Synth Pad 7
516	Synth Pad 8
517	Synth Pad 9
518	Synth Pad 10
519	Synth Pad 11
520	Synth Pad 12
521	Synth Pad 13
522	Synth Pad 14
523	Synth Pad 15
524	Synth Pad 16
525	Synth Pad 17
526	Synth Riff 1
527	Synth Riff 2
528	Synth Riff 3
529	Synth Riff 4
530	Synth Riff 5
531	Synth Riff 6
532	Synth Riff 7
533	Synth Riff 8
534	Synth Riff 9
535	Synth Riff 10
536	Synth Riff 11
537	Synth Riff 12
538	Synth Riff 13
539	Synth Riff 14
540	Synth Riff 15
541	Synth Riff 16
542	Synth Riff 17
543	Synth Riff 18
544	Synth Riff 19
545	Synth Riff 20

No.	Pattern Name
546	Synth Riff 21
547	Synth Riff 22
548	Synth Riff 23
549	Synth Riff 24
550	Synth Riff 25
551	Synth Riff 26
552	Synth Riff 27
553	Synth Riff 28
554	Synth Riff 29
555	Synth Riff 30
556	Synth Riff 31
557	Synth Riff 32
558	Synth Riff 33
559	Synth Riff 34
560	Synth Riff 35
561	Synth Riff 36
562	Synth Seq 1
563	Synth Seq 2
564	Synth Seq 3
565	Synth Seq 4
566	Synth Seq 5
567	Synth Seq 6
568	Synth Seq 7
569	Synth Seq 8
570	Synth Seq 9
571	Synth Seq 10
572	Synth Seq 11
573	Synth Seq 12
574	Synth Seq 13
575	Synth Seq 14
576	Synth Seq 15
577	Synth Seq 16
578	Synth Seq 17
579	Synth Seq 18
580	Synth Seq 19
581	Synth Seq 20
582	Synth Seq 21
583	Synth Seq 22
584	Hit 1
585	Hit 2
586	Hit 3
587	Hit 4
588	Hit 5
589	Voice 1
590	Voice 2
591	Voice 3
592	Voice 4
593	Voice 5
594	Voice 6
595	Voice 7
596	Voice 8
597	Voice 9
598	Voice 10
599	Voice 11
600	Voice 12

No.	Pattern Name
601	Voice 13
602	Voice 14
603	Voice 15
604	Voice 16
605	Voice 17
606	Voice 18
607	Voice 19
608	FX 1
609	FX 2
610	FX 3
611	FX 4
612	FX 5
613	FX 6
614	FX 7
615	FX 8
616	FX 9
617	FX 10
618	FX 11
619	FX 12
620	FX 13
621	FX 14
622	FX 15
623	FX 16
624	FX 17
625	FX 18
626	FX 19
627	FX 20
628	FX 21
629	FX 22
630	FX 23
631	FX 24
632	FX 25
633	FX 26
634	FX 27
635	FX 28
636	FX 29
637	FX 30
638	FX 31
639	FX 32
640	FX 33
641	FX 34
642	FX 35
643	FX 36
644	FX 37
645	FX 38
646	FX 39
647	FX 40
648	FX 41
649	FX 42
650	FX 43
651	FX 44
652	FX 45
653	FX 46
654	FX 47
655	FX 48

RPS Set List

01. Techno 1

Pad	No.	Pattern Name
1	216	Techno Drums 1
2	217	Techno Drums 2
3	270	Techno Bass 1
4	271	Techno Bass 2
5	376	Cymbal Fill 1
6	322	Kick Fill 1
7	335	Snare Fill 1
8	383	Clap Fill 1
9	526	Synth Riff 1
10	562	Synth Seq 1
11	527	Synth Riff 2
12	563	Synth Seq 2
13	509	Synth Pad 1
14	608	FX 1
15	609	FX 2
16	589	Voice 1

02. Techno 2

Pad	No.	Pattern Name
1	218	Techno Drums 3
2	219	Techno Drums 4
3	272	Techno Bass 3
4	273	Techno Bass 4
5	355	Hi-hat Fill 1
6	391	Tom Fill 1
7	323	Kick Fill 2
8	393	Perc. Fill 1
9	500	Synth Lead 1
10	501	Synth Lead 2
11	564	Synth Seq 3
12	528	Synth Riff 3
13	510	Synth Pad 2
14	610	FX 3
15	611	FX 4
16	612	FX 5

03. Techno 3

Pad	No.	Pattern Name
1	220	Techno Drums 5
2	221	Techno Drums 6
3	274	Techno Bass 5
4	275	Techno Bass 6
5	394	Perc. Fill 2
6	395	Perc. Fill 3
7	384	Clap Fill 2
8	356	Hi-hat Fill 2
9	529	Synth Riff 4
10	530	Synth Riff 5
11	531	Synth Riff 6
12	532	Synth Riff 7
13	479	Vox 1
14	590	Voice 2
15	584	Hit 1
16	613	FX 6

04. Minimal

Pad	No.	Pattern Name
1	222	Techno Drums 7
2	223	Techno Drums 8
3	276	Techno Bass 7
4	277	Techno Bass 8
5	324	Kick Fill 3
6	336	Snare Fill 2
7	396	Perc. Fill 4
8	496	Balaphone 1
9	494	Ethnic Riff 1
10	480	Vox 2
11	533	Synth Riff 8
12	565	Synth Seq 4
13	534	Synth Riff 9
14	481	Vox 3
15	585	Hit 2
16	614	FX 7

05. Hardcore

Pad	No.	Pattern Name
1	224	Techno Drums 9
2	225	Techno Drums 10
3	278	Techno Bass 9
4	279	Techno Bass 10
5	337	Snare Fill 3
6	338	Snare Fill 4
7	397	Perc. Fill 5
8	379	Cymbal 1
9	566	Synth Seq 5
10	567	Synth Seq 6
11	444	Piano 1
12	535	Synth Riff 10
13	536	Synth Riff 11
14	537	Synth Riff 12
15	615	FX 8
16	591	Voice 3

06. Ambient

Pad	No.	Pattern Name
1	226	Techno Drums 11
2	227	Techno Drums 12
3	280	Techno Bass 11
4	281	Techno Bass 12
5	357	Hi-hat Fill 3
6	377	Cymbal Fill 2
7	398	Perc. Fill 6
8	325	Kick Fill 4
9	568	Synth Seq 7
10	569	Synth Seq 8
11	570	Synth Seq 9
12	511	Synth Pad 3
13	512	Synth Pad 4
14	616	FX 9
15	617	FX 10
16	472	Strings 1

