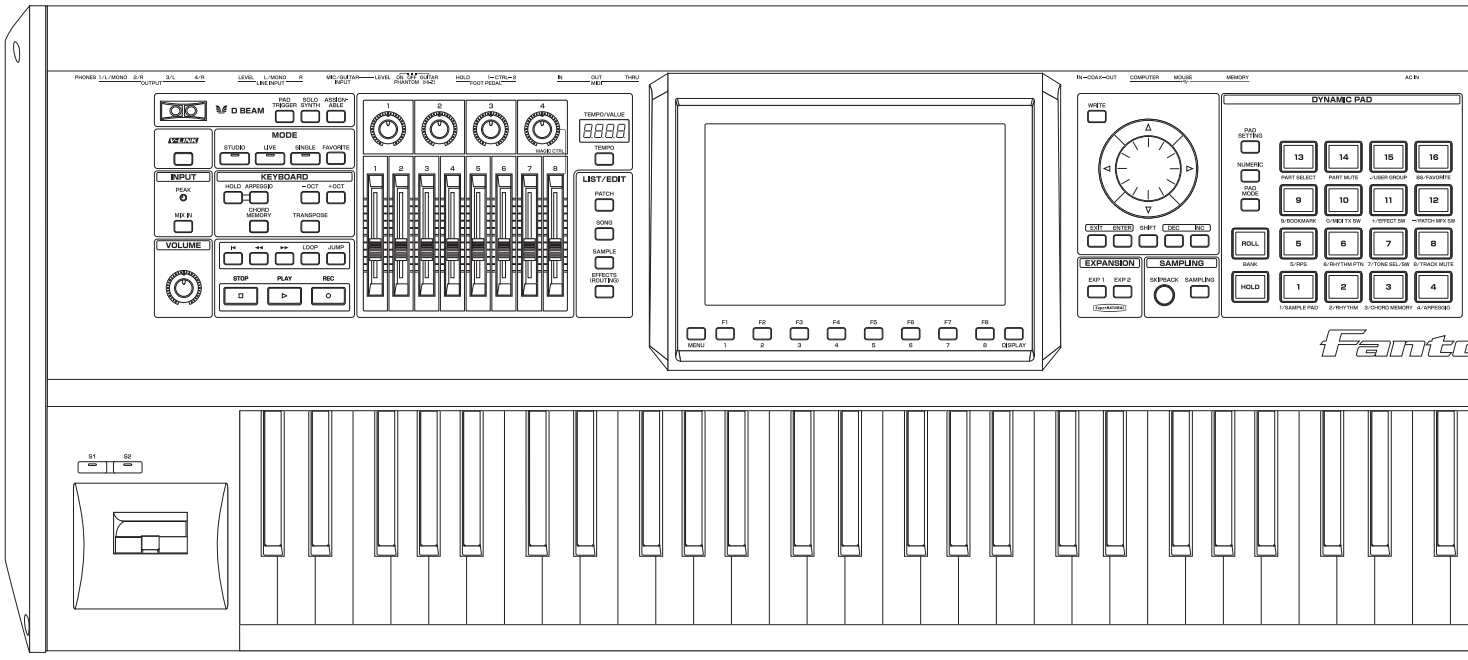

Fantom G6/G7/G8

Owner's Manual

Roland

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

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. 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.

WARNING: THIS APPARATUS MUST BE EARTHED
IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.
GREEN-AND-YELLOW: EARTH, 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 GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured GREEN or GREEN-AND-YELLOW.

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.

Fantom-G6/G7/G8 Owner's Manual

Before using this unit, carefully read the sections entitled: "IMPORTANT SAFETY INSTRUCTIONS" (p. 2), "USING THE UNIT SAFELY" (p. 4), and "IMPORTANT NOTES" (p. 7). 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, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

This Owner's Manual applies to the Fantom-G6, the Fantom-G7 and the Fantom-G8. The manual uses the term "Fantom-G" to indicate all these three models.

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.

In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.

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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.

- Connect mains plug of this model to a mains socket outlet with a protective earthing connection.

- 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. 308, p. 312.)

- 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.

- This unit should be used only with a stand that is recommended by Roland.

⚠WARNING

- When using the unit with a stand recommended by Roland, the stand must be carefully placed so it is level and sure to remain stable. If not using a stand, you still need to make sure that any location you choose for placing the unit provides a level surface that will properly support the unit, and keep it from wobbling.

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

- Use only the attached power-supply cord. Also, the supplied power cord must not be used with any other device.

- 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.

⚠ WARNING

- 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.

- 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 (ARX series; p. 308, DIMM; p. 312).

- DO NOT play a CD-ROM disc on a conventional audio CD player. The resulting sound may be of a level that could cause permanent hearing loss. Damage to speakers or other system components may result.

- 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.

- This unit for use only with Roland stand KS-18Z (Fantom-G6/G7/G8), KS-G8 (Fantom-G8). Use with other stands (or carts) is capable of resulting in instability causing possible injury.

- 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.

- If you need to move the Fantom-G8, take note of the precautions listed below. At least two persons are required to safely lift and move the unit. It should be handled carefully, all the while keeping it level. Make sure to have a firm grip, to protect yourself from injury and the instrument from damage.
  - Disconnect the power cord.
  - Disconnect all cords coming from external devices.

- Before cleaning the unit, turn off the power and unplug the power cord from the outlet (p. 25).

- 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(s) (ARX Series, DIMM). Remove only the specified screws (p. 308, p. 312).

⚠ CAUTION

- Should you remove screws from the bottom cover of the unit (p. 308, p. 312), keep them in a safe place out of children's reach, so there is no chance of them being swallowed accidentally.

- Always turn the phantom power off when connecting any device other than condenser microphones that require phantom power. You risk causing damage if you mistakenly supply phantom power to dynamic microphones, audio playback devices, or other devices that don't require such power. Be sure to check the specifications of any microphone you intend to use by referring to the manual that came with it.

  (This instrument's phantom power: 48V DC, 10 mA Max)

IMPORTANT NOTES

Power Supply

- Do not connect this unit to same electrical outlet that is being used by an electrical appliance that is controlled by an inverter (such as a refrigerator, washing machine, microwave oven, or air conditioner), or that contains a motor. Depending on the way in which the electrical appliance is used, power supply noise may cause this unit to malfunction or may produce audible noise. If it is not practical to use a separate electrical outlet, connect a power supply noise filter between this unit and the electrical outlet.
- 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.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.
- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.
- Do not allow objects to remain on top of the keyboard. This can be the cause of malfunction, such as keys ceasing to produce sound.
- Depending on the material and temperature of the surface on which you place the unit, its rubber feet may discolor or mar the surface.
  You can place a piece of felt or cloth under the rubber feet to prevent this from happening. If you do so, please make sure that the unit will not slip or move accidentally.

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.

Repairs and Data

- Please be aware that all data contained in the unit's memory may be lost when the unit is sent for repairs. Important data should always be backed up on a USB memory, or written down on paper (when possible). During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data, and Roland assumes no liability concerning such loss of data.

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 USB memory.
- Unfortunately, it may be impossible to restore the contents of data that was stored on a USB memory or unit's memory 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.
- A small amount of noise may be heard from the display during normal operation.
- 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 only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.
- 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.
- 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 (p. 291).
- If you switch off the power to an external device that is connected to the DIGITAL AUDIO IN jack or disconnect the cable, noise may subsequently be heard in the input from DIGITAL AUDIO IN. If this occurs, correctly reconnect the external device, or turn off the Fantom-G's [MIX IN] switch.

Before Using Cards

Using USB memory

- Carefully insert the USB memory all the way in—until it is firmly in place.
- Never touch the terminals of the USB memory. Also, avoid getting the terminals dirty.
- USB memorys are constructed using precision components; handle the cards carefully, paying particular note to the following.
  - To prevent damage to the cards from static electricity, be sure to discharge any static electricity from your own body before handling the cards.
  - Do not touch or allow metal to come into contact with the contact portion of the cards.
  - Do not bend, drop, or subject cards to strong shock or vibration.
  - Do not keep cards in direct sunlight, in closed vehicles, or other such locations (storage temperature: -25 to 85° C).
  - Do not allow cards to become wet.
  - Do not disassemble or modify the cards.

Handling CD-ROMs

- Avoid touching or scratching the shiny underside (encoded surface) of the disc. Damaged or dirty CD-ROM discs may not be read properly. Keep your discs clean using a commercially available CD cleaner.

Copyright

- Recording, duplication, distribution, sale, lease, performance, or broadcast of copyrighted material (musical works, visual works, broadcasts, live performances, etc.) belonging to a third party in part or in whole without the permission of the copyright owner is forbidden by law.
- This product can be used to record or duplicate audio or visual material without being limited by certain technological copy-protection measures. This is due to the fact that this product is intended to be used for the purpose of producing original music or video material, and is therefore designed so that material that does not infringe copyrights belonging to others (for example, your own original works) can be recorded or duplicated freely.
- 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.

* MMP (Moore Microprocessor Portfolio) refers to a patent portfolio concerned with microprocessor architecture, which was developed by Technology Properties Limited (TPL). Roland has licensed this technology from the TPL Group.

* MatrixQuest™ 2008 TEPCO UQUEST, LTD. All rights reserved.
The Fantom-G's USB functionality uses MatrixQuest middleware technology from TEPCO UQUEST, LTD.

* Harpsichord samples courtesy of the Hamamatsu Museum of Musical Instruments.

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* Mac OS is a trademark of Apple Inc.

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01: Introduction (Overview and Basic Operation)

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- Panel Descriptions ..... p. 22
- Making Connections ..... p. 25
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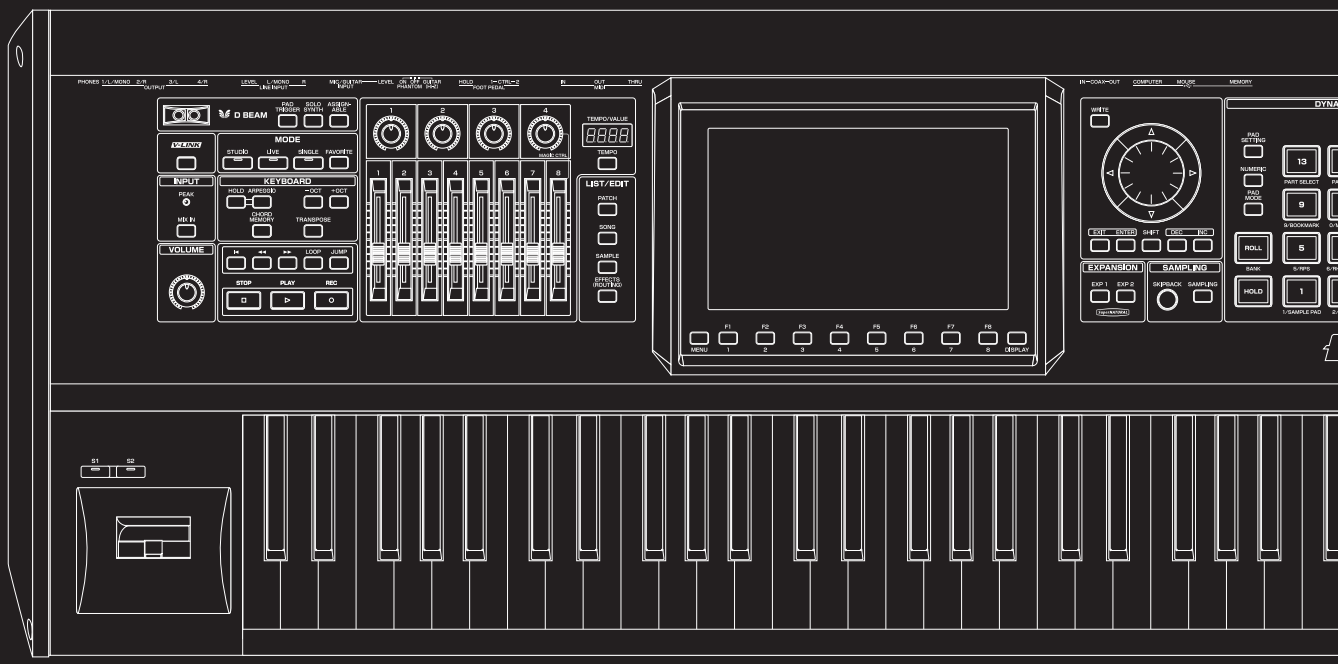


Main Features

Sound quality that's a class above

The Fantom-G features a new sound engine that provides a patch multi-effect (PFX) for each sound (patch) at all times, allowing you to create lavish sounds in a way not possible until now.

In addition, there are two multi-effects (MFX) processors that can be used flexibly. Up to twenty-two types of effects, such as chorus and reverb, can be used simultaneously.

Of course the "integration of audio and MIDI" featured on the Fantom-X is also provided, letting you use sampled sounds as internal sounds.

Mode settings optimized for your situation

The Fantom-G provides modes optimized for your situation; use "Live mode" for live performances, and "Studio mode" for music production.

"Live mode" lets you freely create eight-part multitimbral layers and splits. With functions such as Patch Remain, which ensures that the notes you were playing before switching sounds are not cut off, this mode is designed to ensure the expression and speed you need for a live performances.

"Studio mode" lets the Fantom-G operate as a 16-part multitimbral instrument, and allows you to use all of its effects in your music productions.

"Single mode" is what you'll want to choose when playing a single sound, such as when using the Fantom-G as a dedicated piano or organ. Choose this mode when you're editing a sound.

The latest and greatest internal sounds

Starting with the 88-note multisampled piano that was acclaimed on the Fantom-X, all sounds have been renewed. The Fantom-G boasts the world's best lineup of sounds, with an emphasis on quality. You'll have immediately usable sounds for performance and creativity in every situation. It features 256 MB of internal waveform capacity (double that of the Fantom-X series), with broad coverage of everything from acoustic sounds to synth sounds.

Support for the new ARX series expansion boards featuring the SuperNATURAL sound generator

The Fantom-G features two slots that support the ARX series, which not only allows you to expand the existing sounds, but provides an optimal sound engine for each different sound (Roland's new "SuperNATURAL" technology, which boasts amazing expressive power).

This new technology delivers the expressive power and quality of "the real thing," surpassing even the high-quality internal sounds.

MEMO

"SuperNATURAL" is proprietary Roland technology that realistically expresses the tonal changes and performance techniques that are distinctive to acoustic instruments and electric instruments, bringing you natural and rich expressive power.

SuperNATURAL

New 152-track sequencer is a highly evolved fusion of audio and MIDI

The fusion of audio and MIDI has evolved to a new dimension. The new sequencer provides a graphical workflow with up to 128 tracks of MIDI and 24 tracks of audio available simultaneously. The easy to understand phrase-based interface lets you use a USB mouse for an even speedier music production environment.

Full-fledged sampler

The sampling functionality rivals dedicated samplers, offering not only detailed wave editing but also the ability to immediately play recorded samples from the pads or keyboard, or use them as material in audio tracks. Of course there's also an Auto Sync function, which lets you match the current tempo without changing the pitch, or change the pitch without affecting the tempo.

* 32 MB of sampling memory is provided as standard, and you can add DIMM memory (p. 312, p. 314) to expand this to a maximum of 1 GB.

Skip Back Sampling function

The Skip Back Sampling function, which was so popular on the Fantom-X series, is also provided on the Fantom-G.

By constantly recording your performance on the Fantom-G, this function ensures that you can retroactively record an inspired improvisation at any time. Never again will you lose a great idea just because the recorder wasn't running.

Favorites function

This function gives you one-touch call-up of settings for the songs in your live performance.

Using this, you can simply press a single button to change sounds and settings during performances that require quick changes. Each such setting includes master volume, so you'll be able to prepare volume adjustments during your rehearsal to match the actual live performance environment.

Wide VGA color liquid crystal display

The large wide VGA color liquid crystal screen is a revolutionary leap that ensures superb visibility and operability in any situation.

A full range of interfaces

USB functionality has been enhanced. The USB MEMORY connector lets you use USB memory to back up your data. The USB MOUSE connector lets you connect a two-button wheel mouse for an even more ideal user interface. The USB COMPUTER connector handles data transfer between the Fantom-G and your computer, and also supports USB MIDI and audio. This lets the Fantom-G connect to various computer-based software tools, and also lets you use the dedicated editor software to perform editing tasks.

In addition, the external audio inputs include dedicated LINE (STEREO) input jacks and a dedicated MIC/GUITAR jack.

V-LINK

V-LINK functionality opens up a new realm of expression for your performances because of the way it allows you to synchronize music and visual images. You can use controllers such as the D Beam and the Fantom-G's knobs, sliders, and dynamic pads to control visual images as part of the process of performing your music.

Plug-in editor/librarian

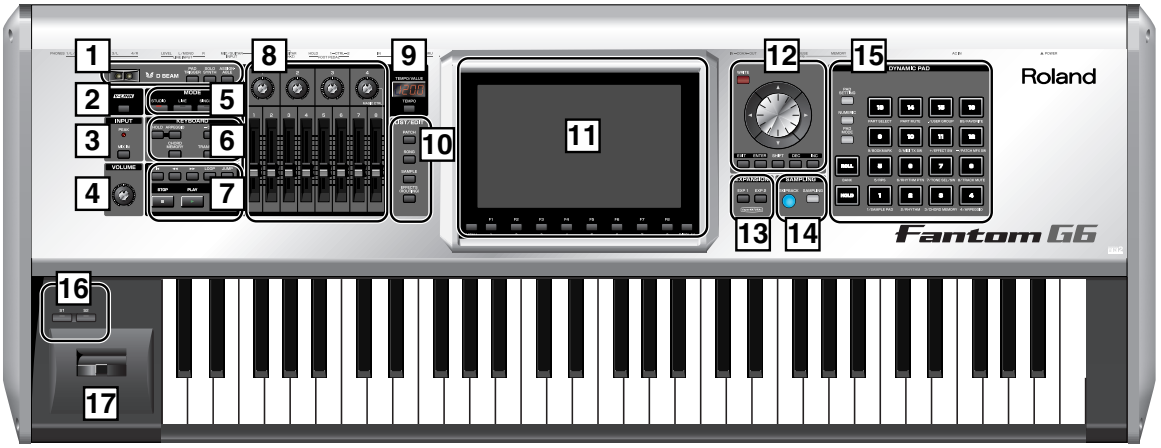
The included dedicated editor and librarian software let you use your computer to edit and manage the Fantom-G's sounds. The dedicated editor also supports operation as a VSTi/AU plug-in.

Support for GM/GM2

The Fantom-G supports GM/GM2. Any music data compatible with GM/GM2 (GM Scores) can be played by the Fantom-G.

Panel Descriptions

Front Panel



1 D BEAM

Here you can switch the D Beam function on/off. This lets you apply various effects to the sound by moving your hand above the sensor. → (p. 72)

[PAD TRIGGER]

This lets you use the D Beam controller to play the pads, as an alternative to striking them by hand. → (p. 73)

[SOLO SYNTH]

This lets you use the D Beam controller as a monophonic synthesizer. → (p. 73)

* By holding down [SHIFT] and pressing the appropriate button, you can access the D Beam setting screen.

[ASSIGNABLE]

This lets you assign various parameters or functions to the D Beam controller, and use it to modify the sound in real time. → (p. 75)

2 [V-LINK]

This switches V-LINK on/off. The V-LINK setting screen will appear when you turn this button on. → (p. 305)

3 INPUT

PEAK Indicator

This will light when the external input volume is too high.

[MIX IN]

This turns the external input on/off. → (p. 258)

* By holding down [SHIFT] and pressing this button you can access the input setting screen. → (p. 258)

4 VOLUME

VOLUME Knob

This adjusts the overall volume that is output from the rear panel OUTPUT A (MIX) jacks and PHONES jack. → (p. 28)

5 MODE

[STUDIO]

This puts the Fantom-G in Studio mode. Choose this setting for song production. → (p. 66)

[LIVE]

This puts the Fantom-G in Live mode. Choose this setting when you want to play multiple sounds layered together or split across the keyboard. → (p. 58)

[SINGLE]

This puts the Fantom-G in Single mode. Choose this setting when you want to play a single sound at a time. → (p. 46)

[FAVORITE]

This lets you register favorite sounds for immediate call-up — a convenient capability for live performances. → (p. 54)

6 KEYBOARD

[ARPEGGIO]

This turns the arpeggiator on/off. → (p. 78)

[HOLD]

This switches the arpeggiator's Hold function on/off. → (p. 78)

[CHORD MEMORY]

This switches Chord Memory on/off. → (p. 81)

* By holding down [SHIFT] and pressing these buttons, you can access the setting screens for chord memory and the arpeggiator.

[-OCT], [+OCT]

These raise or lower the key range in one-octave steps. (-3– +3)

* By pressing the [-OCT] and [+OCT] buttons simultaneously you can reset the setting to its original value.

[TRANSPOSE]

If this is on, you can use [-OCT] [+OCT] to raise or lower the key range in semitone steps. (-5– +6)

* By pressing the [-OCT] and [+OCT] buttons simultaneously you can reset the setting to its original value.

7 SEQUENCER

Here you can perform sequencer operations such as playback and recording.

[⏮]

This moves the song position to the beginning of the song. If you press this during playback, you will return to the beginning of the song and stop. → (p. 206)

[⏪] [⏩]

These move the song position to the first beat of the previous or next measure. → (p. 206)

* By holding down [SHIFT] and pressing these buttons, you can move the song position to the previous or next marker.

[LOOP]

This turns Loop Playback on/off. → (p. 208)

* By holding down [SHIFT] and pressing this button, you can access the Loop setting screen.