07. Drum'n'Bass 1

Pad	No.	Pattern Name
1	248	Dnb Drums 1
2	249	Dnb Drums 2
3	302	Dnb Bass 1
4	303	Dnb Bass 2
5	358	Hi-hat Fill 4
6	380	Cymbal 2
7	326	Kick Fill 5
8	327	Kick Fill 6
9	502	Synth Lead 3
10	503	Synth Lead 4
11	504	Synth Lead 5
12	473	Strings 2
13	571	Synth Seq 10
14	618	FX 11
15	619	FX 12
16	620	FX 13

08. Drum'n'Bass 2

Pad	No.	Pattern Name
1	250	Dnb Drums 3
2	251	Dnb Drums 4
3	304	Dnb Bass 3
4	305	Dnb Bass 4
5	328	Kick Fill 7
6	359	Hi-hat Fill 5
7	360	Hi-hat Fill 6
8	399	Perc. Fill 7
9	445	Piano 2
10	451	E.Piano 1
11	513	Synth Pad 5
12	514	Synth Pad 6
13	515	Synth Pad 7
14	621	FX 14
15	622	FX 15
16	572	Synth Seq 11

09. Break Beats 1

Pad	No.	Pattern Name
1	252	B.Beats Drums 1
2	253	B.Beats Drums 2
3	306	B.Beats Bass 1
4	307	B.Beats Bass 2
5	329	Kick Fill 8
6	339	Snare Fill 5
7	361	Hi-hat Fill 7
8	421	Human Fill 1
9	538	Synth Riff 13
10	460	Guitar Riff 1
11	623	FX 16
12	624	FX 17
13	461	Guitar Riff 2
14	427	Scratch 1
15	625	FX 18
16	592	Voice 4

10. Break Beats 2

Pad	No.	Pattern Name
1	254	B.Beats Drums 3
2	255	B.Beats Drums 4
3	308	B.Beats Bass 3
4	309	B.Beats Bass 4
5	340	Snare Fill 6
6	400	Perc. Fill 8
7	401	Perc. Fill 9
8	422	Human Fill 2
9	446	Piano 3
10	462	Guitar Riff 3
11	463	Guitar Riff 4
12	486	Brass 1
13	487	Brass 2
14	593	Voice 5
15	428	Scratch 2
16	539	Synth Riff 14

11. Euro Trance 1

Pad	No.	Pattern Name
1	230	Trance Drums 1
2	231	Trance Drums 2
3	284	Trance Bass 1
4	285	Trance Bass 2
5	341	Snare Fill 7
6	362	Hi-hat Fill 8
7	379	Cymbal 1
8	385	Clap Fill 3
9	505	Synth Lead 6
10	540	Synth Riff 15
11	573	Synth Seq 12
12	574	Synth Seq 13
13	516	Synth Pad 8
14	575	Synth Seq 14
15	626	FX 19
16	627	FX 20

12. Euro Trance 2

Pad	No.	Pattern Name
1	232	Trance Drums 3
2	233	Trance Drums 4
3	286	Trance Bass 3
4	287	Trance Bass 4
5	342	Snare Fill 8
6	363	Hi-hat Fill 9
7	378	Cymbal Fill 3
8	402	Perc. Fill 10
9	506	Synth Lead 7
10	541	Synth Riff 16
11	542	Synth Riff 17
12	543	Synth Riff 18
13	517	Synth Pad 9
14	576	Synth Seq 15
15	628	FX 21
16	629	FX 22

13. Hard Trance

Pad	No.	Pattern Name
1	234	Trance Drums 5
2	235	Trance Drums 6
3	288	Trance Bass 5
4	289	Trance Bass 6
5	343	Snare Fill 9
6	344	Snare Fill 10
7	364	Hi-hat Fill 10
8	403	Perc. Fill 11
9	544	Synth Riff 19
10	577	Synth Seq 16
11	498	Bass Riff 1
12	578	Synth Seq 17
13	518	Synth Pad 10
14	545	Synth Riff 20
15	546	Synth Riff 21
16	547	Synth Riff 22

14. Psy. Trance

Pad	No.	Pattern Name
1	236	Trance Drums 7
2	237	Trance Drums 8
3	290	Trance Bass 7
4	291	Trance Bass 8
5	345	Snare Fill 11
6	346	Snare Fill 12
7	386	Clap Fill 4
8	365	Hi-hat Fill 11
9	548	Synth Riff 23
10	549	Synth Riff 24
11	550	Synth Riff 25
12	579	Synth Seq 18
13	519	Synth Pad 11
14	630	FX 23
15	631	FX 24
16	464	Guitar Riff 5

15. UK HardHouse

Pad	No.	Pattern Name
1	238	House Drums 1
2	239	House Drums 2
3	292	House Bass 1
4	293	House Bass 2
5	347	Snare Fill 13
6	387	Clap Fill 5
7	381	Cymbal 3
8	404	Perc. Fill 12
9	551	Synth Riff 26
10	552	Synth Riff 27
11	553	Synth Riff 28
12	554	Synth Riff 29
13	499	Bass Riff 2
14	520	Synth Pad 12
15	594	Voice 6
16	632	FX 25

16. US HardHouse

Pad	No.	Pattern Name
1	240	House Drums 3
2	241	House Drums 4
3	294	House Bass 3
4	295	House Bass 4
5	330	Kick Fill 9
6	366	Hi-hat Fill 12
7	388	Clap Fill 6
8	405	Perc. Fill 13
9	555	Synth Riff 30
10	556	Synth Riff 31
11	474	Strings 3
12	488	Brass 3
13	521	Synth Pad 13
14	595	Voice 7
15	633	FX 26
16	634	FX 27

17. Progressive

Pad	No.	Pattern Name
1	242	House Drums 5
2	243	House Drums 6
3	296	House Bass 5
4	297	House Bass 6
5	348	Snare Fill 14
6	367	Hi-hat Fill 13
7	389	Clap Fill 7
8	406	Perc. Fill 14
9	557	Synth Riff 32
10	558	Synth Riff 33
11	559	Synth Riff 34
12	452	E.Piano 2
13	522	Synth Pad 14
14	596	Voice 8
15	635	FX 28
16	636	FX 29

18. Garage 1

Pad	No.	Pattern Name
1	244	House Drums 7
2	245	House Drums 8
3	298	House Bass 7
4	299	House Bass 8
5	349	Snare Fill 15
6	407	Perc. Fill 15
7	408	Perc. Fill 16
8	392	Tom Fill 2
9	447	Piano 4
10	448	Piano 5
11	475	Strings 4
12	453	E.Piano 3
13	560	Synth Riff 35
14	489	Brass 4
15	586	Hit 3
16	637	FX 30

19. Garage 2

Pad	No.	Pattern Name
1	246	2Step Drums 1
2	247	2Step Drums 2
3	300	2Step Bass 1
4	301	2Step Bass 2
5	331	Kick Fill 10
6	368	Hi-hat Fill 14
7	409	Perc. Fill 17
8	423	Human Fill 3
9	457	Organ 1
10	454	E.Piano 4
11	465	Guitar Riff 6
12	466	Guitar Riff 7
13	523	Synth Pad 15
14	491	Flute 1
15	449	Piano 6
16	587	Hit 4

20. R&B

Pad	No.	Pattern Name
1	256	HipHop Drums 1
2	257	HipHop Drums 2
3	310	HipHop Bass 1
4	311	HipHop Bass 2
5	369	Hi-hat Fill 15
6	410	Perc. Fill 18
7	411	Perc. Fill 19
8	382	Cymbal 4
9	476	Strings 5
10	450	Piano 7
11	455	E.Piano 5
12	580	Synth Seq 19
13	524	Synth Pad 16
14	429	Scratch 3
15	638	FX 31
16	639	FX 32

21. Hip Hop

Pad	No.	Pattern Name
1	258	HipHop Drums 3
2	259	HipHop Drums 4
3	312	HipHop Bass 3
4	313	HipHop Bass 4
5	370	Hi-hat Fill 16
6	412	Perc. Fill 20
7	413	Perc. Fill 21
8	414	Perc. Fill 22
9	495	Ethnic Riff 2
10	477	Strings 6
11	492	Flute 2
12	467	Guitar Riff 8
13	588	Hit 5
14	430	Scratch 4
15	431	Scratch 5
16	597	Voice 9

22. G-Funk

Pad	No.	Pattern Name
1	260	HipHop Drums 5
2	261	HipHop Drums 6
3	314	HipHop Bass 5
4	315	HipHop Bass 6
5	350	Snare Fill 16
6	371	Hi-hat Fill 17
7	372	Hi-hat Fill 18
8	415	Perc. Fill 23
9	507	Synth Lead 8
10	493	Flute 3
11	468	Guitar Riff 9
12	478	Strings 7
13	456	E.Piano 6
14	640	FX 33
15	641	FX 34
16	432	Scratch 6

23. Abstract

Pad	No.	Pattern Name
1	262	HipHop Drums 7
2	263	HipHop Drums 8
3	316	HipHop Bass 7
4	317	HipHop Bass 8
5	373	Hi-hat Fill 19
6	416	Perc. Fill 24
7	417	Perc. Fill 25
8	351	Snare Fill 17
9	497	Balaphone 2
10	458	Organ 2
11	642	FX 35
12	643	FX 36
13	644	FX 37
14	645	FX 38
15	482	Vox 4
16	483	Vox 5

24. Electro

Pad	No.	Pattern Name
1	264	HipHop Drums 9
2	265	HipHop Drums 10
3	318	HipHop Bass 9
4	319	HipHop Bass 10
5	352	Snare Fill 18
6	390	Clap Fill 8
7	418	Perc. Fill 26
8	420	Cowbell 1
9	508	Synth Lead 9
10	469	Guitar Riff 10
11	581	Synth Seq 20
12	582	Synth Seq 21
13	525	Synth Pad 17
14	484	Vox 6
15	646	FX 39
16	647	FX 40

25. Electronica

Pad	No.	Pattern Name
1	228	Techno Drums 13
2	229	Techno Drums 14
3	282	Techno Bass 13
4	283	Techno Bass 14
5	332	Kick Fill 11
6	333	Kick Fill 12
7	374	Hi-hat Fill 20
8	424	Human Fill 4
9	583	Synth Seq 22
10	648	FX 41
11	649	FX 42
12	650	FX 43
13	651	FX 44
14	652	FX 45
15	653	FX 46
16	654	FX 47

26. Reggae

Pad	No.	Pattern Name
1	266	Reggae Drums 1
2	267	Reggae Drums 2
3	320	Reggae Bass 1
4	321	Reggae Bass 2
5	334	Kick Fill 13
6	353	Snare Fill 19
7	375	Hi-hat Fill 21
8	419	Perc. Fill 27
9	459	Organ 3
10	470	Guitar Riff 11
11	471	Guitar Riff 12
12	561	Synth Riff 36
13	485	Vox 7
14	655	FX 48
15	598	Voice 10
16	490	Brass 5

27. Snare Fill Set

Pad	No.	Pattern Name
1	349	Snare Fill 15
2	337	Snare Fill 3
3	335	Snare Fill 1
4	341	Snare Fill 7
5	339	Snare Fill 5
6	354	Snare Fill 20
7	347	Snare Fill 13
8	342	Snare Fill 8
9	348	Snare Fill 14
10	353	Snare Fill 19
11	340	Snare Fill 6
12	345	Snare Fill 11
13	344	Snare Fill 10
14	350	Snare Fill 16
15	352	Snare Fill 18
16	336	Snare Fill 2

28. FX Set

Pad	No.	Pattern Name
1	632	FX 25
2	625	FX 18
3	628	FX 21
4	610	FX 3
5	636	FX 29
6	616	FX 9
7	620	FX 13
8	623	FX 16
9	648	FX 41
10	653	FX 46
11	619	FX 12
12	627	FX 20
13	615	FX 8
14	629	FX 22
15	612	FX 5
16	639	FX 32

29. Human Set

Pad	No.	Pattern Name
1	268	Human Beat 1
2	269	Human Beat 2
3	425	Human Fill 5
4	426	Human Fill 6
5	599	Voice 11
6	592	Voice 4
7	600	Voice 12
8	601	Voice 13
9	602	Voice 14
10	603	Voice 15
11	595	Voice 7
12	604	Voice 16
13	590	Voice 2
14	605	Voice 17
15	606	Voice 18
16	607	Voice 19

30. Scratch Set

Pad	No.	Pattern Name
1	427	Scratch 1
2	433	Scratch 7
3	434	Scratch 8
4	435	Scratch 9
5	436	Scratch 10
6	437	Scratch 11
7	428	Scratch 2
8	431	Scratch 5
9	432	Scratch 6
10	438	scratch 12
11	430	Scratch 4
12	439	Scratch 13
13	440	Scratch 14
14	441	Scratch 15
15	442	Scratch 16
16	443	Scratch 17