[JUMP]

This jumps to the JUMP marker. If no marker has been set, it jumps to the beginning of the song. → (p. 208)

* By holding down [SHIFT] and pressing this button, you can access the Marker setting screen.

[PLAY]
This plays back the song. → (p. 204)
It will blink in time with the tempo and time signature. → (p. 297)

[STOP]
This stops playback.

[REC]
This accesses the Recording Standby screen. → (p. 222)
Pressing this during recording will activate the Rehearsal function. → (p. 225)

8 CONTROL

Control Knobs 1–4
Control Sliders 1–8
These provide realtime control of the parameters or functions assigned to them. → (p. 75)

* By holding down [SHIFT] and moving one of the above knobs (sliders), you can access the setting screen for that control. → (p. 76)

MAGIC CTRL (Magic Control)
Magic Control is a function that automatically changes the role of knob 4 and slider 8 according to the screen. For example, in the Patch List screen (p. 49), knob 4 selects the category and slider 8 scrolls the list.

9 TEMPO/VALUE

This indicates the tempo. When you move a control knob or slider, this will indicate its value.

[TEMPO]
You can adjust the tempo by pressing this button and turning the VALUE dial. → (p. 78, p. 207)

10 LIST/EDIT

[PATCH]
Press this to edit a patch. Press it once to access the Patch Zoom Edit screen (p. 84), or twice in succession to access the Patch Pro Edit screen (p. 86).

[SONG]
Press this to edit a song. Press it once to access the Song Play screen (p. 205), or twice in succession to access the Song Edit screen (p. 232).

[SAMPLE]
Press this to edit a sample. Press it once to access the Sample Edit screen (p. 266), or twice in succession to access the Sample List (p. 263).

[EFFECTS (ROUTING)]
Press this to make effect-related settings. → (p. 150)

11 DISPLAY

A variety of information is shown here according to the operations you perform.

[MENU]
Opens the MENU. → (p. 280)

Function buttons ([F1]–[F8])
When you're editing, these buttons execute various functions that will differ depending on the screen.

[DISPLAY]
Displays the shortcut menu. → (p. 44)

12 VALUE

[WRITE]
Writes the modified content into memory.
→ (p. 80, p. 82, p. 88, p. 116, p. 148, p. 254, p. 274, p. 290)

VALUE Dial
Modifies a value. By holding down [SHIFT] and turning the VALUE dial, you can modify the value in larger steps.

[CURSOR] Buttons
These move the cursor up/down/left/right.

[EXIT]
This returns you to the previous screen or closes an opened window. In some screens, it cancels the currently executing function.

[ENTER]
Use this to finalize a value or to execute an operation.

[DEC], [INC]
These modify a value. The value will change more rapidly if you hold down one button and press the other. If you hold down [SHIFT] while pressing these buttons, the value will change more rapidly.

[SHIFT]
This button is used in conjunction with other buttons to execute various functions.

13 EXPANSION

[EXP 1], [EXP 2]
These access the screens for expansion boards installed in the Fantom-G.

* For details on operation, refer to the owner's manual of the expansion board you've installed.

14 SAMPLING

[SKIPBACK]
This retroactively samples your performance for a specified period of time prior to when you pressed the button. → (p. 262)

[SAMPLING]
This accesses the Sampling menu screen. → (p. 260)

15 DYNAMIC PAD

[PAD SETTING]
This accesses the setting and information screen for the currently selected Pad mode. → (p. 190)

[NUMERIC]
Lets you use the pads as numeric keys. → (p. 41)

[PAD MODE]
Switches the pad mode. → (p. 188)

[ROLL]
Turns the Roll function on/off. → (p. 189)

* Depending on the Pad mode, this will switch banks.

[HOLD]
Turns the Hold function (which causes the pad to continue sounding even after it's released) on/off. → (p. 188)

[PAD 1–16]
You can use these to play sounds just like the keyboard. They will also perform various functions depending on the Pad mode. → (p. 188)

16 [S1] [S2] (Assignable Switches)

You can assign various parameters or functions to these buttons. They will turn on/off the assigned parameter or function in real time to modify the sound. → (p. 77)

* By holding down [SHIFT] and pressing one of the above buttons, you can access the corresponding setting screen. → (p. 77)

17 Pitch Bend/Modulation Lever

You can use this to modify the pitch or apply vibrato.

Rear Panel

1 POWER ON Switch

Press to turn the power on/off. → (p. 28)

2 AC Inlet

Connect the included power cord to this inlet.

3 USB

USB MEMORY Slot

A USB memory (sold separately) can be inserted here.

* Never insert or remove a USB memory while this unit's power is on. Doing so may corrupt the unit's data or the data on the USB memory.
* Carefully insert the USB memory all the way in—until it is firmly in place.

USB MOUSE Connector

Connect the USB mouse (sold separately). → (p. 26)

USB COMPUTER Connector

This connector lets you use a USB cable to connect your computer to the Fantom-G. → (p. 285)

4 DIGITAL AUDIO IN/OUT Connectors (S/P DIF COAXIAL)

These are coaxial-type S/P DIF format digital in/out connectors. These connectors input and output a digital audio signal (stereo). The output signal is identical to the signal that is output from the OUTPUT A (MIX) jacks.

* S/P DIF is a digital interface format used for consumer digital audio devices.
* If you switch off the power to an external device that is connected to the DIGITAL AUDIO IN jack or disconnect the cable, noise may subsequently be heard in the input from DIGITAL AUDIO IN. If this occurs, correctly reconnect the external device, or turn off the Fantom-G's [MIX IN] switch.

5 MIDI Connectors (IN, OUT, THRU)

These connectors can be connected to other MIDI devices to receive and transmit MIDI messages.

6 FOOT PEDAL

CTRL (CONTROL) 1, 2 Jacks

You can connect optional expression pedals (EV-5, etc.) or optional pedal switches (DP series etc.) to these jacks. By assigning a desired function to a pedal, you can use it to select or modify sound or perform various other control. → (p. 31)

* Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

HOLD Jack

An optional pedal switch (DP series, FS-5U etc.) can be connected to this jack for use as a hold pedal. → (p. 31)

This can also be set so it supports the use of half-pedaling techniques. So, after connecting an optional pedal switch (DP series etc.), you can employ pedal work to achieve even finer control in performances in which piano tones are used.

7 AUDIO INPUT

MIC/GUITAR Jack

You can connect either a mic or guitar. Set the Switch as appropriate for the device you've connected to the MIC/GUITAR jack.

GUITAR (Hi-Z)	Guitar (High impedance supported)
PHANTOM OFF	Dynamic Mic: 1/4"phone plug (balanced or unbalanced), XLR connector
PHANTOM ON	Condenser Mic: XLR connector (48 V phantom power supported) * If you don't need phantom power supply, select the PHANTOM OFF position.

* This instrument is equipped with balanced (XLR/TRS) type jacks. Wiring diagrams for these jacks are shown below. Make connections after first checking the wiring diagrams of other equipment you intend to connect.

MIC/GUITAR LEVEL knob

Controls the volume of the mic/guitar input.

LINE Jacks (L, R)

Connect a line-level device such as an audio device (e.g., portable music player) or keyboard. If you want to use mono input, connect to the L jack (p. 258).

LINE LEVEL knob

Controls the volume of the line input.

8 OUTPUT

OUTPUT A (MIX) Jacks (L (MONO), R)

These jacks output the audio signal to the connected mixer/amplifier system in stereo. For mono output, use the L jack. → (p. 26)

OUTPUT B Jacks (L, R)

These jacks output the audio signal to the connected mixer/amplifier system in stereo.

INDIVIDUAL 1–4 Jacks

These jacks output audio signals in mono to an amp or mixer.

* The setting determining whether these jacks are used as stereo OUTPUT jacks or monaural INDIVIDUAL jacks is made with the Output Assign setting. → (p. 152)

9 PHONES Jack

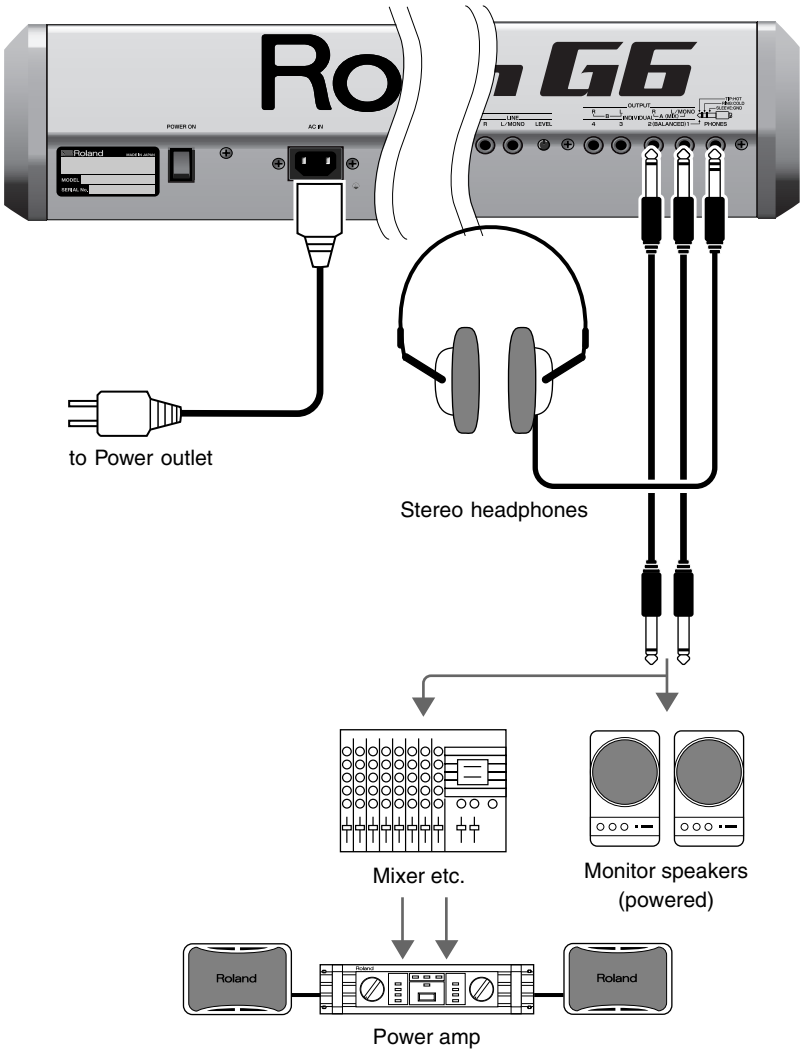
This is the jack for connecting headphones (sold separately). → (p. 26)

Making Connections

Connecting an Amp and Speaker System

Since the Fantom-G contains no amplifier or speakers, you'll need to connect it to audio equipment such as a keyboard amplifier, monitor speaker system or home stereo, or use headphones to hear its sound.

1. **Before hooking anything up, make sure that the power on all of your gear is turned OFF.**
2. **Connect one end of the supplied power cable to the Fantom-G, and the other end to a power outlet.**
3. **Connect the Fantom-G to your amp/speaker system as shown in the diagram.**



NOTE

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.

HINT

In order to fully experience the Fantom-G's sound, we recommend using a stereo amp/speaker system. If you're using a mono system, however, make your connections to the Fantom-G's OUTPUT A (MIX) jack L (MONO).

NOTE

Audio cables are not included with the Fantom-G. You'll need to provide them.

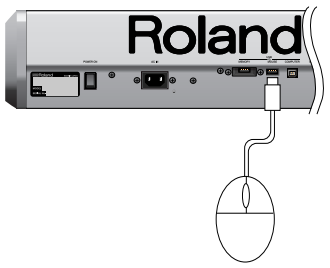
For details on how to install a Expansion Board (sold separately), refer to **"Installing the Expansion Board"** (p. 308, p. 310).

MEMO

The OUTPUT A [MIX] jacks support balanced output. Use a correctly wired cable so that the HOT, COLD, and GND as printed on the rear panel of the Fantom-G are correct for the mixer or other input device you're using.

Connecting a USB Mouse (sold separately)

If you connect a commercially available USB mouse to the Fantom-G's rear panel USB MOUSE connector, a mouse cursor will be shown in the display, and you'll be able to use the mouse.



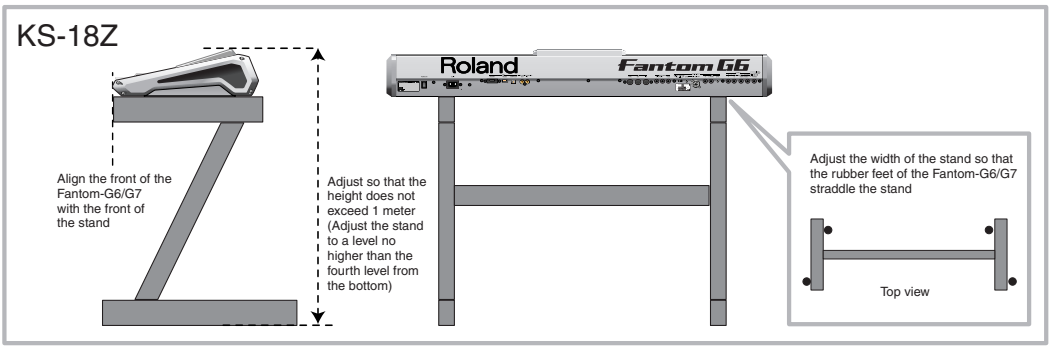
Action	Operation
Left-click	Select (move the cursor)
Right-click	[ENTER] button / list display
Wheel	VALUE dial / scroll
Drag (move while holding down left button)	Drag the mouse on the area or knob for which you want to input a value. Dragging upward or to the right will increase the value, and dragging downward or to the left will decrease it.
Click the button	Opens the menu (p. 280)
Click the button	[EXIT] button
Click the button	Opens the shortcut menu (p. 44)

Placing the Fantom-G on a Stand

* *Be careful not to pinch your fingers when setting up the stand.*

For Fantom-G6/G7 user

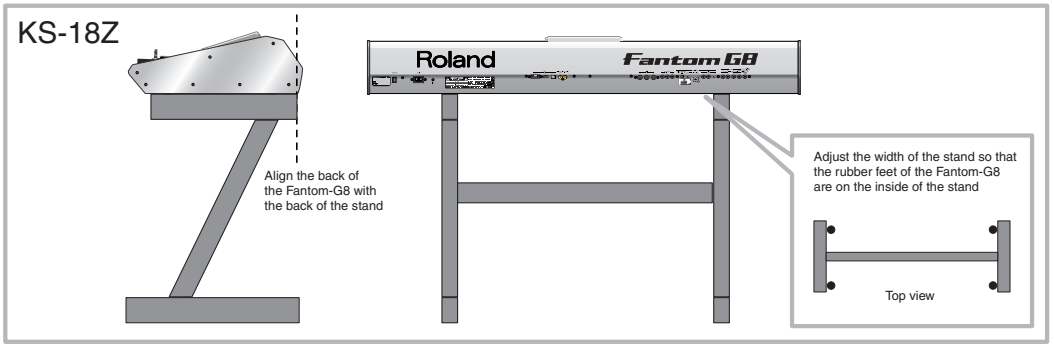
If you want to place the Fantom-G6/G7 on a stand, use the Roland KS-18Z.
Place the instrument on the stand as follows.

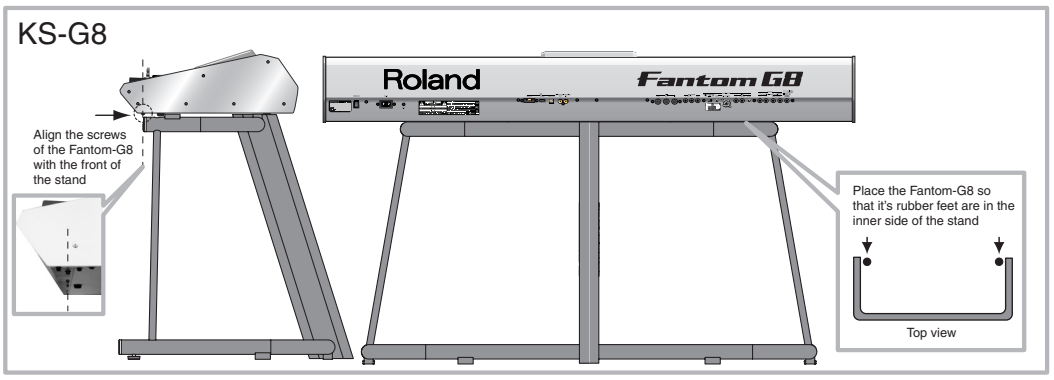


WARNING:
Use of stand not according to the instructions above will result in instability causing possible injury.

For Fantom-G8 user

If you want to place the Fantom-G8 on a stand, use the Roland KS-18Z or KS-G8.
Place the instrument on the stand as follows.





WARNING:
Use of stand not according to the instructions above will result in instability causing possible injury.

Turning On the Power

Once the connections have been completed (p. 25), 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. **Before turning on the Fantom's power, consider these two questions:**
   - Are all peripheral devices connected correctly?
   - Have the volume controls of the Fantom-G and all connected audio devices been turned to their lowest settings?
2. **Turn on the POWER ON switch located on the rear panel of the Fantom-G.**

* *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.*

3. **Turn on the power for any connected amplifiers or speakers.**
4. **Play the Fantom-G's keyboard, gradually increasing the setting of its volume control, and then carefully raise the volume of your connected amplifiers or speakers to the desired listening level.**

NOTE

To ensure proper operation of the pitch bend lever, make sure not to touch the lever when turning the Fantom-G's power on.

Do not touch!

NOTE

Be careful not to set your listening volume too high to avoid damage to your amp/speaker system or your hearing.

Turning Off the Power

1. **Before you turn off the power, consider these two questions:**
   - Have the volume controls for the Fantom-G and all connected audio devices been turned to their lowest settings?
   - Have you saved your Fantom-G sounds or other data you've created?
2. **Turn off the power for all connected audio devices.**
3. **Turn off the POWER ON switch of the Fantom-G.**

NOTE

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. 7).

Listening to the Demo Songs

The Fantom-G has a demo song that will be loaded at start-up.
Here's how to play the demo.

1. Press [PLAY].
The demo song will play.

2. Press [STOP] to stop demo song playback.

Song Automatically Loaded at Power-on (When Loading a Project)

When the Fantom-G is powered-on (when loading a project), song 001 (the top song in the Song List) will be loaded automatically.

HINT

If you don't want a song to be loaded automatically at power-on (when loading a project), delete song 001 as described in **"Deleting a Song File (Song Delete)"** (p. 210).

HINT

When you execute a Factory Reset (p. 284), the demo song will be written to song 001.

NOTE

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Various Performance Features

Velocity/Aftertouch

The force with which you play the keyboard, or the "velocity" with which you play, can affect the volume or timbre of a sound. Aftertouch—downward pressure you apply to a key after playing a note—can also affect the sound.

For details on the setting, refer to p. 292.

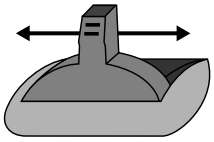
MEMO

There are two types of aftertouch: Polyphonic Aftertouch, which applies aftertouch to individual notes, and Channel Aftertouch, which applies aftertouch to an entire MIDI channel (p. 251). The Fantom-G can output the MIDI data for Polyphonic Aftertouch using the pads, and Channel Aftertouch using the keyboard.

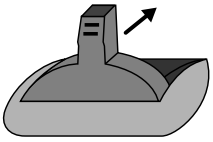
Pitch Bend/Modulation Lever

While playing the keyboard, move the lever to the left to lower the pitch of the currently selected patch, or to the right to raise its pitch. This is known as **pitch bend**. You can also apply vibrato by gently pushing the lever away from you. This is known as **modulation**.

If you push the lever away from you and at the same time move it to the right or left, you can apply both effects at once.



Pitch Bend



Modulation

MEMO

You can set the amount of pitch change for each patch (p. 96).

Octave Shift (OCT)

You can shift the pitch of the keyboard in one-octave units over a range of +/-3 octaves.

Use KEYBOARD [-OCT] or [+OCT] at the left of the screen to make the desired setting.

To return to the original setting, press both buttons simultaneously.

Transpose

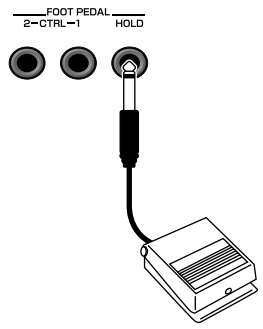
You can transpose the pitch of the keyboard in semitone units (-5– +6).

At the left of the display, turn on the KEYBOARD [TRANSPOSE] button, and then use the [-OCT] or [+OCT] button to specify the desired transposition.

To return to the original setting, press both buttons simultaneously.

Hold Pedal

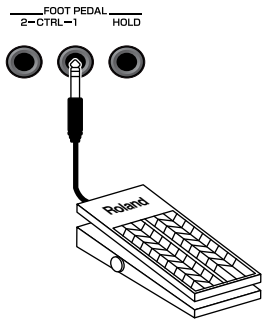
If an optional pedal switch (DP series) is connected to the rear panel PEDAL HOLD jack, you can press the pedal switch to cause notes to sustain or "hold" even after their keys have been released.



For details on the setting, refer to p. 291.

Control Pedal

If an optional expression pedal or pedal switch (EV-5, DP series.) is connected to the rear panel PEDAL CONTROL jack (1, 2), you can use the pedal to control the volume or various functions.



The way in which the sound changes will depend on the settings. For details on settings for parameters controlled by the pedal, refer to **"Making Control Pedal Settings"** (p. 77).

NOTE

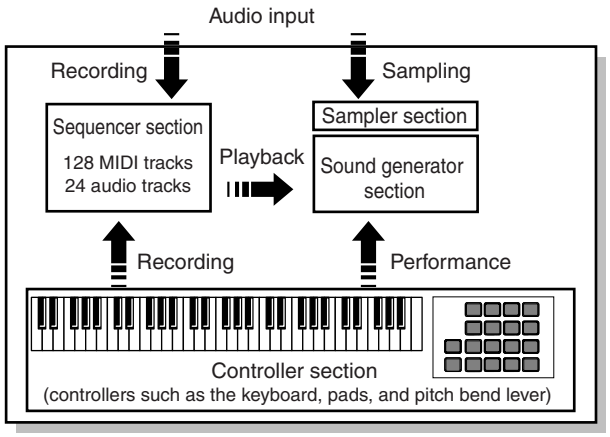
Use only the specified expression pedal or pedal switch (EV-5, DP series, BOSS FS-5U; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

Overview of the Fantom-G

How the Fantom-G is Organized

Basic Structure

Broadly speaking, the Fantom-G consists of a **controller section**, **sound generator section**, **sequencer section**, and **sampler section**.



Controller section

This section includes the keyboard, pads, pitch bend / modulation lever, the panel knobs, sliders, and D Beam controller, and pedals connected to the rear panel.

Sound generator section

This section generates sound in response to performance data from the controller section or sequencer section.

Sequencer section

This is a sequencer with 128 MIDI tracks and 24 audio tracks. The MIDI tracks record performance data (MIDI) from the keyboard, pads, and other controllers. The audio tracks record sound (audio) from a mic or guitar connected to the Fantom-G's audio input jacks.

Sampler section

A sampler is a device that captures (samples) sound from a CD player or mic connected to the audio input or digital input, and saves this sample as a wave file.

A captured sample can be used in the same way as the waveforms of the sound generator section. You can also sample the sound of the internal sound generator section itself (p. 258).

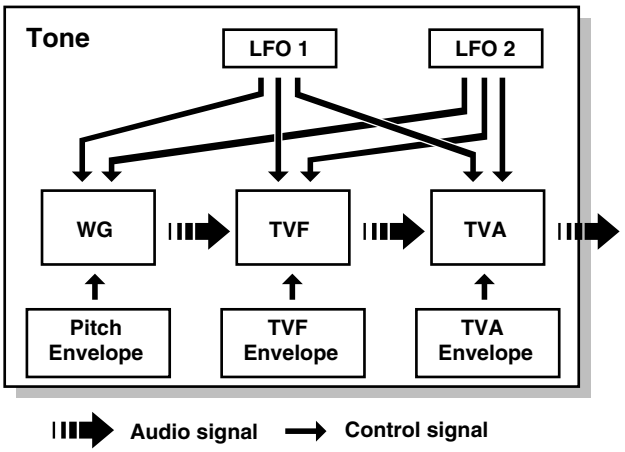
The Fantom-G can load WAV/AIFF format wave files from your computer via USB as samples.

Different Units of Sound

When using the Fantom-G, you'll encounter various units of sound. Here we'll provide a simple explanation of these units.

Tone

A Tone is the smallest unit of sound in the Fantom-G. However, you can't play a tone by itself. The smallest unit of sound that you can play is the "Patch," so you can think of tones as the sonic material that makes up each patch.



A tone consists of the following five elements.

WG (Wave Generator)

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

All of the patches built into the Fantom-G consist of combinations of tones that are based on PCM waveforms (waves).

NOTE

A rhythm tone (percussion instrument sound) contains four wave generators.

TVF (Time Variant Filter)

This specifies how the frequency components of the sound will change over time.

TVA (Time Variant Amplifier)

This specifies volume change and panning.

Envelope

An envelope specifies a change over time. Dedicated envelopes are provided for Pitch, TVF (filter), and TVA (volume). For example, if you want to modify the time over which the sound starts or decays, you would use the TVA Envelope settings to specify the desired time-variant volume change.

LFO (Low Frequency Oscillator)

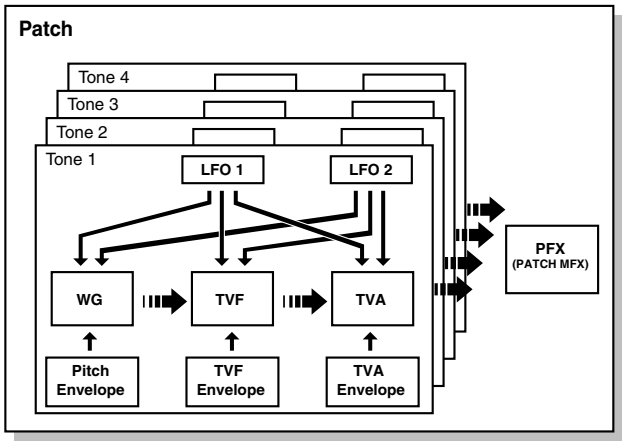
An LFO creates cyclic change (modulation). There are two LFOs, and each can be applied to one aspect of the sound; WG (pitch), TVF (filter), or TVA (volume). Applying an LFO to the WG pitch will produce vibrato, applying it to the TVF cutoff frequency will produce wah, and applying it to the TVA volume will produce tremolo.

NOTE

A rhythm tone (percussion instrument sound) does not have an LFO.

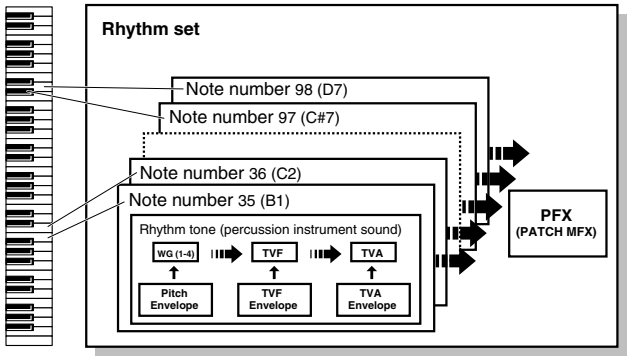
Patch

Patches are the basic unit of sound on the Fantom-G; they correspond to an individual instrument such as "piano," "organ," or "guitar." A patch can consist of up to four tones. The Structure 1&2 and 3&4 parameters (p. 92) determine how the four tones are combined. You can apply a "PFX (Patch MFX)" effect to each patch.



Rhythm set

A rhythm set is a group of percussion instrument sounds. Since percussion instrument sounds are not usually used to play melodies, there's no need for them to produce different pitches when played from the keyboard. Rather, it's important that you have simultaneous access to as many percussion instrument sounds as possible. This is why in a rhythm set, each note (note number) of the keyboard will play a different percussion instrument sound. You can apply a "PFX (Patch MFX)" effect to each rhythm set.



Sample set

On the Fantom-G, a piece of wave data obtained by audio recording or sampling is called a Sample. A sample set is a collection of sixteen samples handled as a set. You can specify how each sample will play when you press a pad or key.

Single / Live / Studio Modes

The Fantom-G can operate in the following three modes.

Single mode

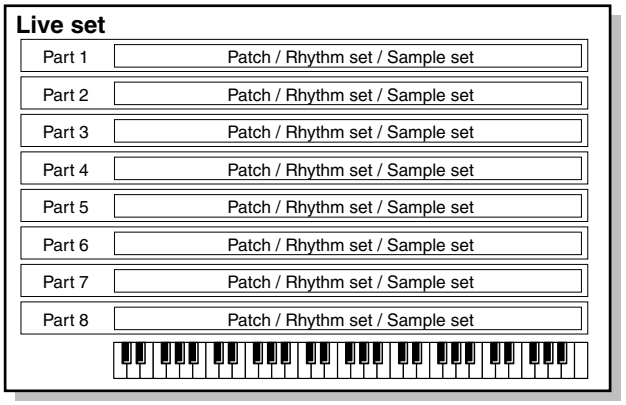
Single mode is when you play a single patch (or rhythm set or sample set), using the Fantom-G as a single piano, organ, etc. Choose this mode when you want to edit a patch to create your own original sound.

Live mode

Live mode is designed for live performance. It lets you play up to eight patches (or either rhythm sets or sample sets) simultaneously. For example, you can create layers (p. 62) in which a piano sound and strings sound are heard simultaneously, or splits (p. 62) in which your right hand plays a piano sound while your left hand plays a bass sound.

Live set

Settings for Live mode can be saved as a "live set."

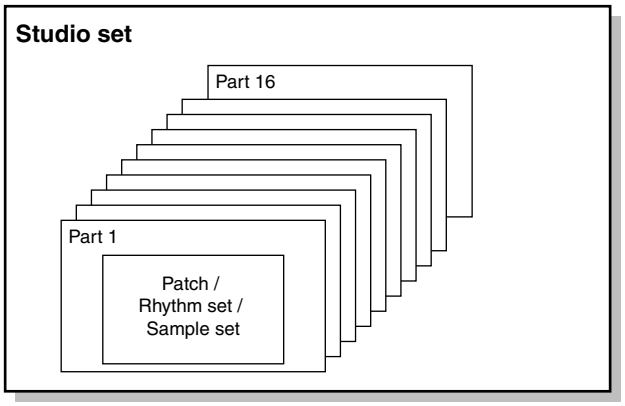


Studio mode

Studio mode is designed to let you record a song. It provides sixteen parts, and you can assign a patch (or rhythm set or sample set) to each part, letting you use sixteen different sounds at the same time. You can use the mixer screen to adjust the level and pan for each of the sixteen parts.

Studio set

Settings for Studio mode can be saved as a "studio set."



Part

On the Fantom-G, a "Part" is a kind of location or slot to which you can assign a patch, rhythm set, or sample set.

Live mode gives you eight parts, and you can assign a patch, rhythm set, or sample set to each part. This means that you can play up to eight sounds together.

Studio mode gives you sixteen parts, and you can assign a patch, rhythm set, or sample set to each part.

Part group

In addition to the internal parts (the internal sound generator), the Fantom-G provides part groups for expansion boards 1 and 2, and for the external MIDI output.

Part group	Explanation	Number of parts
Internal	Internal (internal sound generator)	Live mode: 8 Studio mode: 16
EXP 1	Expansion board 1	Up to 16 * *Depends on the expansion board*
EXP 2	Expansion board 2	Up to 16 * *Depends on the expansion board*
External	External MIDI output	16

About Polyphony

The Fantom-G has a maximum polyphony of 128 simultaneous notes. Here we'll explain how the polyphony is counted, and what happens when the limit of 128 notes is exceeded.

How polyphony is counted

The Fantom-G can produce up to 128 notes simultaneously. This number of notes will vary depending not only on the number of notes you're actually playing, but also on the number of tones used by each patch, and the number of waves used by each tone. When playing a patch, the polyphony is calculated as follows.

(number of patches that are sounding) x (number of tones used in the currently sounding patches) x (number of waves used by those tones)

For example, if a patch consists of four tones, and each of these tones uses two waves, it will use a total of eight notes of polyphony. If you're playing in Live mode (multi) or in Studio mode, count the polyphony for each part to obtain the total polyphony of all parts.

* *If you're using realtime time stretch, twice as much polyphony will be used.*

Patch polyphony

If you attempt to play more than 128 notes simultaneously on the Fantom-G, existing notes will be turned off, starting with the note having the lowest priority of the currently sounding notes. This priority is specified by the **Patch Priority** setting (p. 90).

You can choose either "LAST" or "LOUDEST" as the patch priority. If you choose "LAST," notes will be turned off starting with the first-played of the currently sounding notes when you exceed the 128 note limit. If you choose "LOUDEST," notes will be turned off starting with the note whose volume is least. Normally, you will probably want to select "LAST."

If you're using multiple patches to play an ensemble, it's important to specify which part gets priority for its notes over the others. This is specified by the **Voice Reserve** setting (p. 141). The **patch priority** setting (p. 90) will determine how the notes of a patch are turned off.

Voice reserve

The Fantom-G provides a **Voice Reserve** setting, which lets you reserve a minimum number of notes for each part. For example, if you specify a voice reserve setting of "10" for part 16, ten notes of polyphony will be guaranteed to be available for the sound being played by part 16 even when the overall Fantom-G reaches its 128 note limit. When making voice reserve settings, you'll need to consider the number of notes you actually want to play and the number of tones in the patches you're using (p. 141).

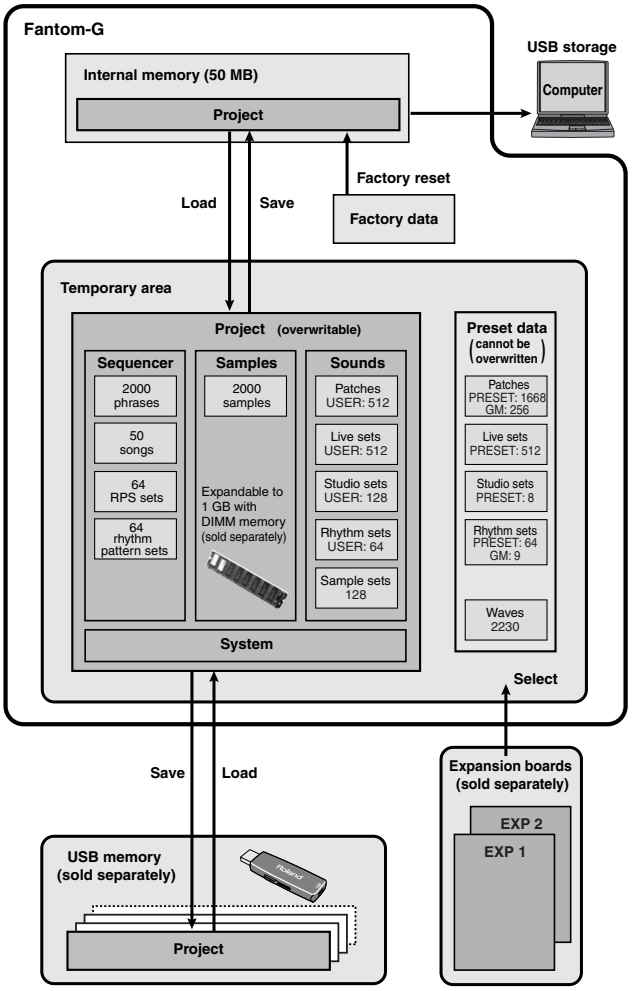
MEMO

You can make voice reserve settings for up to a total of 64 notes for all parts.

NOTE

When the audio tracks of a song are playing back, the audio tracks take priority over the voice reserve settings.

About Memory



Project

The largest unit of memory handled by the Fantom-G is the "project." As shown in the illustration, a project contains sequencer data, samples, sounds, and various system settings. On the Fantom-G you can use one project at a time.

Preset data

This is read-only data for patches, live sets, studio sets, rhythm sets, and waves.

Internal memory

The Fantom-G has internal memory in which you can save a project. A project can be overwritten at will. You can also restore the memory to the factory-set condition (Factory Reset) (p. 284).

The internal memory is approximately 50 MB in size. If you need to save a project that is larger than 50 MB, you'll need to save it on USB memory.

Temporary area

When you switch on the Fantom-G's power or load a project, the project data is placed in an area of memory called the "temporary area."

When you edit a patch or song, you are modifying the data in this temporary area.

These edits will be lost if you simply turn off the power; if you want to keep the changes you made, you must save them (SAVE/WRITE).

DIMM memory (sold separately)

You can install up to 1 GB of DIMM memory. Installing DIMM memory will allow you to record or sample for a longer period of time. For details on installing DIMM, refer to **"Expanding the DIMM Memory"** (p. 312, p. 314).

USB memory (sold separately)

Internal memory can hold only one project, but commercially available USB memory can hold multiple projects. Connect your USB memory to the rear panel USB MEMORY connector (p. 24). For details on how to format USB memory, refer to p. 284.

* *If the USB memory is formatted using something other than FAT, it will not be recognized by the Fantom-G. Use your computer to format the USB memory with the "FAT" or "FAT32" file system. (If you're using Mac OS X, format the USB memory using the "MS-DOS file system (FAT32)."*)

USB storage

You can use a USB cable to connect the Fantom-G to your hard disk, and save (back up) projects from internal memory or USB memory to the hard disk of your computer (p. 285).

Samples created using the Fantom-G can also be used by software on your computer; or conversely, you can use your computer software to create wave data and use it as samples in the Fantom-G.

Factory data

The factory data is memory that holds the factory-set state of the internal memory. If you have deleted the factory-set patches or other data from internal memory, and would like to use this data again, you can execute the Factory Reset operation (p. 284).

* *If you've created important data and saved it in the Fantom-G's internal memory, be aware that your data will be lost if you execute a Factory Reset. (**The data you're in the process of editing will also be lost**.)*

Expansion boards (ARX series; sold separately)

Up to two expansion boards (ARX series; sold separately) can be installed in the Fantom-G. An expansion board includes a sound generator engine, and will expand both the number of available sounds and the polyphony. For details on installing expansion boards, refer to **"Installing the Expansion Board"** (p. 308, p. 310).

About the Internal Effects

Types of Effects

The Fantom-G contains the following effects units. You can make settings independently for each one.

PFX (Patch MFX) (Patch multi-effect)

This is a dedicated multi-effect unit for the patch. You can use it as part of the sound of the patch itself.
You can choose from 76 types including distortion and rotary.

MFX (Multi-effect)

This is a general-purpose multi-effect that can apply various modifications to the sound.
You can choose from 78 types including distortion and rotary.

Chorus

Chorus is an effect that adds depth and spaciousness to the sound. You can choose whether to use this as chorus or as delay.

Reverb

Reverb is an effect that simulates the reverberation that characterizes sounds heard in a hall or other acoustic environment. You can choose from 10 types of reverb.

Mastering effect

This is a stereo compressor (limiter) applied to the final output of the Fantom-G. It operates independently for high, mid, and low frequency bands, compressing sounds that exceed the specified volume level, and making the overall sound more consistent.

Input effect

This is a dedicated effect for the external input.
You can choose from six types, including equalizer and compressor.

About the Sequencer

Audio and MIDI

The Fantom-G's sequencer can record audio and MIDI.

Audio (samples)

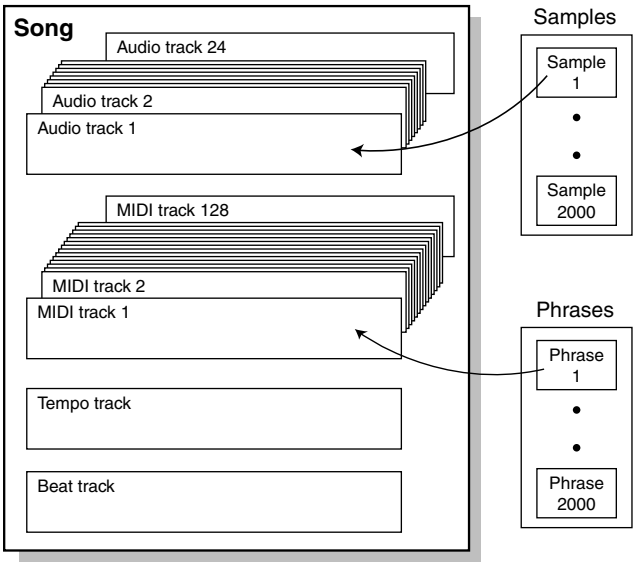
Audio is a "recording" of the sound from a mic or portable audio player connected to the Fantom-G's input jacks. The recorded audio data is called a "sample." You can create a song simply by placing samples in an audio track.

MIDI (phrases)

MIDI records performance data from the keyboard or pads. The recorded MIDI data is called a "phrase." You can create a song simply by placing phrases in a MIDI track.
In the sense that both types of recording can be used to capture a performance, MIDI is similar to audio, but while audio recording captures the "sound" of a performance, MIDI recording captures the notes and other control data of a performance, and allows you to freely make detailed edits even to the individual note data.

What is a Song?

Performance data for one composition is called a "**song**." This consists of audio tracks 1–24, MIDI tracks 1–128, a tempo track, and a beat track.



What is a Track?

A track is an area in which performance data can be recorded.

Audio tracks 1–24

There are twenty-four tracks for recording audio.

Samples

A piece of recorded audio data is called a "sample." You can create up to 2,000 samples in one project. The Fantom-G can capture samples by sampling (p. 258), or by importing WAV/AIFF format wave files via USB from your computer (p. 287). You can also create a song by placing samples in an audio track.

Samples also support the Sample Pad function (p. 191) which lets you play samples simply by pressing a pad.

MIDI tracks 1–128

There are 128 MIDI tracks that can record MIDI performances. A MIDI track can be assigned to the Fantom-G's 16 parts (Studio mode), to the two sets of up to 16 parts for the expansion boards (the number of parts will depend on the expansion board), or to the 16 parts of the external MIDI connector. You can also assign multiple tracks to a single part (for example, tracks 1 and 2 could be assigned to the Fantom-G's part 1.)

Phrases

The MIDI data recorded in a MIDI track is called a "phrase." Up to 2,000 phrases can be created in a single project. Just like a track, each phrase can record a performance of 16 MIDI channels. You can also create a song simply by placing phrases in a MIDI track.

Phrases also support the RPS function that lets you instantly play a phrase simply by pressing a pad (p. 194), and the Rhythm Pattern function that lets you play rhythm patterns by pressing a pad (p. 196). This means that you can use phrases to record performance data for use in a live performance.