No.: RPS Pattern Number

* *All data is that programmed at the factory. For instructions on carrying out Factory Reset, refer to p. 20.*

Pattern Set List

01. Techno 1

Pad	No.	Pattern Name
1	6	Techno 1
2	7	Techno 2
3	8	Techno 3
4	9	Techno 4
5	10	Techno 5
6	11	Techno 6
7	12	Techno 7
8	13	Techno 8
9	14	Techno 9
10	15	Techno 10
11	16	Techno 11
12	17	Techno 12
13	18	Techno 13
14	19	Techno 14
15	20	Techno 15
16	21	Techno 16

02. Techno 2

Pad	No.	Pattern Name
1	28	Minimal 2
2	29	Minimal 3
3	30	Minimal 4
4	31	Minimal 5
5	32	Minimal 6
6	33	Minimal 7
7	34	Minimal 8
8	35	Minimal 9
9	36	Minimal 10
10	37	Minimal 11
11	38	Minimal 12
12	39	Minimal 13
13	22	Techno 17
14	23	Techno 18
15	24	Techno 19
16	25	Techno 20

03. Drum'n'Bass

Pad	No.	Pattern Name
1	51	Drum'n'Bass 1
2	52	Drum'n'Bass 2
3	53	Drum'n'Bass 3
4	54	Drum'n'Bass 4
5	55	Drum'n'Bass 5
6	56	Drum'n'Bass 6
7	57	Drum'n'Bass 7
8	58	Drum'n'Bass 8
9	59	Drum'n'Bass 9
10	60	Drum'n'Bass 10
11	61	Drum'n'Bass 11
12	62	Drum'n'Bass 12
13	63	Drum'n'Bass 13
14	51	Drum'n'Bass 1
15	52	Drum'n'Bass 2
16	53	Drum'n'Bass 3

04. Break Beats

Pad	No.	Pattern Name
1	64	Break Beats 1
2	65	Break Beats 2
3	66	Break Beats 3
4	67	Break Beats 4
5	68	Break Beats 5
6	69	Break Beats 6
7	70	Break Beats 7
8	71	Break Beats 8
9	72	Break Beats 9
10	73	Break Beats 10
11	74	Break Beats 11
12	75	Break Beats 12
13	76	Break Beats 13
14	77	Break Beats 14
15	26	Techno 21
16	27	Techno 22

05. Trance 1

Pad	No.	Pattern Name
1	78	Euro Trance 2
2	79	Euro Trance 3
3	80	Euro Trance 4
4	81	Euro Trance 5
5	82	Euro Trance 6
6	83	Euro Trance 7
7	84	Euro Trance 8
8	85	Euro Trance 9
9	86	Hard Trance 1
10	87	Hard Trance 2
11	88	Hard Trance 3
12	89	Hard Trance 4
13	90	Hard Trance 5
14	91	Hard Trance 6
15	92	Hard Trance 7
16	93	Hard Trance 8

06. Trance 2

Pad	No.	Pattern Name
1	94	Hard Trance 9
2	95	Hard Trance 10
3	96	Hard Trance 11
4	97	Psy. Trance 1
5	98	Psy. Trance 2
6	99	Psy. Trance 3
7	100	Psy. Trance 4
8	101	Psy. Trance 5
9	102	Psy. Trance 6
10	103	Psy. Trance 7
11	118	Progressive 1
12	119	Progressive 2
13	43	Hardcore 4
14	44	Hardcore 5
15	42	Hardcore 3
16	41	Hardcore 2

07. House 1

Pad	No.	Pattern Name
1	104	UK HardHouse 1
2	105	UK HardHouse 2
3	106	UK HardHouse 3
4	107	UK HardHouse 4
5	108	UK HardHouse 5
6	109	UK HardHouse 6
7	110	UK HardHouse 7
8	111	US HardHouse 1
9	112	US HardHouse 2
10	113	US HardHouse 3
11	114	US HardHouse 4
12	115	US HardHouse 5
13	116	US HardHouse 6
14	117	US HardHouse 7
15	120	Progressive 3
16	121	Progressive 4

08. House 2

Pad	No.	Pattern Name
1	125	Garage 2
2	126	Garage 3
3	127	Garage 4
4	128	Garage 5
5	129	Garage 6
6	130	Garage 7
7	131	Garage 8
8	132	Garage 9
9	133	Garage 10
10	134	Disco 1
11	135	Disco 2
12	136	Disco 3
13	137	House 1
14	138	House 2
15	139	House 3
16	141	House 5

09. R&B

Pad	No.	Pattern Name
1	143	R&B 2
2	144	R&B 3
3	145	R&B 4
4	146	R&B 5
5	147	R&B 6
6	148	R&B 7
7	149	R&B 8
8	150	R&B 9
9	151	R&B 10
10	152	R&B 11
11	153	R&B 12
12	154	R&B 13
13	155	R&B 14
14	156	R&B 15
15	157	R&B 16
16	158	R&B 17

10. Hip Hop

Pad	No.	Pattern Name
1	160	Hip Hop 1
2	161	Hip Hop 2
3	162	Hip Hop 3
4	163	Hip Hop 4
5	164	Hip Hop 5
6	165	Hip Hop 6
7	166	Hip Hop 7
8	167	Hip Hop 8
9	168	Hip Hop 9
10	169	Hip Hop 10
11	170	Hip Hop 11
12	171	Hip Hop 12
13	172	Hip Hop 13
14	173	G-Funk 2
15	174	G-Funk 3
16	175	G-Funk 4

11. Abstract

Pad	No.	Pattern Name
1	183	Abstract 1
2	184	Abstract 2
3	185	Abstract 3
4	186	Abstract 4
5	45	Ambient 1
6	46	Ambient 2
7	47	Ambient 3
8	48	Ambient 4
9	49	Ambient 5
10	195	Electronica 1
11	196	Electronica 2
12	197	Electronica 3
13	198	Electronica 4
14	199	Electronica 5
15	200	Electronica 6
16	201	Electronica 7

12. Reggae

Pad	No.	Pattern Name
1	204	Reggae 1(Dance Hall)
2	205	Reggae 2(Dance Hall)
3	206	Reggae 3(Dance Hall)
4	207	Reggae 4(Dance Hall)
5	208	Reggae 5(Dance Hall)
6	209	Reggae 6(Lovers)
7	210	Reggae 7(Lovers)
8	211	Reggae 8(Lovers)
9	212	Reggae 9(Lovers)
10	213	Reggae 10(Roots)
11	214	Reggae 11(Roots)
12	215	Reggae 12(Dub)
13	209	Reggae 6(Lovers)
14	210	Reggae 7(Lovers)
15	211	Reggae 8(Lovers)
16	212	Reggae 9(Lovers)

No.: Pattern Number

* *All data is that programmed at the factory. For instructions on carrying out Factory Reset, refer to p. 20.*

* *When the unit shipped from the factory, pattern sets 13–24, 25–36, and 37–48 contained the same sets as pattern sets 1–12, and 49 and 50 contained the same sets as 1 and 2.*

Song List

Song No.	Song Name	No.	Pattern Name
01	Techno 1	10	Techno 5
02	Techno 2	14	Techno 9
03	Minimal	37	Minimal 11
04	Hardcore	40	Hardcore 1
05	Ambient	45	Ambient 1
06	Drum'n'Bass 1	51	Drum'n'Bass 1
07	Drum'n'Bass 2	62	Drum'n'Bass 12
08	Break Beats 1	64	Break Beats 1
09	Break Beats 2	68	Break Beats 5
10	Euro Trance	78	Euro Trance 2
11	Hard Trance	91	Hard Trance 6
12	Psy. Trance	102	Psy. Trance 6
13	UK HardHouse	104	UK HardHouse 1
14	US HardHouse	111	US HardHouse 1
15	Progressive	120	Progressive 3
16	Garage 1	126	Garage 3
17	Garage 2	129	Garage 6
18	Disco	136	Disco 3
19	R&B	143	R&B 2
20	Hip Hop	160	Hip Hop 1
21	G-Funk	174	G-Funk 3
22	Abstract	183	Abstract 1
23	Electro	189	Electro 1
24	Electronica	195	Electronica 1
25	Reggae	213	Reggae 10(Roots)

No.: Pattern Number

* *All data is that programmed at the factory. For instructions on carrying out Factory Reset, refer to p. 20.*

Arpeggio Style List

No.	Number of Notes	Number of Steps	Effective Chord Forms
001	2	2	
002	3	3	
003	4	4	
004	2	2	
005	3	3	
006	4	4	
007	4	6	
008	3	8	
009	3	6	
010	4	4	
011	5	8	
012	12	16	
013	3	4	
014	3	6	
015	3	8	
016	3	4	
017	4	4	
018	4	8	
019	6	6	
020	4	8	
021	4	8	
022	5	8	
023	3	16	
024	1	16	
025	2	16	
026	3	16	
027	3	16	
028	3	16	
029	3	16	
030	3	16	
031	3	16	
032	3	32	
033	3	16	
034	4	16	
035	4	16	
036	4	16	
037	3	8	
038	2	16	
039	4	16	29
040	4	16	30
041	3	8	
042	2	8	
043	2	8	
044	2	4	
045	3	4	
046	4	16	
047	4	16	31
048	3	16	
049	4	16	
050	4	16	32
051	4	16	
052	4	16	33
053	3	16	
054	7	8	
055	9	16	
056	9	16	
057	6	32	
058	7	16	
059	9	16	34
060	12	32	35
061	5	16	
062	8	16	36
063	7	24	37
064	5	16	
065	5	16	
066	5	16	38
067	5	16	
068	6	8	
069	5	8	
070	4	8	39
071	4	8	40
072	4	8	41
073	4	8	
074	4	8	41
075	4	16	42
076	4	8	41
077	4	8	43
078	4	16	
079	4	8	44
080	4	8	45
081	4	16	46
082	4	16	47
083	4	16	
084	4	8	
085	4	8	48
086	4	16	
087	4	8	
088	4	8	
089	4	8	
090	4	8	
091	2	4	
092	2	16	
093	2	16	
094	4	16	
095	4	16	
096	4	16	
097	4	32	
098	5	16	
099	10	16	
100	10	8	
101	10	16	
102	4	32	
103	10	8	
104	10	16	
105	10	16	
106	4	16	
107	4	8	
108	5	16	
109	5	12	
110	5	4	
111	6	16	
112	5	23	49
113	6	32	50
114	6	32	51
115	6	32	52
116	7	16	53
117	5	16	54
118	7	32	55
119	4	32	56
120	6	32	57
121	9	32	58
122	6	16	59
123	7	16	60
124	9	16	61
125	8	16	62
126	7	16	63
127	10	32	64
128	6	16	

Chord Form List

No.	Chord Name	Constituent Notes of Chord Form (when C4 is pressed)
1	C Maj	C4, E4, G4
2	C Maj7	C4, E4, G4, B4
3	C 7	C4, E4, G4, Bb4
4	C min	C4, Eb4, G4
5	C min7	C4, Eb4, G4, Bb4
6	C dim	C4, Eb4, Gb4, A4
7	C min7 b5	C4, Eb4, Gb4, Ab4
8	C Aug	C4, E4, G#4
9	C sus4	C4, F4, G4
10	C 7sus4	C4, F4, G4, Bb4
11	C add9	C4, E4, G4, D5
12	C #11	C4, E4, F#4
13	C min7 b9	C4, Eb4, G4, Bb4, Db5
14	C min add9	C4, Eb4, G4, D5
15	C 6	C4, E4, G4, A4
16	C 6 9	C4, E4, G4, A4, D5
17	C Maj9	C4, E4, G4, B4, D5
18	C min6	C4, Eb4, G4, A4
19	C min9	C4, Eb4, G4, Bb4, D5
20	C min Maj7	C4, Eb4, G4, B4
21	C 7 b5	C4, E4, Gb4, Bb4
22	C 7 b9	C4, E4, G4, Bb4, Db5
23	C 9	C4, E4, G4, Bb4, D5
24	C 7 #9	C4, E4, G4, Bb4, D#5
25	C 7 #11	C4, E4, G4, Bb4, F#5
26	C Aug7	C4, E4, G#4, Bb4
27	C 7 b13	C4, G4, Bb4, E5, Ab5
28	C 7 13	C4, G4, Bb4, E5, A5
29	A min add9	E4, A4, B4, C5
30	A min add11	A3, C4, D4, E4
31	G Maj add9	A3, G4, A4, B4
32	A min9 11	A3, B3, C4, D4
33	A 7 b9	A3, G4, A4, Bb4
34	A min7 11	G3, A3, C4, D4, E4, G4, A4, C5, D5
35	C Maj9 #11 13	A1, C2, D2, E2, D4, E4, F#4, G4, A4, B4, C5, D5
36	A min6 9 11	A4, B4, C5, D5, E5, F5, G#5, B5
37	C min7 11	Bb1, C2, Eb2, F2, Gb2, G2, Bb2
38	G Maj add9	G1, G4, A4, B4, D5
39	B Maj7	B2, F#3, A#3, D#4
40	D sus4	D2, D3, A3, G4
41	A min	A2, A3, C4, E4
42	C sus4	F2, F3, C4, G4
43	A min	A2, E3, A3, C4
44	G sus4	C3, G3, D4, G4
45	A	A2, A3, E4, A4
46	F Maj	F2, F3, A3, C4
47	A	A2, E3, A3, E4
48	G Maj	C2, C3, E3, G3
49	C min9 11	G3, C4, D4, Eb4, F4
50	A min9 11	E5, G5, A5, B5, C6, D6
51	A min9 11	E3, A3, B3, C4, D4, E4
52	E 7 #11 13	G#2, A#2, B3, C#4, D4, E4
53	A min9	A2, C3, A3, B3, C4, E4, G4
54	A min9	A3, G4, A4, B4, C5
55	A min9	A3, C4, E4, G4, A4, B4, C5
56	A min9 11	A4, B4, C5, D5
57	F Maj9 #11	A3, F4, G4, A4, B4, C5
58	A min9 11	A2, A3, B3, C4, D4, A4, B4, C5, D5
59	A min9 11	C2, G3, G4, A4, B4, D5
60	G min9	G2, A2, Bb2, A4, Bb4, E5, F5
61	C Maj9	G2, B2, C3, D3, G3, B3, C4, D4, E4
62	F Maj9	C1, C2, C3, G3, A3, C4, E4, F4
63	F Maj9 13	E1, F2, G3, A3, C4, D4, E4
64	F Maj9 #11	E1, G2, B2, F4, G4, A4, B4, C5, E5, F5