You can also use phrases to record your musical ideas.

Tempo track

The tempo track records tempo changes for the song. Use it when you want the tempo to change during the song. If the tempo is going to stay the same from the beginning to the end of the song, you can ignore the tempo track.

When you record a song on the Fantom-G, the tempo you specify at the time of recording is stored at the beginning of the tempo track. This means that this tempo will always be used every time you play back the song.

In this way, songs are played back according to the data in their tempo track, but if you change the tempo during playback, the overall tempo of the entire song will change accordingly.

Beat track

The beat track records time signature information for each measure of the song. You'll make beat track settings when recording a new song, or when you want the time signature to change during the song.

Songs and the State of the Sound Generator

The Fantom-G's sequencer is available at all times, regardless of the sound generator mode (Single, Live, or Studio).

In Studio mode, you can record separate performances for each part using up to sixteen sounds. This makes Studio mode the ideal choice when you want to record or play back a song using an ensemble of multiple instruments such as drums, bass, and piano.

SMF (Standard MIDI File .MID)

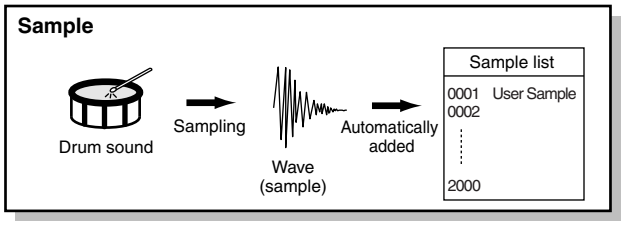
SMF (Standard MIDI File) is a file format that allows performance data to be exchanged between music applications. Songs created on the Fantom-G can be saved as standard MIDI files (p. 256). The Fantom-G can also play back commercially available music data that is compatible with the GM/GM2 system (GM Scores).

About the Sampling Section

The sampling section "samples" (records) audio input from an external source such as an audio device or mic. You can play these sampled sounds as a patch or rhythm set. You can also import WAV/AIFF format files and use them in the same way.

Samples

A "sample" refers to a waveform (wave) produced by sampling on the Fantom-G. A sample consists of waveform data together with parameters such as a start point, loop start, and loop end. The Fantom-G can hold up to 2,000 samples for a single project.



Basic Operation of the Fantom-G

Switching the Sound Generator Mode

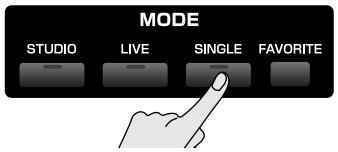
The Fantom-G provides three sound generator modes: Single, Live, and Studio. You can switch to the sound generator mode that's most appropriate for the way you're using the Fantom-G.

Single mode

This mode is for playing one sound (patch, rhythm set, sample set) at a time.

< To select Single mode >

1. **Press [SINGLE].**



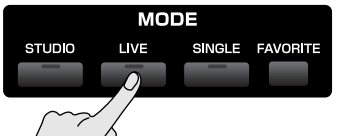
cf.
"Playing in Single Mode" (p. 46)

Live mode

This mode is for combining multiple sounds (patches, rhythm sets, sample sets) so that you can play them in a live performance.
You can layer patches so that they sound simultaneously, or split them across the keyboard so that they can be played by separate hands.

< To select Live mode >

1. **Press [LIVE].**



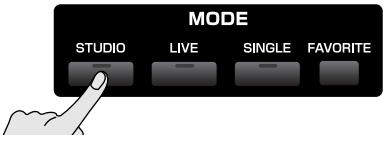
cf.
"Playing in Live Mode" (p. 58)

Studio mode

This mode is for recording a song using multiple sounds (patches, rhythm sets, sample sets).
This mode is ideal when you need to adjust mixing parameters such as level and pan for the sixteen parts.

< To select Studio mode >

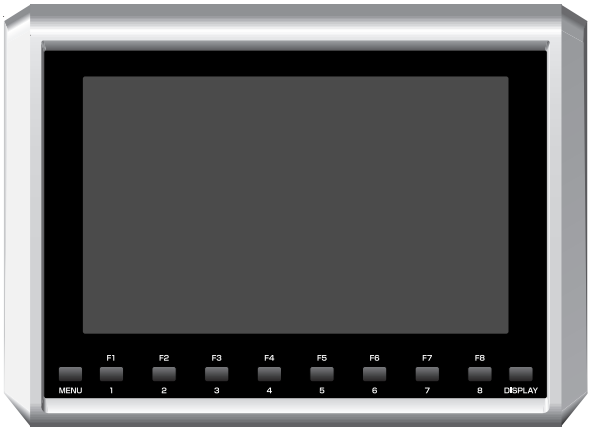
1. **Press [STUDIO].**



cf.
"Playing in Studio Mode" (p. 66)

How the Function Buttons Work

The eight buttons [F1]–[F8] located below the display (the function buttons) are used to execute various functions. Their function will depend on the screen that's currently shown. The current functions of these buttons are indicated in the bottom of the screen.



Windows

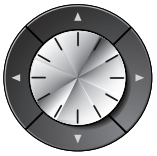
A small screen displayed within the normal screen is called a "**window**." Various types of windows will appear as you operate the Fantom-G. Some windows display lists, others allow you to make settings or confirm operations.

To close a window, press [EXIT]. Some windows will close automatically when you perform an operation.

Moving the Cursor

A single screen or window can contain multiple items (parameters) to set or select. If you want to modify the setting of a parameter, move the cursor to the value of that parameter. To select an item, move the cursor to the desired item. The value or item selected by the cursor will be highlighted.

Use ▲ / ▼ / ◀ / ▶ (cursor buttons) to move the cursor.



▲ : Moves the cursor upward.

▼ : Moves the cursor downward.

◀ : Moves the cursor to the left.

▶ : Moves the cursor to the right.

TIP

If you hold down a cursor button and then press the opposite cursor button, the cursor will move more rapidly in the direction of the button you pressed first.

TIP

In some cases, pressing [ENTER] while the cursor is displayed will show a list of the parameters you can select. This is a convenient way to see the choices you have. When a list is displayed, you can also use the pads to input your choice (p. 41).

Using the mouse for selection

If you're using a USB mouse, you can move the cursor by clicking the mouse on a parameter value.

Editing a Value

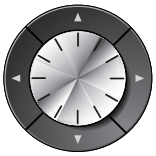
To edit a value, you can use either the VALUE dial or [INC] [DEC].

TIP

In each of the Fantom-G's screens, move the highlighted cursor to the value you want to edit, and then edit the value.

VALUE dial

Turn the VALUE dial toward the right to increase the value, or toward the left to decrease it. The value will change in larger steps if you hold down [SHIFT] while turning the VALUE dial.



When the cursor is located at a parameter value, pressing [ENTER] (or right-clicking the USB mouse) will open a window where you can specify the value. You can easily select a value by pressing ▲ or ▼ to select the desired value and then pressing [ENTER].

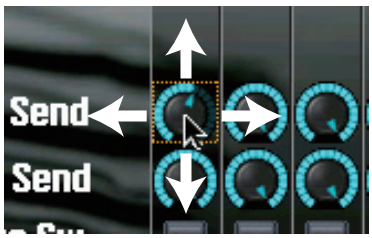
[INC], [DEC]

Press [INC] to increase a value, or [DEC] to decrease it. To make the value continue increasing (or decreasing), hold down the button. To make the value increase rapidly, hold down [INC] and then press [DEC]. Conversely, to make the value decrease rapidly, hold down [DEC] and then press [INC].

The value will change in larger steps if you hold down [SHIFT] while you press [INC] or [DEC].

Using the mouse for input

Drag up/down or left/right on the value or knob. Dragging up or to the right will increase the value, and dragging down or to the left will decrease the value.



Using the pad for numeric input

If you press the [NUMERIC] pad button, the pads will operate as numeric keys.

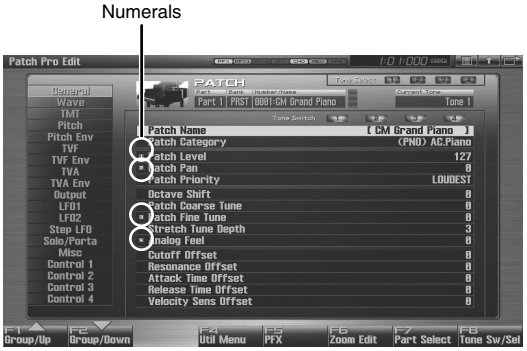
Each pad will enter the following values

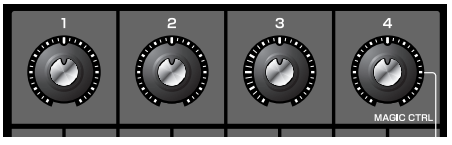
Pad	Value entered
1–9	1–9
10	0
11	+
12	-
15	, (comma)
16	BS (backspace)
ROLL	Cancel
HOLD	Enter

When you've entered the value, press [ENTER] to finalize your input. If you decide to cancel, press [EXIT].

Using the knobs for input

If the display shows small numerals (1 , 2 , 3 , 4), you can use knobs 1–4 to edit the corresponding parameters.

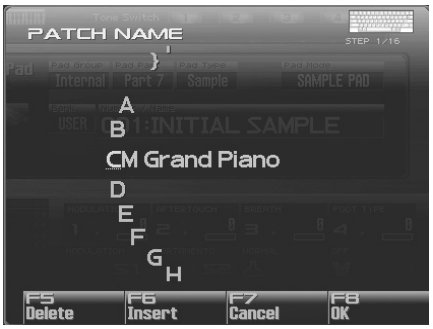




Assigning a Name

On the Fantom-G you can assign a name to each patch, rhythm set, live set, studio set, song, phrase, or sample when you save it. Regardless of the type of object you're naming, the procedure is the same.

1. Use [CURSOR] to move the cursor to the position at which you want to enter a character.



2. Turn the VALUE dial or use [INC] [DEC] to specify the character that you want to enter.

- [F5 (Delete)]: Deletes the character at the cursor, and moves the subsequent characters one place forward.
- [F6 (Insert)]: Inserts a space at the cursor location.
- [F7 (Cancel)]: Cancels the name entry procedure.
- [F8 (OK)]: Confirms the name.
- [◀] [▶]: Move the cursor.
- [▲] [▼]: Switch between uppercase and lowercase letters.

You can use the following characters,
space, A–Z, a–z, 0–9, ! ” # $ % & ’ ( ) * + , - . / : ; < = > ? @ [\ ] ^ ` { | }

NOTE

When assigning a name to a song file, you can't use spaces, lowercase letters, or certain symbols (\ / : , ; * ? ” < > |).

Using a mouse to input characters

If you're using a USB mouse, you can enter characters using a virtual keyboard.

1. Click the mouse on the keyboard icon shown in the name entry screen.
The virtual keyboard will appear.

2. Click the mouse on the keyboard to enter characters.

3. Press [F8 (OK)] or click it with the mouse to finalize the input.

MEMO

If you use the virtual keyboard for entry, it will be shown again the next time you enter a name.

Basic Pad Operations

cf.

For details on using the pads, refer to **"Using the Pads"** (p. 188).

Switching the Pad Mode

The pads have sixteen modes. Press [PAD MODE] to switch the pad mode.

1. Press [PAD MODE].

[PAD MODE] will blink, and the currently selected pad mode (pad [1]–[16]) will blink.

MEMO

If you decide not to switch the pad mode, press [PAD MODE] once again. [PAD MODE] will go out and you will return to the previous state.

2. Press a pad [1]–[16].

The pad mode will be switched. The following table shows what the pads do in each mode, and a page reference where you can learn more.

Pad number	Pad mode	Explanation	Page reference
1	SAMPLE PAD	Play a sample set	p. 191
2	RHYTHM	Play a rhythm set	p. 192
3	CHORD MEMORY	Switch the chord form of the Chord Memory function (p. 81)	p. 193
4	ARPEGGIO	Switch the style of the Arpeggio function (p. 78)	p. 193
5	RPS	Play phrases	p. 194
6	RHYTHM PTN	Play rhythm patterns	p. 196
7	TONE SEL/SW	Act as tone select and on/off switches	p. 197
8	TRACK MUTE	Switch the mute status of the sequencer tracks	p. 197
9	BOOKMARK	Call up frequently used screens you've registered for each pad	p. 198
10	MIDI TX SW	Act as on/off switches for external MIDI transmit channels (1–16)	p. 198
11	EFFECT SW	Act as effect switches (except for patch multi-effect)	p. 199
12	PATCH MFX SW	Act as multi-effect switches for each part	p. 199
13	PART SELECT	Select parts (1–16) and banks (INT/EXP1/EXP2/EXT)	p. 200
14	PART MUTE	Switch the mute status of parts (1–16) and banks (INT/EXP1/EXP2/EXT)	p. 200
15	USER GROUP	Store/load user group patches, live sets, or studio sets	p. 201
16	FAVORITE	Store/load favorite settings	p. 202

Viewing the Pad Settings

Press [PAD SETTING], and the setting/information screen for the currently selected pad mode will appear.

MEMO

To go back to where you were, press [PAD SETTING] once again so its light goes out.

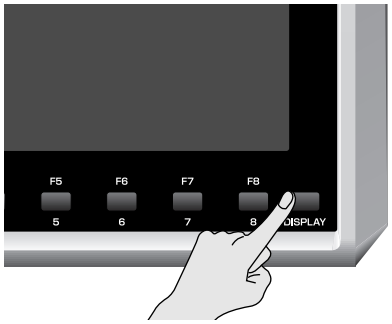
Using the Pads as Numeric Keys

If you press PAD [NUMERIC], the pads will operate as numeric keys. → **"Using the pad for numeric input"** (p. 41)

Shortcut Menu

By pressing the [**DISPLAY**] button, you can jump directly to the most important screens.

1. Press [DISPLAY].



The Shortcut menu will appear.

MEMO

You can also open the Shortcut menu by clicking your USB mouse on the shortcut icon.

2. Press ▲ or ▼ to select the screen to which you want to jump, then press [F8 (Select)].

If you decide to cancel, press [F7 (Cancel)].

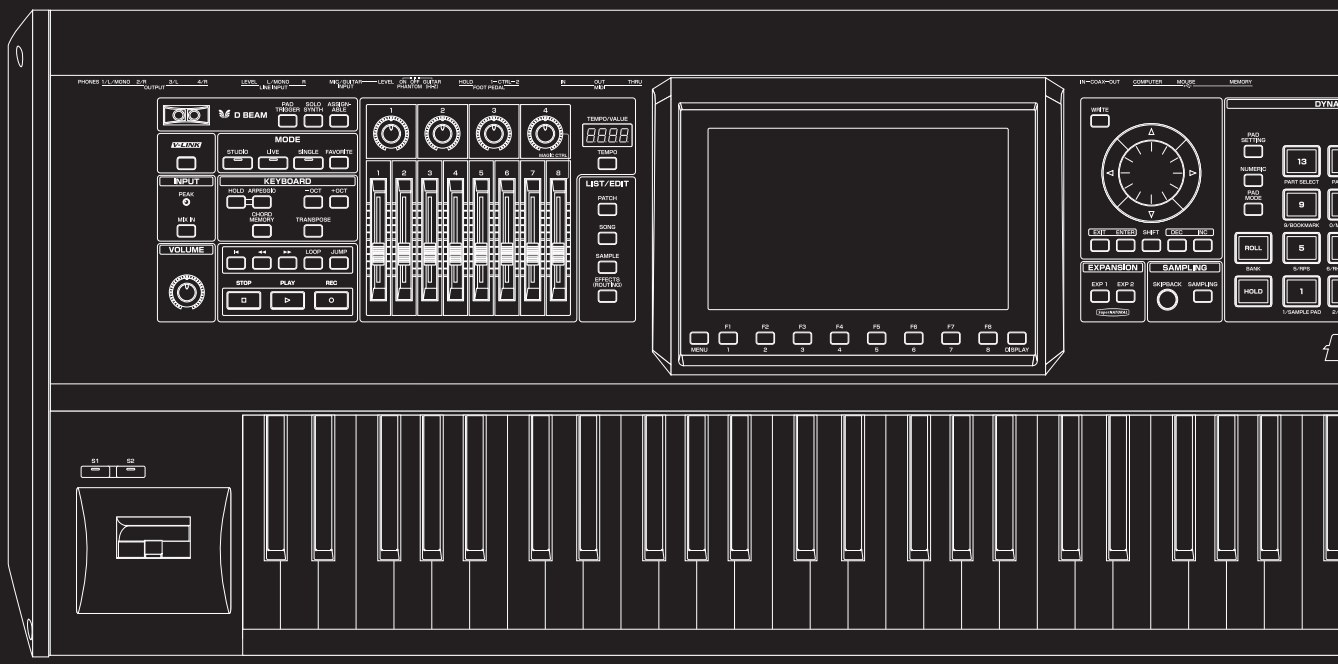
List of shortcut menu

Menu	Page
Studio Play/Live Play/Single Play	p. 66, p. 58. p. 46
Patch Zoom Edit	p. 84
Patch Pro Edit	p. 86
Song Play/Song Edit	p. 205, p. 232
Sample Edit	p. 266
Effects Routing	p. 151
Sampling	p. 260
Input Setting	p. 258
Digital/USB Input Level	p. 301
Master Level	p. 297
Pad Setting	p. 190

02: Sound Generator, Section 1 (Playing Sounds)

This chapter explains the three modes in which the Fantom-G's sound generator can operate.

- Single Mode ..... p. 46
- Live Mode ..... p. 58
- Studio Mode ..... p. 66



Playing in Single Mode

In Single mode, the keyboard and the pads are each used to play a single sound (patch/rhythm set/sample set).

About the Single Play Screen

Displaying Single Play Screen

To access the Single Play screen, use the following procedure.

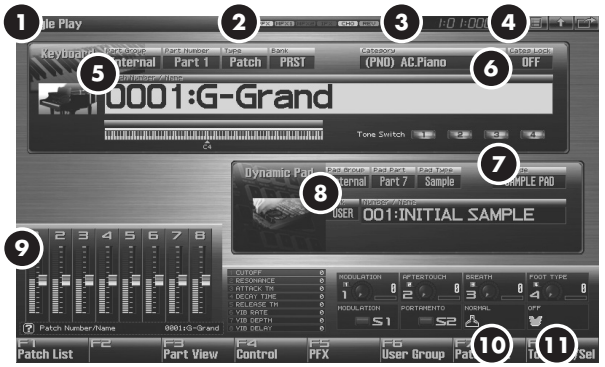
1. Press [SINGLE].

You will enter Single mode, and the Single Play screen appears.

F-key operations in the Single Play screen

F-key	Explanation	Page
F1 Patch List	Select a sound (patch).	p. 49
F3 Part View	Make detailed settings for each part (keyboard, sample pad, rhythm part).	p. 51
F4 Control	Select the parameters that will be controlled by the realtime controllers and D Beam controller.	p. 51
F5 PFX	Access the PFX (Patch Multi-effect) editing screen.	p. 157
F6 User Group	Access the user group list screen, where you can register frequently-used patches.	p. 201
F7 Patch Edit	Edit a patch.	p. 84
F8 Tone Sw/Sel	Select the tones that will be heard.	p. 50

Functions in the Single Play screen



Number	Explanation	Page
❶	Indicates the current sound generator mode.	p. 39
❷	Indicates the on/off status of each effect. PFX Patch multi-effect MFX1 Multi-effect 1 MFX2 Multi-effect 2 IFX Input effect CHO Chorus REV Reverb MAS Mastering effect	p. 150
❸	Indicates the current location of the song, and the status of the sequencer.	p. 205
❹	The Menu/Exit/Shortcut buttons for the USB mouse.	p. 26
❺	Indicates/selects the part group, part number, patch type, bank, number, and name of the selected patch, rhythm set, or sample set.	p. 47
❻	Indicates/selects the patch category, and specifies whether the category will be locked.	p. 48
❼	Indicates the pad mode.	p. 188
❽	Indicates/selects the part group, part, pad type, bank, number, and name of the rhythm set or sample set selected for the pads.	p. 52
❾	Indicates the functions assigned to the realtime controller sliders (1–8), knobs (1–4) and the S1/S2 switches.	p. 51
❿	Indicates the **"Bend Mode"** (p. 97) of the pitch bend lever.	p. 97
⓫	Indicates the function assigned to the D Beam controller and the state of D Beam controller response.	p. 72

Selecting a Patch

The Fantom-G has four patch banks, including the User, Preset, User Sample and GM.

USER

This is the bank inside the Fantom-G which can be rewritten. Patches you create can be stored in this bank. You can store 512 patches.

PRST (Preset)

This is the bank inside the Fantom-G which cannot be rewritten. However you may modify the settings of the currently selected patch, and then store the modified patch in user bank.

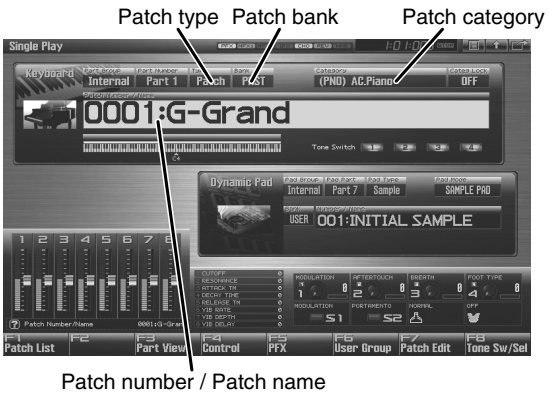
GM (GM2)

This is an internal bank of patches compatible with General MIDI 2, a system of MIDI function specifications designed to transcend differences between makers and types of devices; these patches cannot be overwritten. However you may modify the settings of the currently selected patch, and then store the modified patch in user bank. The Fantom-G includes 256 preset patches.