* *1–28 are basic chords*

* *29–64 are chords effective for arpeggio styles*

SRX-05 Special Patch List

SRX-05 Special Patches are patches that can be used only if the SRX-05 "Supreme Dance" wave expansion board is installed in the MC-909.

No.	Name	No.	Name	No.	Name	No.	Name
313	SRX05 SupSaw	**331**	MG Tri Solo	**349**	Twilight	**367**	080:BladeBt
314	Oct SuperSaw	**332**	SynVox Ld	**350**	TranceWarmer	**368**	093:R&Bees
315	Rave Saws	**333**	Vib Sine 2	**351**	5th PianoPad	**369**	096:RugBurn
316	KrasheadSaws	**334**	Pulsing Saws	**352**	FM HouseBs /	**370**	120:Clubbin
317	Saw Stack	**335**	PulsingSaws2	**353**	SH Rubber Bs	**371**	135:X Racer
318	Saws&Pulses	**336**	SyncroSaws	**354**	SynBs Slide	**372**	LoFi Tre EP
319	Super 5th	**337**	LFO Dance	**355**	SqrResoSwpBs	**373**	BPF Clavi
320	Reso Saw 5th	**338**	Crawl Pulse	**356**	LFO Bass	**374**	JUNO-D Bell
321	Drain-O	**339**	FilSweep Pls	**357**	FingerE.Bs /	**375**	Square Bell3
322	Brow Out	**340**	JunoUnisnSEQ	**358**	Piano Hit	**376**	High Dist Ld
323	Andes 909	**341**	Oct Sqr SEQ	**359**	Organ Hit 5	**377**	ShredFuzzGtr
324	PnoStack 909	**342**	JU2 Saw SEQ	**360**	Aah Hit	**378**	Dance Str 2
325	Northern EP	**343**	Seq 909	**361**	Sand Hit	**379**	DanceStrings
326	Unison Lead	**344**	BPF Sweep 2	**362**	OldBrass Hit	**380**	StrChd Min11
327	FM Lead	**345**	SawStrings	**363**	Ring FX 1	**381**	StrChd Min 9
328	Noise Lead	**346**	Panning Saws	**364**	Ring FX 2	**382**	Saw Brass
329	Belly Lead	**347**	UndrWater909	**365**	Tri Alarm	**383**	BPF Sax
330	Whistle Ld	**348**	FilSweep Pad	**366**	Noise Kick	**384**	ShmiSynth

SRX-05 Special Rhythm Set List

SRX-05 Special Rhythm Sets are rhythm sets that can be used only if the SRX-05 "Supreme Dance" wave expansion board is installed in the MC-909.

Note No.	035: SRX05 TR-909	038: SRX05 Techno	041: SRX05 R&B	044: SRX05 FX
59	909 DryKick3	PlasticKick2	R&B Kick 1	Bobs Slide
C4 60	909 DryKick2	AnalogKick10	R&B Kick 2	Cave Hit
61	909 DryKick1	PlasticKick1	Dinky Kick 2	Thru Hit 2
62	909 Dry SD5	TR909 SD 3	Dinky SD 2	Ripper L
63	909 Dry SD2	Grim SD	Retro SD3	Tramp Hit
64	909 SD&CLP	Layer SD5 mb	R&B SD 2	Cartn Fall
65	909 Dry RSht	Deviant RM3	Deviant RM1	Nz Pass
66	909 Dry Clap	Claptail	Real Clap	Thumpkin
67	909 Dry LTom	MG S Zap 1	WindChime Up	Dist Slide
68	909 Dry MTom	Electric Saw	Long Triangl	Cartn Boing1
69	909 Dry HTom	US SweepD L3	Long Triangl	Electronica
70	909 Dry CHH1	TR909 CHH 1	Miami CHH	Electric Saw
71	909 Dry CHH3	TR909 PHH 1	Mosaic CHH 1	Howl Sync
C5 72	909 Dry OHH2	TR909 OHH 1	Miami OHH	PercolateHit
73	909 Dry CR 2	909 Dry CR 2	Pop Crash2	Metal Atk Hi
74	909 Dry RD2	Pop ChinaCym	PopRideCym 3	Metal Atk Lo

	036: SRX05 TR-808	039: SRX05 House	042: SRX05 Elctro
59	808 DryKick5	909 DryKick3	LoBit Kick 1
C4 60	808 DryKick4	TR909 Kick 7	Livn Kick
61	808 DryKick3	909 DryKick1	SH2 U Zap 6
62	808 Dry SD1	TR909 SD 1	Sim Snare
63	808 Dry SD2	909 Dry SD4	707 Dry SD1
64	808 Dry SD3	TR909 SD 3	106 SD2
65	808 Dry RSht	Basis Rim	Lo-Bit CStk
66	808 Dry Clap	Club Clap	Old Clap
67	808 Dry Clvs	HiConga Opn	Sim5 Tom4S
68	808 Dry Mrcs	LoConga Opn	Sim5 Tom2S
69	808 Dry Cwbl	Tmbl Hi	Sim5 Tom1S
70	808 Dry CHH	909 Dry CHH1	Urban CHH
71	808 Cl&OpHH	909 Dry CHH3	Pedal Hat 1
C5 72	808 Dry OHH3	909 Dry OHH1	Pop Hat Open
73	808 Dry Cym1	909 Dry CR 2	MG Nz Cym
74	808 Dry Cym3	909 Dry RD2	US Nz Cym

	037: SRX05 TR-707	040: SRX05 HipHop	043: SRX05 Perc
59	707 DryKick1	Old Kick 2	HiBongo Opn
C4 60	707 DryKick2	Vinyl Kick	LoBongo Opn
61	707 DryKick2	Boys Kick	HiConga Opn
62	707 Dry SD1	HipHop SD 1	LoConga Opn
63	707 Dry SD2	Filter SD3	Tmbl Hi
64	707 Dry SD1	RegularSnrMF	Tmbl Hi Flm
65	707 Dry RSht	Deviant RM2	Real Shaker1
66	707 Dry Clap	Hip Clap	Real Cabasa3
67	707 Dry LTom	TablaBayam 1	Short Guiro2
68	707 Dry MTom	Scratch 6	Long Guiro2
69	707 Dry HTom	Warp Hit 3	St. FgSnap
70	707 Dry CHH	Hipping CHH	GospelClap
71	707 Dry CHH	Hip PHH	Cwbl Hi
C5 72	707 Dry OHH	HipHop OHH	Cwbl Lo
73	707 Dry CR	Pop Crash1	WindChime Up
74	707 Dry RD	PopRideCym 2	WindChime Dn

sampling groovebox (Sound Generator Section)
Model MC-909

MIDI Implementation Chart

Date : Sep. 20, 2002
Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic	Default	X	1–16	
Channel	Changed	X	1–16	
Mode	Default	X	Mode 3	
	Messages	X	Mode 3, 4 (M = 1)	* 2
	Altered	**********		
Note Number :	True Voice	0–127 **********	0–127 0–127	
Velocity	Note On	O	O	
	Note Off	O	O	
After Touch	Key's	X	O * 1	
	Channel's	O	O * 1	
Pitch Bend		O	O * 1	
Control Change	0, 32	O *1	O *1	Bank select
	1	O	O	Modulation
	5	X	O	Portamento time
	6, 38	X	O	Data entry
	7	O	O	Volume
	10	O	O	Panpot
	11	X	O	Expression
	16	O	O	General Purpose Controller 1
	18	O	O	General Purpose Controller 3
	19	O	O	General Purpose Controller 4
	64	O	O	Hold 1
	65	X	O	Portamento
	66	X	O	Sostenuto
	68	X	O	Legato Foot Switch
	71	O	O	Resonance
	72	O	O	Release Time
	73	O	O	Attack Time
	74	O	O	Cutoff
	75	O	O	Decay Time
	80	O	O	General Purpose Controller 5
	81	O	O	General Purpose Controller 6
	82	O	O	General Purpose Controller 7
	83	O	O	General Purpose Controller 8
	84	X	O	Portamento control
	91	O	O (Reverb)	General Purpose Effect 1
	1–3, 33–95 *3	O	O	
	98, 99	X	X	NRPN LSB, MSB
	100, 101	X	O	RPN LSB, MSB
Program Change	: True Number	O *1 **********	O *1 0–127	Program No. 1–128
System Exclusive		O	O *1	
System Common	: Song Position	X	X	
	: Song Select	X	X	
	: Tune Request	X	X	
System Real Time	: Clock	X	O	
	: Commands	X	X	
Aux Messages	: All Sound Off	X	O	
	: Reset All Controllers	O *4	O	
	: Local On/Off	X	X	
	: All Notes Off	O *4	O (123–127)	
	: Active Sensing	O *1	O	
	: System Reset	X	X	
Notes		* 1 O X is selectable. * 2 Recognized as M=1 even if M≠1. * 3 The settings are changeable. * 4 Transmitted only when V-LINK is ON.		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

sampling groovebox (Sequencer Section)
Model MC-909

MIDI Implementation Chart

Date : Sep. 20, 2002
Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1–16 X	1–16 X	There is no basic channel.
Mode	Default Messages Altered	X X	X X	
Note Number :	True Voice	0–127 **********	0–127 0–127	
Velocity	Note On Note Off	O O	O O	
After Touch	Key's Channel's	O O	O O	
Pitch Bend		O	O	
Control Change	0–119	O	O	
Program Change	: True Number	O **********	O 0–127	
System Exclusive		O	O	
System Common	: Song Position : Song Select : Tune Request	O *1 X X	O *2 X X	
System Real Time	: Clock : Commands	O *1 O *1	O *3 O *2	
Aux Messages	: All Sound Off : Reset All Controllers : Local On/Off : All Notes Off : Active Sensing : System Reset	O O X O *4 O X	O O X O (123–127) *4 O X	
Notes		*1 Transmitted only when Sync Out is ON. *2 Recognized only when Sync Mode is SLAVE or REMOTE. *3 Recognized only when Sync Mode is SLAVE. *4 Mode messages (123–127) are stored/transmitted after All Note Off processing is performed. The All Note Off message itself is not stored/transmitted.		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

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Specifications

MC-909: Sampling groovebox

Sound Generator Section

Maximum Poliphony	64 voices (shared with sampling section)
Sampling Frequency	44.1 kHz
Parts	16 (Main) + 16 (RPS)
Waves	693
Patches	
Preset	800
User	256
Card	256
Rhythm Set	
Preset	72
User	128
Card	128

Sampling Section

Data Format	16-bit linear (File Type: WAV/AIFF)
Maximum Poliphony	shared with sound generator section
Sampling Frequency	44.1 kHz (fixed)
Maximum Sampling Time	

- Internal memory (16 MB) only
  mono: 180 sec. approx. (stereo: 90 sec. approx.)
- with DIMM (256 MB)
  mono: 51 min. approx. (stereo: 25.5 min. approx.)