USAM (User Sample)

This bank lets you play the Fantom-G's internal samples.

1. Press [SINGLE] to access the Single Play screen.



2. Press [CURSOR] to move the cursor to the patch bank. Turn the VALUE dial or use [INC] [DEC] to choose the patch bank.

USER: User
PRST: Preset
GM: GM (GM2)
USAM: User Sample

* *Make sure that the patch type is set to "Patch."*
If this is set to "Rhythm" or "Sample," use [CURSOR] to move the cursor to the patch type, and turn the VALUE dial or press [DEC] to select "Patch."

3. Press [CURSOR] to move the cursor to the patch number.

4. Turn the VALUE dial, or press [INC] [DEC] to select a patch number.

MEMO

You can also use the pads as numeric keys to enter numbers (patch numbers). → **"Using the pad for numeric input"** (p. 41)

5. Play the keyboard to hear the sound.

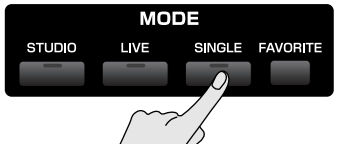
MEMO

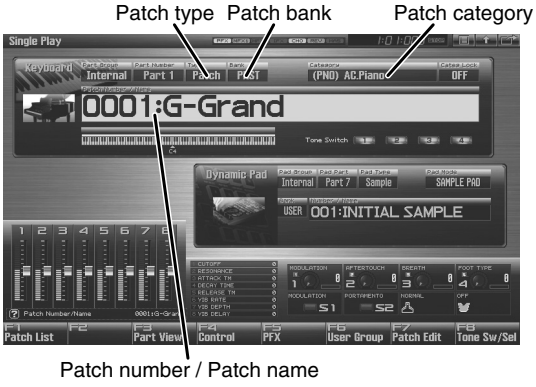
You can also use the following methods to select a patch.
"Selecting Patches by Category (Patch Finder)" (p. 48)
"Selecting Patches from the List" (p. 49)

Selecting Patches by Category (Patch Finder)

The Fantom-G provides a "Patch Search function" (Patch Finder) which allows you to specify a type (category) of patch so that you can quickly find the desired patch. There are a total of 38 categories.

1. Press [SINGLE] to access the Single Play screen.





* *Make sure that the patch type is set to "Patch."*
If this is set to "Rhythm" or "Sample," use [CURSOR] to move the cursor to the patch type, and turn the VALUE dial or press [DEC] to select "Patch."

2. Use [CURSOR] to move the cursor to the "Patch Category," and turn the VALUE dial, or press [INC] [DEC] to select the desired category.

3. Press ▶ to move the cursor to "Categ Lock," and turn the VALUE dial or press [INC] to turn "ON".

4. Use [CURSOR] to move the cursor to the patch bank or patch number, and turn the VALUE dial or use [INC] [DEC] to select the patch.

When the cursor is located at the Patch bank, you can select the bank. When the cursor is located at the Patch number, you can specify the number.

MEMO

You are free to change the category of a patch by editing the Patch Pro Edit screen (p. 86) parameter **"Patch Category"** (p. 89).

The following categories can be selected.

Category		Contents
- - -	No Assign	No assign
PNO	AC.Piano	Acoustic Piano
EP	EL.Piano	Electric Piano
KEY	Keyboards	Other Keyboards (Clav, Harpsichord etc.)
BEL	Bell	Bell, Bell Pad
MLT	Mallet	Mallet
ORG	Organ	Electric and Church Organ
ACD	Accordion	Accordion
HRM	Harmonica	Harmonica, Blues Harp
AGT	AC.Guitar	Acoustic Guitar
EGT	EL.Guitar	Electric Guitar
DGT	DIST.Guitar	Distortion Guitar
BS	Bass	Acoustic & Electric Bass
SBS	Synth Bass	Synth Bass
STR	Strings	Strings
ORC	Orchestra	Orchestra Ensemble
HIT	Hit&Stab	Orchestra Hit, Hit
WND	Wind	Winds (Oboe, Clarinet etc.)
FLT	Flute	Flute, Piccolo
BRS	AC.Brass	Acoustic Brass
SBR	Synth Brass	Synth Brass
SAX	Sax	Sax
HLD	Hard Lead	Hard Synth Lead
SLD	Soft Lead	Soft Synth Lead
TEK	Techno Synth	Techno Synth
PLS	Pulsating	Pulsating Synth
FX	Synth FX	Synth FX (Noise etc.)
SYN	Other Synth	Poly Synth
BPD	Bright Pad	Bright Pad Synth
SPD	Soft Pad	Soft Pad Synth
VOX	Vox	Vox, Choir
PLK	Plucked	Plucked (Harp etc.)
ETH	Ethnic	Other Ethnic
FRT	Fretted	Fretted Inst (Mandolin etc.)
PRC	Percussion	Percussion
SFX	Sound FX	Sound FX
BTS	Beat&Groove	Beat and Groove
DRM	Drums	Drum Set
CMB	Combination	Other patches which use Split and Layer

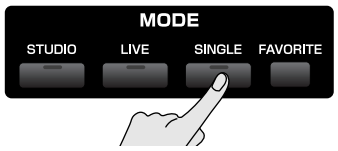
MEMO

You can't select categories for rhythm sets or sample sets.

Selecting Patches from the List

You can display a list of patches and select a patch from that list.

1. Press [SINGLE] to access the Single Play screen.



2. Press [F1 (Patch List)].
The Patch List screen will appear.

You can use [F3 (Patch)], [F4 (Rhythm Set)], and [F5 (Sample Set)] to switch between patch types (patches, rhythm sets, samples sets).

3. Use [F1] [F2] or ◀ / ▶ to select a category.

MEMO

You can also use the front panel [Knob 4] to select a category, and use [Slider 8] to scroll the list.
→ **"Magic Control"** (p. 294)

MEMO

You can't select categories for rhythm sets or sample sets.

4. Turn the VALUE dial or use [DEC] [INC] or ▲ / ▼ to select a patch.

MEMO

You can press [F7 (Preview)] to audition the patch using an appropriate phrase that is preset for each category (Phrase Preview).

MEMO

By pressing [F6 (User Group)] you can register a frequently used sound in the user group. For details, refer to **"Registering a sound in the User Group screen"** (p. 201).

MEMO

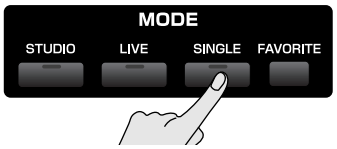
If you're using a USB mouse, you can click the keyboard symbol in the screen, and search using the virtual keyboard that appears in the screen.

5. Press [F8 (Select)] to confirm your patch selection.

Auditioning Patches (Phrase Preview)

The Fantom-G allows you to preview patches by hearing a phrase appropriate for each type of patch.

1. Press [SINGLE] to access the Single Play screen.



2. Press [F1 (Patch List)] to access the Patch List screen.

3. Press and hold [F7 (Preview)].
The patch selected in the Patch List screen will be sounded.

4. Release your finger from [F7 (Preview)], and the phrase will stop playing.

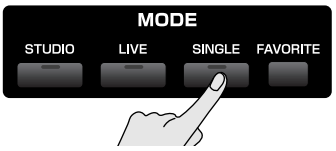
cf.

If you wish to change how the phrase is played by Phrase Preview, you can edit the Preview Mode parameter (p. 300).

Selecting the Tones That Will Sound (Tone On/Off)

Since a patch is a combination of up to four tones, you can switch unwanted (tones out of the four) off and get just the sound of a specific tone.

1. Press [SINGLE] to access the Single Play screen.



2. Press [F8 (Tone Sw/Sel)].
The Tone Switch/Select window appears.

3. Press [F1 (Tone Sw)]–[F4 (Tone Sw)] to turn each tone on/off. The setting will switch on/off each time you press the button.

4. Press [EXIT] to close the window.

TIP

If you want just one or two tones to sound in a patch, turn the others off and store that setting on a patch. This cuts nonessential use of the Fantom-G's simultaneous voices.

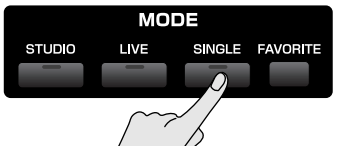
TIP

You can also use the pads to select tones and switch them on/off (p. 197).

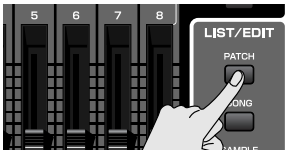
Playing Single Notes (Monophonic)

When using a patch for a naturally monophonic instrument such as sax or flute, it is effective to play in mono.

1. Press [SINGLE] to access the Single Play screen.



2. Press [PATCH] twice to access the Patch Pro Edit screen.



3. Press [F1 (Up)] or [F2 (Down)] to select the "Solo/Porta" tab.
A screen like the one shown below appears.

4. Press ▲ or ▼ to move the cursor to "Mono/Poly."

5. Turn the VALUE dial or press [DEC] to select "MONO."
Now you can play in mono mode.

TIP

If you assign "MONO/POLY" as a function to be controlled by the assignable switch ([S1] [S2]), you can easily switch between mono/poly by pressing a button (p. 77).

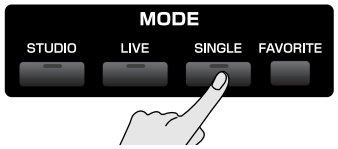
Part Settings (Part View)

Single mode has the following three parts.

Part		Explanation
1	Keyboard	The part that is heard when you play the keyboard
7	Sample Pad	The part that is heard when you set the pads to **"1 SAMPLE PAD (Using the Pads to Play Samples)"** (p. 191) mode
8	Rhythm Pad	The part that is heard when you set the pads to **"2 RHYTHM (Using the Pads to Play a Rhythm Set)"** (p. 192) mode

In the Part View screen you can view and edit the volume and pan settings of these three parts.

1. Press [SINGLE] to access the Single Play screen.



2. Press [F3 (Part View)].
The Part View screen will appear.

3. Press [F1 (Up)] or [F2 (Down)] to select the parameter group.

4. Use [CURSOR] to move the cursor to the parameter.

5. Either turn the VALUE dial or use [INC] [DEC] to set the value.

6. If you want to keep the settings, press [F7 (Sys Write)].

NOTE

When Single mode is selected, part settings cannot be saved for each individual patch. Part settings are saved as system settings.

7. When you have finished making settings, press [EXIT] to return to the Single Play screen.

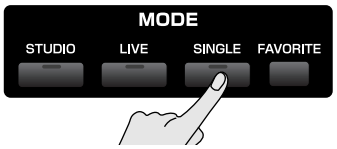
cf.

See **"Level/Pan (When the Part Group is Internal/EXP1/EXP2)"** (p. 134)–**"MIDI Rx Filter"** (p. 141) for each parameter's functions.

Selecting the Parameter Controlled by the Realtime Controllers or D Beam Controller (Control Setting)

The Fantom-G lets you assign the parameters that will be affected when you operate the 1–4 knobs, 1–8 sliders, S1/S2 switches, D Beam, pitch bend, or modulation lever. This lets you modify the sound in a variety of ways by operating the controllers.

1. Press [SINGLE] to access the Single Play screen.



2. Press [F4 (Control)].
The Control Setting screen will appear.

3. Press [F1 (Up)] or [F2 (Down)] to select the parameter group.

4. Use [CURSOR] to move the cursor to the parameter.

5. Either turn the VALUE dial or use [INC] [DEC] to set the value.

6. If you want to keep the settings, press [F7 (Sys Write)].

NOTE

When Single mode is selected, controller settings cannot be saved for each individual patch. Controller settings are saved as system settings.

7. When you have finished making settings, press [EXIT] to return to the Single Play screen.

cf.

See **"Keyboard Mode"** (p. 143)–**"Ctrl Switch"** (p. 147) for each parameter's functions.

Controller Reset

In Single mode, you can hold down [SHIFT] and press [SINGLE] to reset the controllers.

In addition to controllers such as bender, modulation, and pedals, the values of the following part parameters will also be initialized.

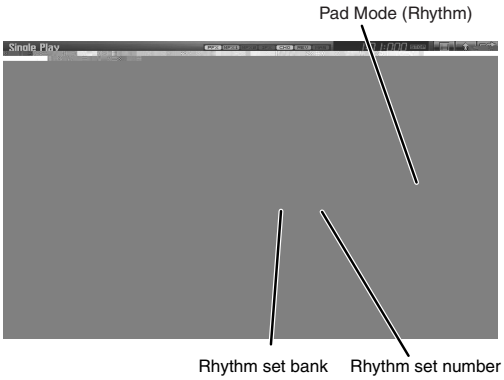
Cutoff Offset, Resonance Offset, Attack Time Offset, Release Time Offset, Decay Time Offset, Vibrato Rate, Vibrato Depth, Vibrato Delay

Playing Percussion Instruments (Rhythm Set)

In Single mode, you can play percussion instruments from the keyboard by selecting a rhythm set.

TIP

You can also use the pads to play a rhythm set. → p. 192



Selecting a Rhythm Set

The Fantom-G has three rhythm set banks, including the User bank, Preset bank and GM bank, with 64 rhythm sets in the User bank, 64 rhythm sets in Preset bank, and 9 rhythm sets in GM bank.

USER

This is the bank inside the Fantom-G which can be rewritten. The rhythm sets you create can be stored in this bank. You can store 64 rhythm sets.

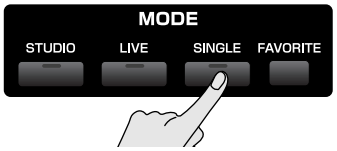
PRST (Preset)

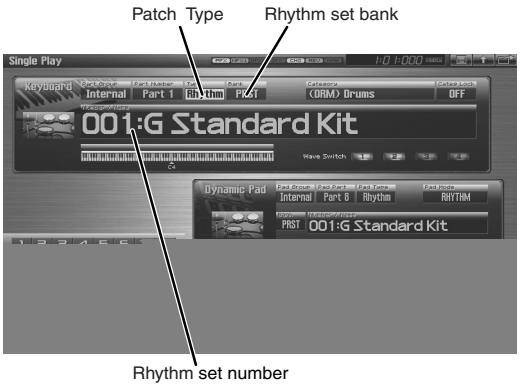
This is the bank inside the Fantom-G which cannot be rewritten. However, you can modify the settings of the currently selected rhythm set, and then save the modified settings in User bank. The Fantom-G contains 64 preset rhythm sets.

GM (GM2)

This is an internal bank of rhythm sets compatible with General MIDI 2, a system of MIDI function specifications designed to transcend differences between makers and types of devices; these rhythm sets cannot be overwritten. However, you can modify the settings of the currently selected rhythm set, and then save the modified settings in User bank. The Fantom-G includes nine preset rhythm sets.

1. Press [SINGLE] to access the Single Play screen.





* *Make sure that the Patch Type is set to "Rhythm." If this is set to "Patch" or "Sample," use [CURSOR] to move the cursor to the patch type, and turn the VALUE dial or press [INC] [DEC] to select "Rhythm."*

2. Press [CURSOR] to move the cursor to the rhythm set bank.

3. Turn the VALUE dial or press [INC] [DEC] to select the rhythm set bank.

USER: User
PRST: Preset
GM: GM (GM2)

4. Press [CURSOR] to move the cursor to the rhythm set number.

5. Turn the VALUE dial or press [INC] [DEC] to select the rhythm set number.

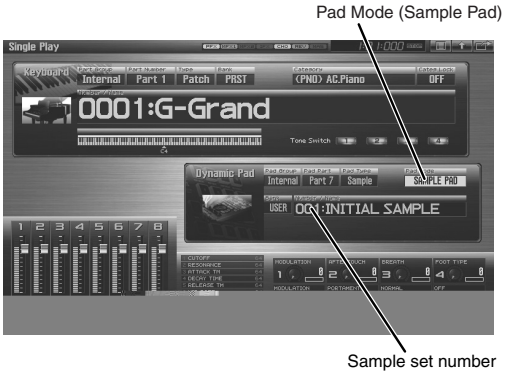
6. Play the keyboard to hear the sound.

Playing a Sample Set

In Single mode you can select a sample set and play the samples from the keyboard.

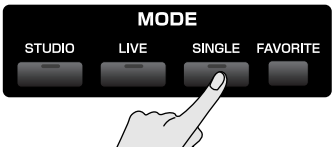
TIP

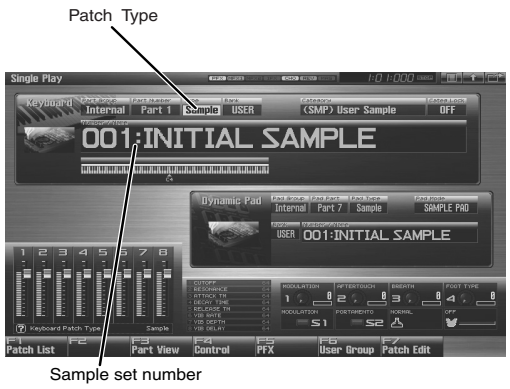
You can also use the pads to play a sample set. → p. 191



Selecting a Sample Set

1. Press [SINGLE] to access the Single Play screen.





* *Make sure that the Patch Type is set to "Sample." If this is set to "Patch" or "Rhythm," use [CURSOR] to move the cursor to the patch type, and turn the VALUE dial or press [INC] [DEC] to select "Sample."*

2. Press [CURSOR] to move the cursor to the sample set number.

3. Turn the VALUE dial or press [INC] [DEC] to select the sample set number.

4. Play the keyboard to hear the sound.

* *For a sample set, the sixteen sample tones are mapped to keys B3–D5.*

Creating a List of Frequently Used Sounds (Favorite)

You can make a list of sounds that you frequently use in live performance, and recall these sounds instantly. You are free to register any type of sound — patches, rhythm sets, sample sets, live sets, studio sets, or songs — so you'll be able to instantly recall any sound you need for your performance.

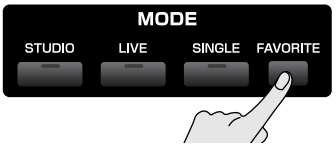
You can register sixteen sounds (steps) in a bank, and you can create sixteen of these banks.

For example, up to sixteen sounds (steps) that you use in the first song of your live performance could be registered in bank 1, in the order in which they appear in the song.

Registering a Sound (Regist)

1. **Access the screen for the patch (or rhythm set, sample set, live set, or studio set) that you want to register.**

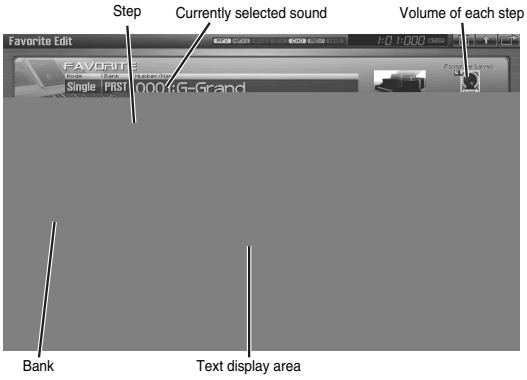
2. **Press [FAVORITE] twice so it's blinking.**



The Favorite Edit screen will appear.

MEMO

Each time you press [FAVORITE], you will alternate between the Favorite Play screen ([FAVORITE] lit) and the Favorite Edit screen ([FAVORITE] blinking).



F-key operations in the Favorite Edit screen

F-key	Explanation		Page
F1 Bank ▲	Selects the bank.		–
F2 Bank ▼	Selects the bank.		–
F3 Step ◀	Selects the step and recalls the sound.		p. 54
F4 Step ▶	Selects the step and recalls the sound.		p. 54
F5 Dynamic Pad	Sets the pads in Favorite mode.		p. 54
F6 Util Menu	Font	Switches the display font	p. 57
	Set Song	Registers a song	p. 56
	Import Text	Imports text	p. 56
	Remove Text	Deletes text	p. 57
	Remove Bank	Deletes a bank	p. 55
F7 Remove	Deletes the registration of a sound.		p. 55
F8 Regist	Registers a sound.		p. 54

3. **Press [F1 Bank ▲] or [F2 Bank ▼] to select the bank in which you want to register the sound.**

4. **Use the cursor buttons ◀ or ▶ to select the number (step) in which you want to register the sound.**
   You can register the sound in any of the sixteen steps. You'll want to register each sound in the order that's appropriate for the progression of your song or live performance.

5. **Press [F8 (Regist)] to register the sound.**
   For example if you registered the sound to number 02 of bank 1, the display will indicate "Regist to 1-02".

Recalling a Sound

Using the Favorite Play screen to recall sounds

1. **Press [FAVORITE] so it's lit.**

   MEMO

   Each time you press [FAVORITE], you will alternate between the Favorite Play screen ([FAVORITE] lit) and the Favorite Edit screen ([FAVORITE] blinking).

2. **Press ▲ or ▼ to select the bank that you want to recall.**

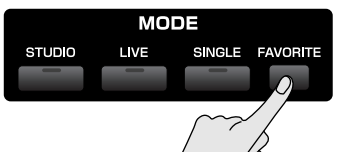
3. **Use [F1 (1)]–[F8 (8)] to select the step number that you want to recall.**
   If you want to select 9--16, hold down [SHIFT] and press [F1 (9)]–[F8 (16)].
   The selected sound will be recalled.

   MEMO

   As an alternative to step 3, you can also press ◀ or ▶ to select the he step number. In this case, the sound will not be switched until you press [ENTER].

Using the Favorite Edit screen to recall sounds

1. **Press [FAVORITE] twice so it's blinking.**



The Favorite Edit screen will appear.

2. **Press [F1 Bank ▲] or [F2 Bank ▼] to select the bank from which you want to recall sounds.**

3. **Press [F3 Step ◀] or [F4 Step ▶] to select the step number (1–16) that you want to recall.**
   The selected sound will be recalled immediately.

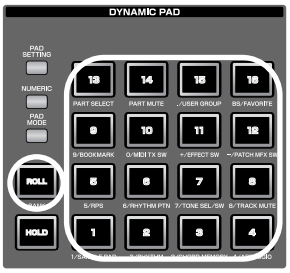
   TIP

   As an alternative to step 3, you can also press ◀ or ▶ to select the he step number. In this case, the sound will not be switched until you press [ENTER].

Using the pads to recall sounds

1. **In the Favorite Edit screen, press [F5 (Dynamic Pad)].**
   The pads will be set to Favorite mode.

- Now you can press pads [1]–[16] to select the sound (step) that's registered for each pad.
- You can press [ROLL](BANK) to switch banks (1–6). → p. 189



NOTE

If you want to use the pads to successively switch between live sets (or studio sets), set the system parameter **"Pad Assign Source"** (p. 292) to "SYS." If this is set to "TEMP," the pad mode will change to the setting of that particular live set (or studio set) when you switch to a live set (or studio set).

Specifying the Volume for Each Step (Favorite Level)

Here's how to specify the volume (Favorite Level) for each step. Use this to adjust the volume of each sound in your live performance.

1. **In the Favorite Edit screen, press ◀ or ▶ to move the cursor to the step whose volume you want to adjust.**
2. **Use knob 4 or [INC] [DEC] to specify the volume (Favorite Level).**
   Range: 0–127

Changing the Step in Which You Registered a Sound

Here's how to move a registered sound to a different step.

1. **In the Favorite Edit screen, press ◀ or ▶ to move the cursor to the step at which the sound you want to move is registered.**
2. **While holding down [SHIFT], press ◀ or ▶ to move the sound.**

Removing a Sound You Registered (Remove)

Here's how to remove a registered sound from the favorites list.

1. **In the Favorite Edit screen, press ◀ or ▶ to move the cursor to the step whose registration you want to remove.**
2. **Press [F7 (Remove)].**
   For example if you remove the registration from step number 02 of bank 1, the display will indicate "Remove 1-02," and that step will be empty.

Removing All Sound Registrations from a Bank (Remove Bank)

Here's how to remove all sound registrations from a bank.

1. **In the Favorite Edit screen, press [F1 Bank ▲] or [F2 Bank ▼] to select the bank whose sound registrations you want to remove.**
2. **Press [F6 (Util Menu)].**
   The Favorite Utility Menu window will appear.
3. **Press ▲ or ▼ to select "Remove Bank," and then press [F8 (Select)].**
   If you removed all registrations from bank 1, the display will indicate "Remove Bank 1," and that bank will be empty.

Registering a Song (Set Song)

Here's how to register a song instead of a sound.

1. **In the Favorite Edit screen, press [F1 Bank ▲] or [F2 Bank ▼] to select the bank in which you want to register a song.**

2. **Press ◀ or ▶ to select the number (step) in which you want to register a song.**

3. **Press [F6 (Util Menu)].**
   The Favorite Utility Menu window will appear.

4. **Press ▲ or ▼ to select "Set Song," and press [F8 (Select)].**
   The Song Select screen will appear.

5. **Press ▲ or ▼ to select a song.**

6. **Press [F8 (Select)] to register the song.**
   For example if you register the song in number 02 of bank 1, the display will indicate "Regist to 1-02."

   MEMO

   Songs can be recalled in the same way as recalling sounds.

Importing a Text File (Import Text)

You can create a text file on your computer, and import it into the Fantom-G so that it can be displayed in the Favorite screen.

1. **Use the USB Storage function to place the text file in the "IMPORT" folder of the Fantom-G's internal memory or the USB memory.**

   cf.

   "Exchanging Files with Your Computer (USB Storage)" (p. 285)

2. **Access the Favorite Edit screen, and press [F1 Bank ▲] or [F2 Bank ▼] to select the bank in which you want to display the text.**

3. **Press [F6 (Util Menu)].**
   The Favorite Utility Menu window will appear.

4. **Press ▲ or ▼ to select "Import Text," and then press [F8 (Select)].**

5. **Press [F1 (Internal)] or [F2 (USB Memory)] to select the import-source area (either internal memory or USB memory).**

6. **Press ▲ or ▼ to select the file that you want to import.**

7. **Press [F8 (Import Text)].**
   The file to be imported will appear.

   * *If you decide to cancel, press [F7 (Cancel)].*

8. **Press [F8 (Execute)].**
   The file will be imported.

   * *If you decide to cancel, press [F7 (Cancel)].*

   MEMO

   You can scroll the screen by pressing ▲ or ▼ .

Removing a Text File (Remove Text)

Here's how to remove a text file that you imported.

1. **Access the Favorite Edit screen, and press [F1 Bank ▲] or [F2 Bank ▼] to select the bank whose text you want to remove.**
2. **Press [F6 (Util Menu)].**
   The Favorite Utility Menu window will appear.
3. **Press ▲ or ▼ to select "Remove Text," and then press [F8 (Select)].**
   A message will appear, and the text will be removed from the selected bank.

Switching the Display Font (Font)

Here's how to switch the display font of the imported text. The display font will switch each time you perform the following steps.

1. **Press [F6 (Util Menu)].**
   The Favorite Utility Menu window will appear.
2. **Press ▲ or ▼ to select "Font," and press [F8 (Select)].**
   The display font will be switched.

Playing in Live Mode

Live mode is designed for live performances; it lets you play up to eight patches (or rhythm sets or sample sets) at the same time. For example you can layer (p. 62) a piano sound with strings, or split (p. 62) sounds across the keyboard so that your right hand plays a piano sound while your left hand plays a bass sound.

MEMO

In addition, Live mode lets you play the parts of any installed expansion boards (the number of parts will depend on the type of expansion board) and any external MIDI output parts at the same time as the eight parts of the internal sound generator.

Part group	Number of parts
Internal	8
Expansion board 1	Maximum 16 * *Depends on the expansion board*
Expansion board 2	Maximum 16 * *Depends on the expansion board*
External MIDI output	16

A "live set" contains a patch (or rhythm set or sample set) assignment as well as volume and pan for each part.

When you play the keyboard, parts whose keyboard switch is on will be sounded. If none are on, the current part will sound.

In addition to the settings of each part, the following settings can also be stored for each live set.

- Controller settings such as the D Beam, 1–4 knobs, 1–8 sliders, [S1] [S2] buttons, and pads

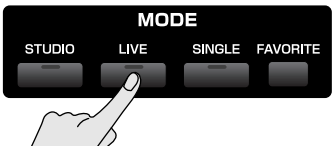
NOTE

If the keyboard switch of the part group (INT, EXP1, EXP2, EXT) is turned on for even one part, the current part will not sound. If you want to sound the current part, turn off the keyboard switch for all parts.

Displaying Live Play (Layer/Split) Screen

To access the Live Play (Layer/Split) Screen, use the following procedure.

1. Press [LIVE].



You will enter Live Mode, and the Live Play (Layer/Split) Screen appears.

F-key operations in the Live Play (Layer/Split) screen

F-key	Explanation	Page
F1 Patch List	Selects the patch sound that's assigned to each part.	p. 61
F2 Utility	Makes settings common to the entire live set.	p. 132
F3 Part View	Makes detailed settings for each part of the live set.	p. 133
F4 Control	Selects the parameters that will be controlled by the realtime controllers or the D Beam controller.	p. 142
F5 LiveSet List	Selects a live set.	p. 60
F6	Switches between the normal screen and a screen that shows only the parts whose keyboard switch is on.	p. 61
F7 Mixer	Displays the mixer screen.	p. 63
F8 Layer Edit	Displays the Layer Edit screen.	p. 64

Functions in the Live Play (Layer/Split) Screen

Number	Explanation	Page
❶	Indicates the current sound generator mode.	p. 39
❷	Indicates the on/off status of each effect. PFX Patch multi-effect MFX1 Multi-effect 1 MFX2 Multi-effect 2 IFX Input effect CHO Chorus REV Reverb MAS Mastering effect	p. 150
❸	Indicates the current location of the song, and the status of the sequencer.	p. 205
❹	The Menu/Exit/Shortcut buttons for the USB mouse.	p. 26
❺	Indicates/selects the bank, name, and number of the currently selected live set.	p. 60
❻	Indicates the pad mode.	p. 188
❼	Indicates/selects the type, bank, number, and name of the patch, rhythm set, or sample set for each part.	p. 61
❽	Indicates/changes the keyboard switch setting.	p. 61
❾	Indicates/changes the key range.	p. 62
❿	Indicates the key range that the Fantom-G6/G7/G8 can play.	–
⓫	Indicates the functions assigned to the realtime control sliders (1–8), knobs (1–4) and the S1/S2 switches. In Live mode, the sliders (1–8) indicate the levels of the 8 internal parts. (p. 62)	p. 142
⓬	Indicates the function assigned to the D Beam controller and the response state of the D Beam controller.	p. 142
⓭	Indicates the **"Bend Mode"** (p. 97) of the pitch bend lever.	p. 97
⓮	Specifies the arpeggio part and pad part.	p. 61

Selecting a Live Set

The Fantom-G has two live set banks, including the User bank and Preset banks.

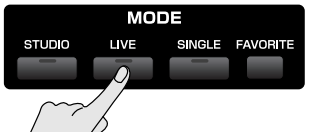
USER

This is the bank inside the Fantom-G which can be rewritten. Live Sets you create can be stored in this bank. You can store 512 live sets.

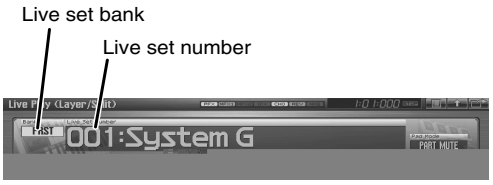
PRST (Preset)

This is the bank inside the Fantom-G which cannot be rewritten. However you may modify the settings of the currently selected live set, and then store the modified live set in User memory. The Fantom-G contains 512 preset live sets.

1. Press [LIVE].



2. Press [CURSOR] to move the cursor to the live set bank.



3. Turn the VALUE dial, or press [INC] [DEC] to select a live set bank.

USER: User

PRST: Preset

4. Press [CURSOR] to move the cursor to the live set number.

5. Turn the VALUE dial or press [INC] [DEC] to select the live set number.

Selecting Live Sets from the List

You can display a list of live sets and select a live set from that list.

1. Press [LIVE].

2. Press [F5 (LiveSet List)].

The Live Set List screen appears.

3. Turn the VALUE dial or press ▲ or ▼ to select the live set.

4. Press [F8 (Select)] to close the Live Set List screen.

MEMO

Pressing [F6 (User Group)] will access the user group list screen, where you can register frequently-used studio sets.

→ **"Registering a sound in the User Group screen"** (p. 201)

MEMO

If you're using a USB mouse, you can click the keyboard symbol in the screen to access a virtual keyboard, which allows you to perform a keyword search.

Using the Live Play (Layer/Split) Screen

MEMO

When you modify the settings of a Live Set, the Live Play screen will indicate "." The settings you modify are temporary, and will be lost when you turn off the power, switch the sound generator mode, or select a different sound. If you want to keep the modified sound, you must save it in the User bank (**"Saving a Live/Studio Set You've Created (Write)"** (p. 148)).

Selecting a Part

The currently selected part is called the "**current part**."

1. **Press [LIVE] to access the Live Play (Layer/Split) Screen.**

2. **Use ▲ or ▼ to select the part.**
   The part number is shown in red for the selected part.

MEMO

As you continue pressing ▼, the screen will scroll downward, allowing you to select expansion board parts (if an expansion board is installed) or external MIDI output parts.

Selecting the Part that You want to Sound (Keyboard Switch)

Here's how to select the parts whose patch, rhythm set or sample set will sound. For each part, use the switch to specify whether that part will be played from the keyboard; this is called the "keyboard switch."

1. **In the Live Play (Layer/Split) screen, use [CURSOR] to move the cursor to the "KBD" area, and press [INC] to turn on the keyboard switch for the part(s) you want to play.**
   When you play the keyboard, you'll hear the part(s) whose keyboard switch you turned on. If all of the keyboard switches are off, you'll hear the current part.

MEMO

You can turn on the keyboard switch for more than one part.

MEMO

By pressing [F6] you can switch to a screen that shows only the parts whose keyboard switch is on.

NOTE

The current part will not sound if even one keyboard switch is on. If you want to hear the current part, turn off the keyboard switch for all parts.

Selecting the Part Played by the Pads

Use the pad switch to select the part whose rhythm set or sample set will be played by the pads.

1. **As described in the procedure for "Switching the Pad Mode (PAD MODE)" (p. 188), set the pad mode to either "1 SAMPLE PAD" or "2 RHYTHM."**

2. **In the Live Play (Layer/Split) screen, use [CURSOR] to move the cursor to the "SAM" or "RHY" field, and press [INC] to turn on the pad switch for the part that you want to play from the pads.**
   When you press the pads, you'll hear the part whose pad switch is on.

NOTE

Make sure that the Patch Type is set to "SAMPLE" or "RHYTHM." If this is set to "PATCH," use [CURSOR] to move the cursor to the patch type, and turn the VALUE dial or press [INC] [DEC] to select "SAMPLE" or "RHYTHM."

MEMO

In the same way, you can use the "ARP" switch to specify the **"Arpeggio Part Number"** (p. 146).

Selecting the Sound for a Part

If you don't like the patch that is assigned to a part, it's easy to switch the patch.

1. **Select the part whose sound you want to switch.**

2. **Press [F1 (Patch List)].**
   The Patch List screen will appear.

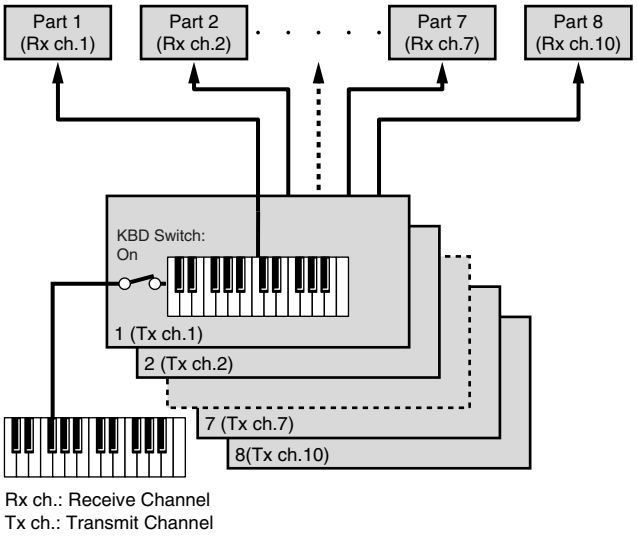
cf.

For details on using the Patch List screen, refer to **"Selecting Patches from the List"** (p. 49).

Combining and Playing Sounds Together (Layer)

In live mode you can play the sounds of all parts whose Keyboard Switch is on. Combining the parts will produce, thicker, fatter sounds.

You can create layers in the Live Play (Layer/Split) screen.



1. Press [LIVE] to access the Live Play (Layer/Split) Screen.

2. Use [CURSOR] to move the cursor to "KBD," and press [INC] to turn on the keyboard switch for the parts that you want to hear.

If you press [DEC], the keyboard switch will turn off. The displayed keyboard shows the key range that will sound.

When you play the keyboard, you'll hear the parts whose keyboard switch is on.

3. Repeat steps 2. to turn the Keyboard Switch on for all parts you want to play.

MEMO

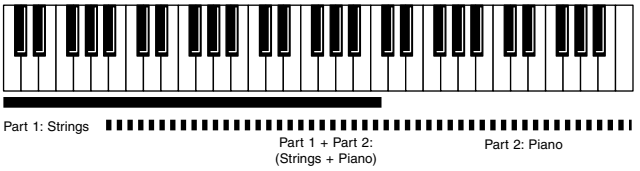
The eight sliders in the Live Play (Layer/Split) screen correspond to the levels of the eight internal parts. You can control these by using the eight sliders on the Fantom-G's panel.

Playing Different Sounds in Different Areas of the Keyboard (Split)

In Live mode you can play (split) as many as 56 different patches across the keyboard.

Part group	Number of parts
Internal	8
Expansion board 1	Maximum 16 * *Depends on the expansion board*
Expansion board 2	Maximum 16 * *Depends on the expansion board*
External MIDI output	16

For instance, you can play strings in the lower range, piano in the upper range, and both sounds in the middle range.



MEMO

A split performance is one application of a layer. Changing the key range of each part in the layer results in a split.

1. Press [LIVE] to access the Live Play (Layer/Split) Screen.

2. Use [CURSOR] to move the cursor to "KBD," and press [INC] to turn on the keyboard switch for the parts you want to hear.

3. Move the cursor to "Lower" and set the lower limit of the keys that will play the part. Move the cursor to "Upper" and set the upper limit of the keys that will play the part.

To specify the key range, you can turn the VALUE dial or use [INC] [DEC]. The displayed keyboard indicates the range of keys for which each part will sound.

Value: Key Range Lower: C-1–UPPER
Key Range Upper: LOWER–G9

TIP

By specifying sections for different parts so that they overlap each other, you can combine two or more parts only in a specific section.

Using the Live Set Part Mixer Screen

The Live Set Part Mixer screen lets you adjust the level and effect settings of each part just as if you were using a mixer.
Here's how to access the Live Set Part Mixer screen.

1. Press [LIVE].

You will enter Live Mode, and the Live Play (Layer/Split) Screen appears.

2. Press [F7 (Mixer)].

The Live Set Part Mixer screen will appear.

F-key operations in the Live Set Part Mixer screen

F-key	Explanation	Page
F1 Patch List	Selects the patch sound assigned to each part.	p. 61
F4 Exit	Returns to the previous screen.	–
F5 LiveSet List	Selects a live set.	p. 60
F6	Switches between the Mixer 1/2 screens.	–
F7 F8	Selects the eight parts that will be controlled by the sliders. A frame is shown around the currently selected parts. By moving this frame outside the screen, you can switch the part group that is displayed.	–

MEMO

In this screen, the name of the parameter selected by the cursor is shown in the " " area at the lower left of the screen. Here you can also check the value of the current setting.

MEMO

By pressing the [F7 ◀] or [F8 ▶] key several times, you can move the screen to the left or right, switching the displayed part group.

Part Group	Explanation
Audio Track	Audio tracks of the song
Internal	Internal (internal sound generator)
EXP 1	Expansion board 1
EXP 2	Expansion board 2
External	External MIDI output

MEMO

You can switch the part group by holding down [SHIFT] and pressing ◀ or ▶ .

Editing the Part Settings

In the Live Set Part Mixer screen you can set the following parameters for each part.

MEMO

Use [F6] to switch between Mixer 1/2.

1. Use [CURSOR] to move the cursor to the parameter you want to edit.

2. Turn the VALUE dial or use [INC] [DEC] to set the desired value.

Mixer1/2	Parameter	Page
Internal		
Mixer1	Mute Switch	p. 134
	Part Chorus Send Level	p. 136
	Part Reverb Send Level	p. 137
	Part Pan	p. 134
	Part Level	p. 134
Mixer2	Part Output Level	p. 136
	Part Output Assign	p. 136
	Recording Switch	*1
	Keyboard Switch	p. 135
	Arpeggio Part	p. 146
	Sample Pad Part	p. 146
	Rhythm Pad Part	p. 146
EXP 1, EXP 2		
Mixer1	Mute Switch	p. 134
	Part EFX1 Send Level	p. 137
	Part EFX2 Send Level	p. 137
	Part Pan	p. 134
	Part Level	p. 134
	Exp.1/2 Master Chorus Send Level	
	Exp.1/2 Master Reverb Send Level	
	Exp.1/2 Master Pan	
	Exp.1/2 Master Level	
Mixer2	Part Output Level	p. 136
	Part Output Assign	p. 136
	Keyboard Switch	p. 135
	Arpeggio Part	p. 146
	Rhythm Pad Part	p. 146
	Exp.1/2 Master Output Level	
	Exp.1/2 Master Output Assign	
	Exp.1/2 Master Recording Switch	
External		
Mixer1	External Pan	p. 135
	External Level	p. 135
Mixer2	Keyboard Switch	p. 135
	Arpeggio Part	p. 146
	Rhythm Pad Part	p. 146
Audio Track		
Mixer1	Mute Switch	
	Part Chorus Send Level	
	Part Reverb Send Level	
	Part Pan	
	Part Level	
Mixer2	Part Output Assign	
	Recording Switch	*1

*1 *Parts whose Recording Switch is off will not be recorded to audio tracks of the sequencer. (Nor will they be sampled.) You can turn this off for a part that you want to hear, but not record as audio. Normally you will leave this turned on. Effects will not be applied to a part whose Recording Switch is off.*

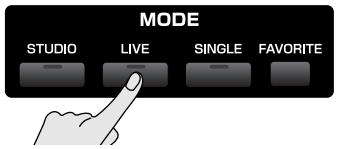
Using the Layer Edit Screen

In general, the Layer Edit screen operates in the same way as the Live Play (Layer/Split) screen, but you can use the F3–F6 keys to instantly switch between the displayed part groups.