Samples	
User	2,000
Card	7,000 (128 MB SmartMedia)

Sequencer Section

Parts	16 + Tempo/Mute Control
Resolution	480 ticks per quarter note
Tempo	5–300
Maximum Note Storage	approx. 1,300,000 notes
Patterns	
Preset	215
RPS	440
User	200
Card	999
Recording Mode	Realtime, TR-REC, Step
Songs	50
Arpeggio Style	
Preset	128
User	128
Chord Memory	
Preset	64
User	128
RPS Set	50
Pattern Set	50

Effects Section

Reverb	1 (4 types)
Compressor	1 (1 type)
Multi-effects (MFX)	2 (MFX1: 38 types) (MFX2: 47 types)
Pitch Shifter (for external input)	1 (1 type)

Mastering Section

3-bands Compressor	1 (1 type)

Specifications

Expansion Slot

Wave Expansion Board SRX Series: 1 slot
DIMM: 1 slot

Number of pins:	168-pin
Speed:	100 MHz (PC100 CL=2)
	133 MHz (PC133 CL=3)
Voltage:	3.3 V
Capacity:	128 MB
	256 MB
Board height:	38 mm or less

External Memory

SmartMedia card: 1 slot
8MB/16MB/32MB/64MB/128MB (3.3V)

Controllers, Display

Display
- QVGA LCD
- BPM Diplay: 7 segment 4 character (LED)

Control Knob
- Pitch: 1 (FINE TUNE/COARSE TUNE)
- Filter: 2 (CUTOFF, RESONANCE)
- LFO 1: 2 (DEPTH/RATE, WAVEFORM)
- Sound Others: 3 (FAT, RANDOM MODIFY, MATRIX CONTROL 1)
- Effects: 3 (TYPE, C1, C2)
- Mastering: 2 (Attack, Release)
- OUTPUT Volume: 1
- INPUT Volume: 1

Control Slider
- Envelope: 13 (Pitch/Filter/Amp)
- Part Mixer: 8
- Turntable Emulation (100 mm): 1

Other Controllers
- Twin D Beam Controller
- Velocity Pads

Connectors

MIX OUTPUT Jack (L (MONO), R)
DIRECT 1 OUTPUT Jack (L (MONO), R)
DIRECT 2 OUTPUT Jack (L (MONO), R)
IPUT Jack (L (MONO), R)
Headphones Jack
MIDI Connectors (IN, OUT)
USB Connector
Digital Audio Interface
- IN/OUT (OPTICAL, COAXIAL)

AC Inlet

Power Supply

AC 117 V, AC 230 V, AC 240 V

Power Consumption

20 W

Dimensions

491 (W) x 386 (D) x 123 (H) mm
19-3/8 (W) x 15-1/4 (D) x 4-7/8 (H) inches

Weight

6.0 kg
13 lbs 4 oz

Accessories

Quick Start
Owner's Manual
Sample Data (Audio) CD
Power Cord
Card Protecter

Options

Wave Expansion Board: SRX Series

* *A separate publication titled "MIDI Implementation" is also available. It provides complete details concerning the way MIDI has been implemented on this unit. If you should require this publication (such as when you intend to carry out byte-level programming), please contact the nearest Roland Service Center or authorized Roland distributor.*

* *In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.*

Error Message List

If an incorrect operation is performed, or if processing could not be performed as you specified, an error message will appear. Refer to the explanation for the error message that appears, and take the appropriate action.

Message	Meaning	Cause/Action
Beat Differs!	While using the Pattern Edit operation Copy, the copy could not be executed since the copy-source and copy-destination patterns have differing time signatures.	You must copy between patterns that have the same time signature.
	The imported SMF has a time signature that cannot be played by the MC-909, or has a changing time signature.	Import SMF data with a time signature that can be played by the MC-909, and whose time signature does not change.
Cannot Assign Phrase!	Since there are two or more unmuted parts, the phrase cannot be registered in an RPS set.	Choose one part of the phrase that you want to register, and mute all of the remaining parts (p. 28).
Cannot Edit Preset Sample!	This is a preset sample, and therefore cannot be edited.	—
Cannot Extract!	When executing the Pattern Edit command Extract a Rhythm Instrument, the move-source part contained no data of the note number you specified by Extract Note.	Specify a note number for which data exists in the move-source part.
Card Not Ready!	A memory card is not inserted in the slot.	Insert a memory card into the slot.
Card Protected!	The write-protect sticker is affixed to the card.	—
Empty Pattern!	The pattern cannot be played since it contains no performance data.	Select a pattern that contains data.
Empty Sample!	The sample contains no data.	Select a sample that contains data.
Empty Song!	The song has not been recorded, and therefore cannot be played.	Select a song that contains data.
Illegal File!	The MC-909 cannot use this file.	The MC-909 can use only audio files (WAV/AIFF format), SMF, and bitmap files.
Memory Damaged!	The contents of memory may have been damaged.	Please perform the Factory Reset operation (p. 20). If this does not resolve the problem, please contact your dealer or the nearest Roland Service Center.
Memory Full! (USER/CARD Area Full!)	Saving is not possible because there is insufficient space in the user area or memory card.	Delete unneeded data.
MIDI Offline!	There is a problem with the MIDI cable connection.	Check that the MIDI cable has not been disconnected or broken.
No More Sample Numbers!	The sample cannot be divided any further.	Delete unneeded samples (p. 124) in order to allocate 256 or more consecutive sample numbers.
	Since fewer than 256 consecutive sample numbers are vacant, no further sampling is possible.	
Now Playing!	Since the MC-909 is playing, this operation cannot be executed.	Stop playback before you execute the operation.
Pattern Full!	Since the maximum number of notes that can be recorded in one pattern has been exceeded, no further pattern recording is possible.	Erase unneeded data from the pattern you are recording (p. 49).
Permission Denied!	The file is protected.	—
Sample Length Too Short!	The sample is too short, and cannot be edited correctly.	If the sample is extremely short, editing may not produce the desired result.
Sample Memory Full!	Since there is insufficient sample memory, no further sampling or sample editing is possible.	Erase unneeded samples (p. 124).
Song Recording Full!	Since the maximum number of patterns that can be recorded in one song has been exceeded, no further song recording is possible.	A maximum of 50 patterns can be recorded in one song. No further patterns can be recorded.
Unformatted!	The memory card is in an unsupported format.	Format the memory card (p. 134).
Wrong Setting!	The pattern edit setting is incorrect.	Make the correct setting.

MEMO

For EU Countries

CE This product complies with the requirements of European Directives EMC 89/336/EEC and LVD 73/23/EEC.

For the USA

FEDERAL COMMUNICATIONS COMMISSION
RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Information

When you need repair service, call your nearest Roland Service Center or authorized Roland distributor in your country as shown below.

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Chaudron - BP79 97 491
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FAX: (011) 403 1234

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As of January 15, 2005 (ROLAND)