F-key	Explanation
F3 Internal	Internal (internal sound generator)
F4 EXP 1	Expansion board 1
F5 EXP 2	Expansion board 2
F6 External	External MIDI output

Here's how to access the Layer Edit screen.

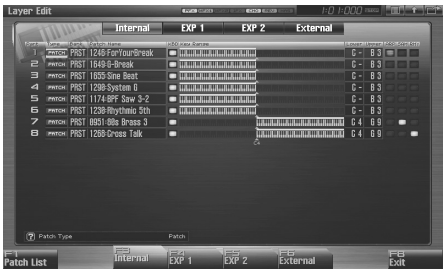
1. Press [LIVE].



You will enter Live Mode, and the Live Play (Layer/Split) Screen appears.

2. Press [F8 (Layer Edit)].

The Layer Edit screen will appear.



Selecting the Sound for a Part

If you don't like the patch that is assigned to a part, it's easy to switch the patch.

1. Select the part whose sound you want to switch.

2. Press [F1 (Patch List)].

The Patch List screen will appear.

cf.

For details on using the Patch List screen, refer to **"Selecting Patches from the List"** (p. 49).

Editing the Part Settings

In the Layer Edit screen you can set the following parameters for each part.

Parameter	Shown in the screen as
Keyboard Switch (p. 135)	KBD
Patch Type (p. 134)	Type
Patch Bank (p. 134)	Bank
Patch Number (p. 134)	Patch Name
Keyboard Range Lower (p. 135)	Lower
Keyboard Range Upper (p. 135)	Upper
Arpeggio Part (p. 146)	ARP
Sample Pad Part / Rhythm Pad Part (p. 146)	SAM/RHY

1. Press [LIVE], and then press [F8 (Layer Edit)] to access the Layer Edit screen.

2. Use [CURSOR] to move the cursor to the parameter you want to edit.

3. Turn the VALUE dial or use [INC] [DEC] to set the desired value.

Performing with the Arpeggio

cf.

For details on using the Arpeggio, refer to **"Playing Arpeggios"** (p. 78).

Performing with the Realtime Controllers and D Beam Controller

cf.

For details on the setting, refer to **"Selecting the Parameter Controlled by the Realtime Controllers or D Beam Controller (Control Setting)"** (p. 142).

Setting Effects

cf.

For details regarding effect settings, refer to the pages shown below.

- **"Making Effect Settings"** (p. 151)
- **"Applying Effects in Live Mode"** (p. 151)

Adjusting the Master Level

cf.

For details, refer to **"How Do I Adjust the Volume?"** (p. 298)

Making Detailed Settings for a Live Set

cf.

Refer to **"Creating a Live/Studio Set"** (p. 132).

Playing in Studio Mode

Studio mode is what you'll use when recording a song. It provides sixteen parts, and allows you to assign a patch (or rhythm set or sample set) to each of these parts, thus allowing you to use sixteen different sounds simultaneously.

You can use the mixer screen to adjust the level and pan for each of the sixteen parts.

MEMO

In addition to sixteen parts of the internal sound generator, Studio mode allows you to simultaneously use parts of an expansion board (the number of parts depends on the expansion board) and external MIDI output parts.

	Number of parts
Internal	16
Expansion board 1	Maximum 16 * *Depends on the expansion board*
Expansion board 2	Maximum 16 * *Depends on the expansion board*
External MIDI output	16

A Studio set contains a patch (rhythm set, sample set) assignment for each part, as well as settings such as volume and pan for each part. When you play the keyboard, you'll hear the current part.

NOTE

Every part whose keyboard switch (p. 69) is on will sound. We recommend that you leave the keyboard switch turned off. If it is on, parts other than the current part will also sound, and this is probably not what you want when you're creating a song.

Recording a song

cf.

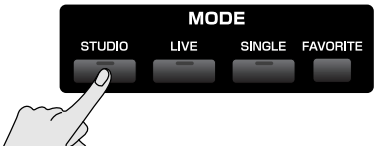
For details on recording a song, refer to **"Recording MIDI"** (p. 217).

Displaying Studio Play Screen

The Studio Play screen allows you to adjust the level and effect settings of each part just as if you were using a mixer.

To access the Studio Play Screen, use the following procedure.

1. Press [STUDIO].



You will enter Studio Mode, and the Studio Play Screen appears.

F-key operations in the Studio Play screen

F-key	Explanation	Page
F1 Patch List	Selects the patch assigned to each part.	p. 68
F2 Utility	Makes settings common to the entire studio set.	p. 132
F3 Part View	Makes detailed settings for each part of the studio set.	p. 133
F4 Control	Selects the parameters that will be controlled by the realtime controllers and the D Beam controller.	p. 70
F5 Studio List	Selects a studio set.	p. 68
F6 🗗	Switches between the Mixer1/2 screens.	–
F7 ◀	Selects the eight parts that will be controlled by the slider. A frame is shown around the currently selected parts. By moving this frame outside the screen, you can switch the part group that is displayed.	–
F8 ▶		

MEMO

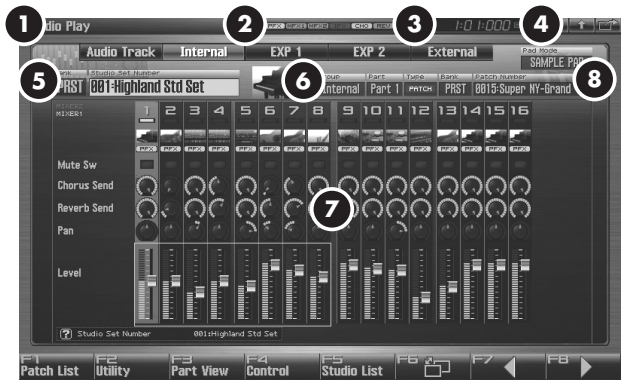
In the Studio Play screen, pressing the [F6 🗗] a number of times will display the controller status (the functions assigned to sliders 1–8, knobs 1–4, switches S1/S2, and the D Beam controller, and the Bend Mode of the pitch bend lever).

Pressing [F6 🗗] cycles you through the screens as follows.

MIXER 1→MIXER 2→Controller display→MIXER 1...

* *The controller display will not appear if audio tracks are shown in the mixer.*

Functions in the Studio Play Screen



Number	Explanation	Page
❶	Indicates the current sound generator mode.	p. 39
❷	Indicates the on/off status of each effect. PFX Patch multi-effect MFX1 Multi-effect 1 MFX2 Multi-effect 2 IFX Input effect CHO Chorus REV Reverb MAS Mastering effect	p. 150
❸	Indicates the current location of the song, and the status of the sequencer.	p. 205
❹	The Menu/Exit/Shortcut buttons for the USB mouse.	p. 26
❺	Indicates/selects the bank, number, and name of the currently selected studio set.	p. 67
❻	Indicates/selects the part group, part number, bank, number, and name of the patch, rhythm set, or sample set for the current part.	p. 68
❼	Accesses the mixer screen.	p. 69
❽	Indicates the pad mode.	p. 188

Switching the Displayed Part Group

In addition to the internal (internal sound generator) parts, the Studio Play screen allows you to switch the view to see audio tracks, expansion board parts, or external MIDI output parts.

1. Press [STUDIO] to access the Studio Play screen.

2. Press the [F7 ◀] or [F8 ▶] key several times to move the screen to left or right, selecting the part group that is displayed.

Part group	Explanation
Audio Track	Audio tracks in the song
Internal	Internal (internal sound generator)
EXP 1	Expansion board 1
EXP 2	Expansion board 2
External	External MIDI output

MEMO

You can switch the part group by holding down [SHIFT] and pressing ◀ or ▶ .

Selecting a Studio Set

The Fantom-G has two studio set banks, including the User bank and Preset banks.

USER

This is the bank inside the Fantom-G which can be rewritten. Studio Sets you create can be stored in this bank. You can store 128 studio sets.

PRST (Preset)

This is the bank inside the Fantom-G which cannot be rewritten. However you may modify the settings of the currently selected studio set, and then store the modified studio set in User memory. The Fantom-G contains 8 preset studio sets.

1. Press [STUDIO].

2. Press [CURSOR] to move the cursor to the studio set bank.

3. Turn the VALUE dial, or press [INC] [DEC] to select a studio set bank.

USER: User

PRST: Preset

4. Press [CURSOR] to move the cursor to the studio set number.

5. Turn the VALUE dial or press [INC] [DEC] to select the studio set number.

You can display a list of studio sets and select a studio set from that list.

1. Press [STUDIO].

2. Press [F5 (Studio List)].
The Studio Set List screen appears.

3. Turn the VALUE dial or press or to select the studio set.

4. Press [F8 (Select)] to close the Studio Set List screen.

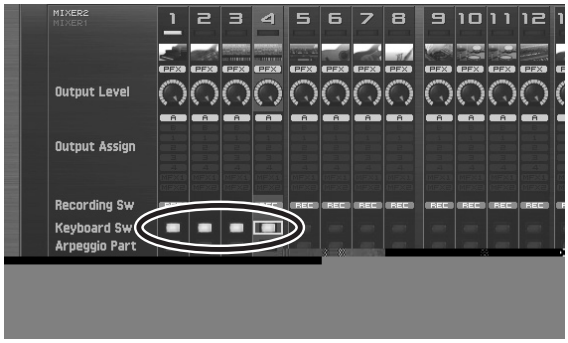
Selecting the Part that You Want to Sound (Keyboard Switch)

Here's how to select the part that you want to play from the keyboard. Each part has a setting called the "keyboard switch" that determines whether that part will sound in response to the keyboard. If this is turned off for all parts, the current part will sound.

TIP

When you're recording a song, we recommend that you turn the keyboard switch off for all parts. If this is turned on for any parts, the keyboard will not play the current part, which would not be convenient for song production.

1. **Press [STUDIO].**
2. **Press [F6 ⊐].**
3. **Use [CURSOR] to move the cursor to the "Keyboard Sw" field, and press [INC] to turn the keyboard switch on.**
   When you play the keyboard, you'll hear the parts whose keyboard switch is on. If the keyboard switch is turned off for all parts, you'll hear the current part.



MEMO

You can turn on the keyboard switch for multiple parts.

Editing the Part Settings

In the Studio Play screen you can set the following parameters for each part.

1. **Press [STUDIO].**
2. **Use [CURSOR] to move the cursor to the parameter you want to edit.**
3. **Turn the VALUE dial or use [INC] [DEC] to set the desired value.**

MEMO

In this screen, the name of the parameter selected by the cursor is shown in the " ? " area at the lower left of the screen. The current value is also shown here.

MEMO

For details on how to switch between part groups, refer to **"Switching the Displayed Part Group"** (p. 67).

MEMO

Use [F6 ⊐] to switch between Mixer 1/2.

Mixer1/2	Parameter	Page
Internal		
Mixer1	Mute Switch	p. 134
	Part Chorus Send Level	p. 136
	Part Reverb Send Level	p. 137
	Part Pan	p. 134
	Part Level	p. 134
Mixer2	Part Output Level	p. 136
	Part Output Assign	p. 136
	Recording Switch	*1
	Keyboard Switch	p. 135
	Arpeggio Part	p. 146
	Sample Pad Part	p. 146
	Rhythm Pad Part	p. 146
EXP 1, EXP 2		
Mixer1	Mute Switch	p. 134
	Part EFX1 Send Level	p. 137
	Part EFX2 Send Level	p. 137
	Part Pan	p. 134
	Part Level	p. 134
	Exp.1/2 Master Chorus Send Level	
	Exp.1/2 Master Reverb Send Level	
	Exp.1/2 Master Pan	
	Exp.1/2 Master Level	
Mixer2	Part Output Level	p. 136
	Part Output Assign	p. 136
	Keyboard Switch	p. 135
	Arpeggio Part	p. 146
	Rhythm Pad Part	p. 146
	Exp.1/2 Master Output Level	
	Exp.1/2 Master Output Assign	
	Exp.1/2 Master Recording Switch	
External		
Mixer1	External Pan	p. 135
	External Level	p. 135
Mixer2	Keyboard Switch	p. 135
	Arpeggio Part	p. 146
	Rhythm Pad Part	p. 146
Audio Track		
Mixer1	Mute Switch	
	Part Chorus Send Level	
	Part Reverb Send Level	
	Part Pan	
	Part Level	
Mixer2	Part Output Assign	
	Recording Switch	*1

*1 *Parts whose Recording Switch is off will not be recorded to audio tracks of the sequencer. (Nor will they be sampled.) You can turn this off for a part that you want to hear, but not record as audio. Normally you will leave this turned on. Effects will not be applied to a part whose Recording Switch is off.*

Performing with the Arpeggio

cf.

For details on using the Arpeggio, refer to **"Playing Arpeggios"** (p. 78).

Performing with the Realtime Controllers and D Beam Controller

cf.

For details on the setting, refer to **"Selecting the Parameter Controlled by the Realtime Controllers or D Beam Controller (Control Setting)"** (p. 142).

Setting Effects

cf.

For details regarding effect settings, refer to the pages shown below.

- **"Making Effect Settings"** (p. 151)
- **"Applying Effects in Studio Mode"** (p. 154)

Adjusting the Master Level

cf.

For details, refer to **"How Do I Adjust the Volume?"** (p. 298).

Making Detailed Settings for a Studio Set

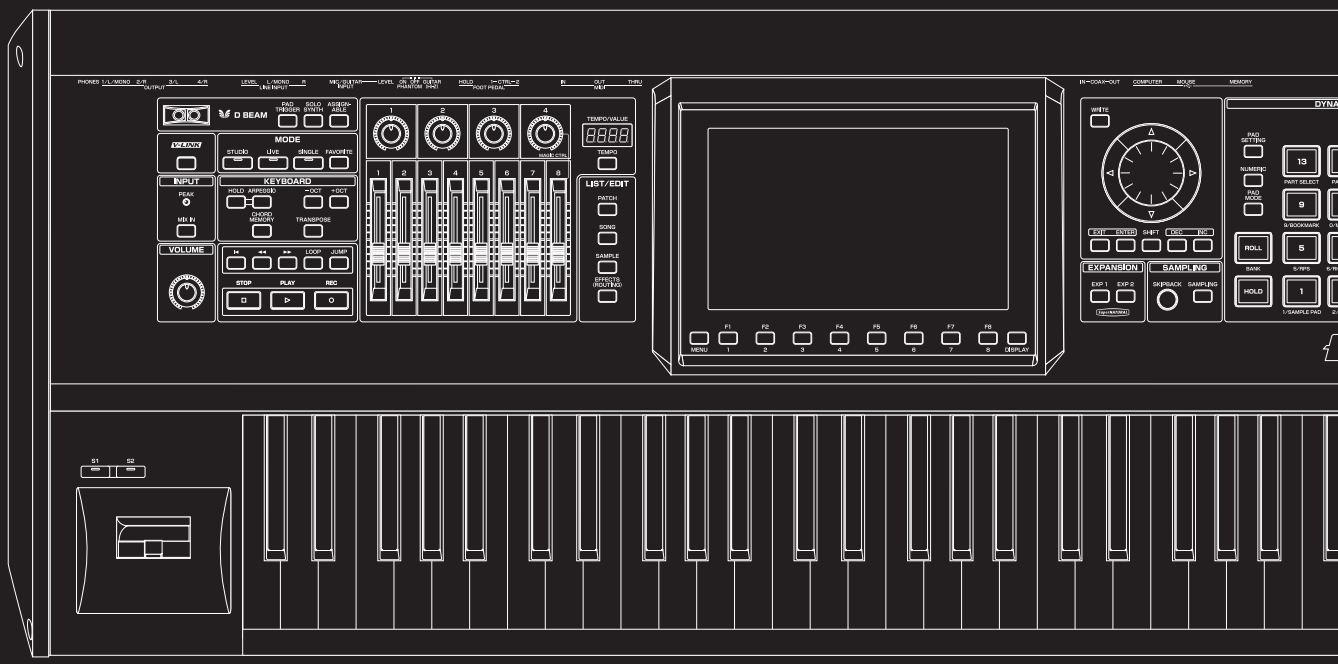
cf.

Refer to **"Creating a Live/Studio Set"** (p. 132).

03: Sound Generator, Section 2 (Controlling Sounds)

This chapter explains the realtime controllers, the arpeggiator, and the chord memory function.

- Real Time Controller ..... p. 72
- Arpeggios ..... p. 78
- Chord Memory ..... p. 81



Modifying the Sound in Real Time

You can use the D Beam controller, realtime controllers, assignable switches or a pedal to modify the sound while you perform.

MEMO

Here we will explain the procedures and settings for using these functions in Single mode. The operations are the same in Live Mode/Studio Mode.

Waving Your Hand Over the D Beam to Modify the Sound (D Beam Controller)

The **D Beam controller** can be used simply by waving your hand over it. It can be used to apply various effects, depending on the function that is assigned to it. You can also create effects in which the sound changes instantaneously, in a way that would not be possible by operating a knob or the bender lever. On the Fantom-G, the D Beam controller can be used not only to modify the sounds assigned to the Keyboard part or Pad part, but also to control the pitch of a monophonic (solo) synthesizer sound.

1. Access the Single Play screen (p. 46).

The following area of the screen is the D Beam controller display area.

2. Press either the D BEAM [PAD TRIGGER], [SOLO SYNTH], or [ASSIGNABLE] button to turn on the D Beam controller.

- **PAD TRIGGER button:** Use the D Beam controller to play sounds instead of striking the pads.
- **SOLO SYNTH button:** Lets you use the D Beam as a monophonic synthesizer.
- **ASSIGNABLE button:** Operates the function assigned to the D Beam controller.

3. While you play the keyboard or pads to produce sound, place your hand above the D Beam controller and move it slowly up and down.

An effect will be applied to the sound, depending on the function that is assigned to the D Beam controller.

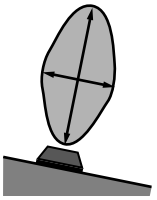
4. To turn off the D Beam controller, once again press the button you pressed in step 2 so the indicator goes out.

MEMO

If live mode is selected, the D Beam controller on/off setting is saved for each live set as part of the live set settings. Similarly in studio mode, this setting is saved as part of the studio set.

The usable range of the D Beam controller

The following diagram shows the usable range of the D Beam controller. Waving your hand outside this range will produce no effect.



The response of the D Beam Controller can also be checked in the "D Beam" area of the display. This is displayed graphically as a bar that lengthens as you move your hand closer, and shortens as you move your hand away.

NOTE

The usable range of the D Beam controller will become extremely small when used under strong direct sunlight. Please be aware of this when using the D Beam controller outside.

NOTE

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. Increase this value will raise the sensitivity (p. 291).

Making Settings for the D Beam Controller

Pad Trigger (Pad-related settings)

You can use the D Beam controller to control the pads as an alternative to striking the pads themselves.

1. **Hold down [SHIFT] and press D BEAM [PAD TRIGGER].**
2. **Move the cursor to the parameter that you want to set, and turn the VALUE dial or press [INC] [DEC] to make the setting.**
3. **Press [EXIT] to close the window.**

Beam Trigger Pad

Specifies the pad number affected by the D Beam.
Value: Pad 1–Pad 16

Beam Trigger Velo (Beam Trigger Velocity)

Specifies the strength of the pad sound played by the D Beam controller.
Value: 1–127

Beam Trigger Mode

This specifies how the D Beam will behave when it is obstructed. If this is set to MOMENTARY, the parameter will be on only while the D Beam is obstructed, and will turn off when you stop obstructing it. If this is set to LATCH, the parameter will alternately be switched on/off each time you obstruct the D Beam.
Value: MOMENTARY, LATCH

TIP

If Live mode is selected, PAD trigger settings are saved independently for each live set as part of the live set settings. This lets you create live sets that make effective use of controller settings. Similarly in studio mode, this setting is saved as part of the studio set.

TIP

If Single mode is selected, this is saved as part of the system settings. If you want to save the settings, press [F7 (Sys Write)].

Solo Synth

On the Fantom-G you can play a monophonic synthesizer whose pitch is controlled by the D Beam.

1. **Hold down [SHIFT] and press D BEAM [SOLO SYNTH].**
2. **Move the cursor to the parameter that you want to set, and turn the VALUE dial or press [INC] [DEC] to make the setting.**
3. **If you want to save the settings, press [F7 (Sys Write)].**
   Press [EXIT] to close the Solo Synth window.

   TIP

   Setting for the Solo Synth are saved for system settings.

   MEMO

   In this screen, the name of the parameter selected by the cursor is shown in the " " area in the lower left of the screen. The current value of the setting is also shown here.

OSC 1/2 Waveform

Select the waveform. **SAW** is a sawtooth wave, and **SQR** is a square wave.
Value: SAW, SQR

OSC 1/2 Pulse Width

Specifies the pulse width of the waveform. By cyclically modifying the pulse width you can create subtle changes in the tone.

* *The Pulse Width is activated when "SQR" is selected with OSC1/2 waveform.*

Value: 0–127

LFO Osc 1 Pulse Width Depth

Specifies the depth to which the LFO will modulate the pulse width of the OSC1 waveform.

* *The Pulse Width is activated when "SQR" is selected with waveform.*

Value: -63– +63

LFO Osc 2 Pulse Width Depth

Specifies the depth to which the LFO will modulate the pulse width of the OSC2 waveform.

* *The Pulse Width is activated when "SQR" is selected with waveform.*

Value: -63– +63

LFO Osc 1 Pitch Depth

Specifies the depth to which the LFO will modulate the OSC1 pitch.
Value: -63– +63

LFO Osc 2 Pitch Depth

Specifies the depth to which the LFO will modulate the OSC2 pitch.
Value: -63– +63

OSC 1/2 Coarse Tune

Adjusts the pitch of the tone's sound up or down in semitone steps (+/-4 octaves).
Value: -48– +48

OSC 1/2 Fine Tune

Adjusts the pitch of the tone's sound up or down in 1-cent steps (+/-50 cents).
Value: -50– +50

OSC Sync Switch

Turning this switch on produces a complex sound with many harmonics. This is effective when the OSC1 pitch is higher than the OSC2 pitch.
Value: ON, OFF

OSC2 Level

Adjust the OSC2 level.
Value: 0–127

Filter Type

Selects the type of filter. A filter modifies the brightness or thickness of the sound by cutting a specific frequency range.

Value

OFF:	No filter is used.
LPF:	Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency (Cutoff Freq).
BPF:	Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency, and cuts the rest.
HPF:	High Pass Filter. This cuts the frequencies in the region below the cutoff frequency.
PKG:	Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency.

Cutoff

Selects the frequency at which the filter begins to have an effect on the waveform's frequency components.
Value: 0–127

Resonance

Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound.
Value: 0–127

LFO Rate

Adjusts the modulation rate, or speed, of the LFO.
Value: 0–127

Range (Solo synth range)

Specifies the range in which the pitch of the solo synth will vary.
Value: 2 OCT, 4 OCT, 8 OCT

Chorus Send Level

Sets the level of the signal sent to chorus.
Value: 0–127

Reverb Send Level

Sets the level of the signal sent to reverb.
Value: 0–127

Level

Sets the volume.
Value: 0–127

Assignable

You can assign various functions to the D Beam controller and apply a wide range of effects to the sound in real time.

1. **Hold down [SHIFT] and press D BEAM [ASSIGNABLE].**
2. **Move the cursor to the parameter that you want to set, and turn the VALUE dial or press [INC] [DEC] to make the setting.**
3. **Press [EXIT] to close the window.**

Type (Assignable Type)

Specifies the function controlled by the D Beam controller.

Value

OFF: Off

CC01–31, CC32(OFF), 33–95: Control Change

AFTERTOUCH: Aftertouch

BEND UP: Controls the pitch as specified by the "Pitch Bend Range Up" setting (p. 96).

BEND DOWN: Controls the pitch as specified by the "Pitch Bend Range Down" setting (p. 96).

ARPEGGIO ACCENT: Arpeggio accent rate

ARPEGGIO SHUFFLE: Arpeggio shuffle rate

ARPEGGIO OCT UP: The range in which the arpeggio is sounded will rise in steps of an octave.

ARPEGGIO OCT DOWN: The range in which the arpeggio is sounded will lower in steps of an octave.

Range Min

Specify the lower limit of the range of the D Beam controller.

Value: 0–127

Range Max

Specify the upper limit of the range of the D Beam controller. By setting Range Max below Range Min you can invert the range of change.

Value: 0–127

TIP

If Live mode is selected, The settings for the ASSIGNABLE are saved independently for each live set as part of the live set settings. This lets you create live sets that make effective use of controller settings. Similarly in studio mode, this setting is saved as part of the studio set.

TIP

If Single mode is selected, this is saved as part of the system settings. If you want to save the settings, press [F7 (Sys Write)].

Using Knobs, Sliders or S1/S2 Buttons to Modify the Sound (Realtime Controller)

You can use the knobs, sliders and [S1] [S2] buttons to modify the sound in real time.

1. **Access the Single Play screen (p. 46).**
   The "Realtime Control" area shows the function that is assigned to each realtime controller knob, slider and [S1] [S2] button.

2. **While playing the keyboard to produce sound, operate the knobs, sliders or [S1] [S2] buttons.**
   The sound will change according to the function assigned to each knob, slider or button.

Changing Realtime Controller Settings

Knob 1–4 Settings

1. **Hold down [SHIFT] and rotate one of the knobs.**
   The Knob screen appears.
2. **Move the cursor to the parameter that you want to set, and turn the VALUE dial or press [INC] [DEC] to set it.**
3. **If you want to save your settings, press [F7 (Sys Write)]. Press [Exit] to return to the previous screen.**

   TIP

   Realtime controller settings are saved independently for each live set as part of the live settings. This lets you create live sets that make effective use of controller settings. Similarly in studio mode, this setting is saved as part of the studio set.

Knob 1–4 Assign

Specify the functions that will be controlled by the knobs.

Value

OFF: Off

CC01–31, CC32(OFF), 33–95: Control Change

AFTERTOUCH: Aftertouch

PITCH BEND: Pitch Bend

ARPEGGIO ACCENT: Arpeggio accent rate

ARPEGGIO SHUFFLE: Arpeggio shuffle rate

ARPEGGIO OCT UP: The range in which the arpeggio is sounded will rise in steps of an octave.

ARPEGGIO OCT DOWN: The range in which the arpeggio is sounded will lower in steps of an octave.

MASTER LEVEL: Master Level (p. 297)

DIGITAL/USB INPUT LEVEL: Digital/USB Input Level (p. 258)

* *If the system setting **"Knob Assign Source"** (p. 293) is set to "System," the system settings will be used. If it is set to "TEMP," the settings of the live set or studio set will be used.*

Slider 1–8 Settings

1. **Hold down [SHIFT] and move one of the sliders.**
   The Slider screen appears.
2. **Move the cursor to the parameter that you want to set, and turn the VALUE dial or press [INC] [DEC] to set it.**
3. **If you want to save your settings, press [F7 (Sys Write)]. Press [Exit] to return to the previous screen.**

   TIP

   Realtime controller settings are saved independently for each live set as part of the live settings. This lets you create live sets that make effective use of controller settings. Similarly in studio mode, this setting is saved as part of the studio set.

Slider 1–8 Assign

Specify the functions that will be controlled by the sliders.

Value

OFF: Off

CC01–31, CC32(OFF), 33–95: Control Change

AFTERTOUCH: Aftertouch

PITCH BEND: Pitch Bend

ARPEGGIO ACCENT: Arpeggio accent rate

ARPEGGIO SHUFFLE: Arpeggio shuffle rate

ARPEGGIO OCT UP: The range in which the arpeggio is sounded will rise in steps of an octave.

ARPEGGIO OCT DOWN: The range in which the arpeggio is sounded will lower in steps of an octave.

* *If the system setting **"Slider Assign Source"** (p. 293) is set to "System," the system settings will be used. If it is set to "TEMP," the settings of the live set or studio set will be used.*

S1/S2 Switch Settings

1. **Hold down [SHIFT] and press [S1] [S2].**
   The Switch screen appears.

2. **Move the cursor to the parameter that you want to set, and turn the VALUE dial or press [INC] [DEC] to make the setting.**

3. **If you want to save your settings, press [F7 (Sys Write)]. Press [Exit] to return to the previous screen.**

TIP

Realtime controller settings are saved independently for each live set as part of the live settings. This lets you create live sets that make effective use of controller settings. Similarly in studio mode, this setting is saved as part of the studio set.

Switch S1/S2 Assign

Specify the functions that will be controlled by the [S1] [S2] switches.

Value OFF, CC01 - CC31, CC32 (OFF), CC33 - CC95, AFTERTOUCH, MONO/POLY, PFX SWITCH, MFX SWITCH, RESERVE, CHORUS SWITCH, REVERB SWITCH, MASTERING SWITCH, MASTER KEY UP, MASTER KEY DOWN, SCALE TUNE SWITCH

Switch 1/2 Assign Mode

Specify the functions that will be controlled by the [S1] [S2] switches.

Value

LATCH: The on/off status will alternate each time you press [S1] [S2].

MOMENTARY: The status will be on only while you hold down [S1] [S2].

TIP

If Single mode is selected, assignable switches are available when the keyboard part is selected.

Using a Pedal to Modify the Sound (Control Pedal)

You can modify the sound by pressing a pedal that is connected to the rear panel PEDAL CONTROL 1, 2 jacks.
Pedal such as expression pedals (DP-8; available separately), pedal switches (DP series; available separately), or foot switches (BOSS FS-U; available separately) can be connected to the Fantom-G.

1. **Access the Single Play screen (p. 46).**

2. **While playing the keyboard to produce sound, operate a pedal.**
   The sound will change according to the function that is assigned to the control pedal.

Making Control Pedal Settings

1. **Press [MENU].**

2. **Turn the VALUE dial or use [CURSOR] to select "System," and then press [ENTER].**
   The System Setup screen appears.

3. **Press [F1 (Up)] or [F2 (Down)] to select "Pedal/D Beam."**

4. **Turn the VALUE dial or press [INC] [DEC] to make the setting.**

5. **If you want to save your settings, press [F7 (Sys Write)]. Press [Exit] to return to the Single Play screen.**

cf.

See **"Pedal/D Beam"** (p. 291) for each parameter's functions.

Playing Arpeggios

About Arpeggio

The Fantom-G's Arpeggio function lets you produce arpeggios automatically; simply hold down some keys, and a corresponding arpeggio will be played automatically.

Playing Arpeggios

MEMO

Use **"Arpeggio Part Number"** (p. 146) to specify the parts that will use the Arpeggio function. The Chord Memory function (p. 81) will also apply to the parts selected by the **Arpeggio Part** setting.

MEMO

If you want to play arpeggios in Live mode or Studio mode, you'll also need to check the **"Arpeggio"** (p. 146) parameter of the live set or studio set.

MEMO

In Live mode or Studio mode, if the keyboard switch is turned off for all part groups, the current part will be the arpeggio part.

Turning Arpeggio On and Off

1. **Press [ARPEGGIO] to turn it on.**
   The button will light.
2. **Play a chord on the keyboard.**
   The Fantom-G will play an arpeggio, according to the notes forming the chord you have just voiced.
3. **To finish playing arpeggios, press [ARPEGGIO] again to turn it off.**

cf.

For details regarding each parameter, refer to **"Arpeggio Settings"** (p. 78).

Using in Combination with the Chord Memory Function

When performing with the Arpeggio, you can also use it along with the Chord Memory function (p. 81). After first storing complex Chord Forms in memory, you can then call them up when Arpeggio function is on, and you can easily play complex arpeggio sounds just by pressing a single key.

Determining the Tempo for Arpeggio Performances

This sets the arpeggio/rhythm tempo.

1. **Press [TEMPO].**
   The current tempo value appears in the display.
2. **Press VALUE dial or [INC], [DEC] to set the tempo value (5.00–300.00), or set the value by tapping [F6 (Tap Tempo)] a number of times with the same rhythm (Tap Tempo).**
   By holding down [SHIFT] and turning the VALUE dial you can adjust the value below the decimal point.

* *If you press [F7 (Click)] to turn on, the click will sound.*

3. **When you have made the setting, press [F8 (Close)].**

Holding an Arpeggio

By using the following procedure, you can produce arpeggios even without continuing to press the keyboard.

1. **Press [HOLD].**
   The indicator will light.
2. **Play a chord on the keyboard.**
3. **If you play a different chord or notes while the arpeggio is being held, the arpeggio will change accordingly.**
4. **To cancel Arpeggio Hold, press [HOLD] once again.**

When Using a Hold Pedal

If you play an arpeggio while pressing the hold pedal, the arpeggio will continue to be played even if you release the chord.

1. **Connect an optional pedal switch (DP series etc.) to the HOLD PEDAL jack.**
2. **Press [ARPEGGIO] to turn on the arpeggio.**
3. **Play a chord while pressing the hold pedal.**
4. **If you play a different chord or notes while the arpeggio is being held, the arpeggio will change accordingly.**

Arpeggio Settings

1. **Hold down [SHIFT] and press [ARPEGGIO].**
2. **Press [CURSOR] to move the cursor to each parameter, and either turn the VALUE dial or press [INC] or [DEC] to make the setting.**
3. **When you have made the setting, press [EXIT].**

Style (Arpeggio Style)

Specifies the basic way in which the arpeggio will be played.

cf.

You can create your own original Arpeggio Style by importing SMF or phrase data into an arpeggio user style. For details, refer to **"Importing SMF or Phrases to an Arpeggio Style"** (p. 79).

Variation (Arpeggio Variation)

The arpeggiator provides several variations (performance patterns) for each arpeggio style. This parameter selects the variation number. The number of variations will differ according to the arpeggio style.

Motif (Arpeggio Motif)

Sets the order in which notes of the chord will sound.

Value

UP: Notes you press will be sounded, beginning from low to high.

DOWN: Notes you press will be sounded, from high to low.

UP&DOWN: Notes you press will be sounded, from low to high, and then back down from high to low.

RANDOM: Notes you press will be sounded, in random order.

NOTE ORDER: Notes you press will be sounded in the order in which you pressed them. By pressing the notes in the appropriate order you can produce melody lines. Up to 128 notes will be remembered.

GLISSANDO: Each chromatic step between the highest and lowest notes you press will sound in succession, repeating upward and downward. Press only the lowest and the highest notes.

CHORD: All notes you press will sound simultaneously.

AUTO1: The timing at which keys will sound will be assigned automatically, giving priority to the lowest key that was pressed.

AUTO2: The timing at which keys will sound will be assigned automatically, giving priority to the highest key that was pressed.

PHRASE: Pressing a single key will sound the phrase based on the pitch of that key. If multiple keys are pressed, the last-pressed key will be valid.

Accent Rate (Arpeggio Accent Rate)

Modifies the strength of accents and the length of the notes to adjust the "groove" feel of the arpeggio. A setting of "100%" will produce the most pronounced groove feel.

Value: 0–100%

Shuffle Rate (Arpeggio Shuffle Rate)

This setting lets you modify the note timing to create shuffle rhythms.

With a setting of "50%" the notes will be spaced evenly. As the value is increased, the note timing will have more of a "dotted" (shuffle) feel.

Value: 0–100%

Shuffle Resolution (Arpeggio Shuffle Resolution)

Specify the timing resolution in terms of a note value. The note value can be specified as either an 16th note or a eighth note.

Value: ♪, ♩

Keyboard Velocity (Arpeggio Keyboard Velocity)

Specifies the loudness of the notes that you play.

If you want the velocity value of each note to depend on how strongly you play the keyboard, set this parameter to "REAL." If you want each note to have a fixed velocity regardless of how strongly you play the keyboard, set this parameter to the desired value (1–127).

Value: REAL, 1–127

Octave Range (Arpeggio Octave Range)

Sets the key range in octaves over which arpeggio will take place. If you want the arpeggio to sound using only the notes that you actually play, set this parameter to "0." To have the arpeggio sound using the notes you play and notes 1 octave higher, set this parameter to "+1." A setting of "-1" will make the arpeggio sound using the notes you play and notes 1 octave lower.

Value: -3– +3

Key Trigger (Arpeggio Key Trigger)

Turn this "ON" if you want the arpeggio to start at the moment that you press the key. If you want the arpeggio to start playing in synchronization with the sequencer, turn this "OFF."

Value: OFF, ON

Importing SMF or Phrases to an Arpeggio Style

You can create your own original Arpeggio Style by importing SMF or phrase data into an arpeggio user style.

MEMO

If you want to import SMF data, you must first copy the Standard MIDI File (SMF) from your computer to the Fantom-G as described in **"Copying a Standard MIDI File (SMF) from Your Computer to the Fantom-G"** (p. 212).

1. **Hold down [SHIFT] and press [ARPEGGIO].**
2. **Press [F1 (Import Style)].**
3. **Press [F2 (SMF List)] or [F3 (Phrase List)] to switch the list from which you want to import.**
4. **Turn the VALUE dial to select the SMF or phrase that you want to import.**

   MEMO

   By pressing [F7 (Preview)] you can audition the selected SMF or phrase.

   MEMO

   If you decide not to import, press [F8 (Exit)].
5. **Press [F6 (Import)].**
6. **Assign a name to the Arpeggio Style that you want to import. After you've assigned a name, press [F8 (OK)].**

   cf.

   For details on how to enter a name, refer to **"Assigning a Name"** (p. 42).

7. **Select the desired Import Destination. Turn the VALUE dial to make your choice, and then press the [F8 (Write)] button.**
   A confirmation message will appear.

8. **Press [F7 (OK)] to execute.**
   The SMF or phrase will be imported into the arpeggio user style.

   MEMO

   Please note the following points regarding importing an arpeggio.

- Only SMF Format 0 is supported. If the data is incorrect, the screen will indicate **"Cannot Import SMF Format 1!"** or **"Illegal File!"**.
- Only the note data will be imported from the original data into the arpeggio.
- Up to 500 events (with a note on/off counting as one event) can be imported. If there are more than 500 events, the screen will indicate **"Too Many Data!"**.

Saving the Arpeggio You Have Created (Write)

The Arpeggios you create are temporary; they are deleted as soon as you turn off the power or select some other Arpeggio. You can store 128 arpeggios in the User memory.

1. **Confirm that the current Arpeggio is the one you want to save.**

2. **Press [F7 (Write)].**
   The Arpeggio name entry screen will appear (p. 42).

3. **When you have finished entering the name, press [F8 (OK)].**
   A screen in which you can select the destination for the write will appear.

4. **Turn the VALUE dial or use [INC] [DEC] to select the write destination.**

5. **Press [F8 (Write)].**
   A message will ask you for confirmation.

6. **To write the data, press [F7 (OK)].**
   Never switch off the Fantom-G while data is being saved.
   To cancel, press [F8 (EXIT)].

Using the Chord Memory Function (Chord Memory)

About the Chord Memory Function

Chord Memory is a function that allows you to play chords based on pre-programmed **Chord Forms**, just by pressing a single key on the keyboard. The Fantom-G can store 128 user chord forms.

NOTE

When you use the Chord Memory function with a tone for which the Mono/Poly Parameters (p. 105) is Mono, only one sound in the chord is played. When using the Chord Memory function to turn Poly the Mono/Poly Parameters.

Using in Combination with the Arpeggio Function

When performing with the Chord Form function, you can also use it along with the Arpeggio function (p. 78). After first storing complex Chord Forms in memory, you can then call them up when Arpeggio is on, and you can easily create complex arpeggio sounds just by pressing a single key.

Performing with the Chord Memory Function

MEMO

Use **"Arpeggio Part Number"** (p. 146) to specify the parts that will use the Chord Memory function. The Arpeggio function (p. 78) will also apply to the pats selected by the **Arpeggio Part** setting.

Turning Chord Memory Function On and Off

1. **Press [CHORD MEMORY] to turn it on.**
   The button will light.

2. **Play the keyboard.**
   A chord will sound according to the currently selected chord form.

   MEMO

   When you press the C4 key (Middle C), the chord is played using the exact chord structure recorded in the Chord Form. This is referenced to the C4 key; parallel chords are played by pressing other keys.

3. **To finish the chord Memory Function, press [CHORD MEMORY] again to turn it off.**

Selecting Chord Forms

Changing the chord form will change the notes in the chord.

1. **Hold down [SHIFT] and press [CHORD MEMORY].**
   The following screen appears.

2. **Either turn the VALUE dial or use [INC] [DEC] to select a Chord Form number.**
   The notes of the chord will be displayed.

3. **When you have finished selecting a Chord Form, press [Exit].**

Sounding a Chord in the Order of Its Notes (Rolled Chord)

This causes the notes within a chord to be sounded consecutively, rather than simultaneously. Since the playback speed will change according to the force with which you play the keyboard, you can vary your playing dynamics to create a realistic simulation of playing a guitar.

1. **Hold down [SHIFT] and press [CHORD MEMORY].**
   The Chord Memory screen appears.
2. **Press [F1 (Rolled Chord)] to turn on.**
   With this setting, the notes of the chord will be sounded consecutively when you play the keyboard.

Changing the order in which notes are sounded (Rolled Chord Type)

You can change the order in which the notes of a chord are sounded.

1. **Hold down [SHIFT] and press [CHORD MEMORY].**
   The Chord Memory screen appears.
2. **Use ▲ or ▼ to select "Rolled Chord Type."**
3. **Either turn the VALUE dial or use [INC] [DEC] to change a value.**

Value

UP: Notes will be sounded in order from bottom to top.

DOWN: Notes will be sounded in order from top to bottom.

ALTERNATE: The order in which the notes are sounded will change each time you play the keyboard.

L-DOWN: The lowest note will be sounded first, and then notes will be sounded in order from the top down.

* *If you press C E G B, the notes will be sounded as C B G E.*

U-UP: The highest note will be sounded first, and then notes will be sounded in order from the bottom up.

* *If you press C E G B, the notes will be sounded as B C E G.*

Creating Your Own Chord Forms

Not only can you use the prepared internal Chord Forms, which determine the constituent notes of chords played using the Chord Memory function, but you can also freely create and rewrite them as well.

1. **Hold down [SHIFT] and press [CHORD MEMORY].**
2. **Turn the VALUE dial to select a chord form.**
3. **Press [F6 (Chord Edit)].**
   The Chord Form Edit screen appears.
4. **Use the keyboard to input the chord that you want to play.**
   When you press a key, the note will be added in the screen.
   If you input a note by mistake, press [F5 (Del Note)].
   You can also erase a note you input by pressing the same key.
   You can press [F6 (Preview)] to hear the chord that you are inputting.
5. **If you want to save the chord form you created, proceed to step 3 of "Saving the Chord Forms You Have Created" (p. 82). If you don't want to save it, press [F8 (Exit)].**

Saving the Chord Forms You Have Created

The Chord Form you create are temporary; they are deleted as soon as you turn off the power or select some other Style. If you want to keep a Chord Form you have made, save it to the Fantom-G's user memory.

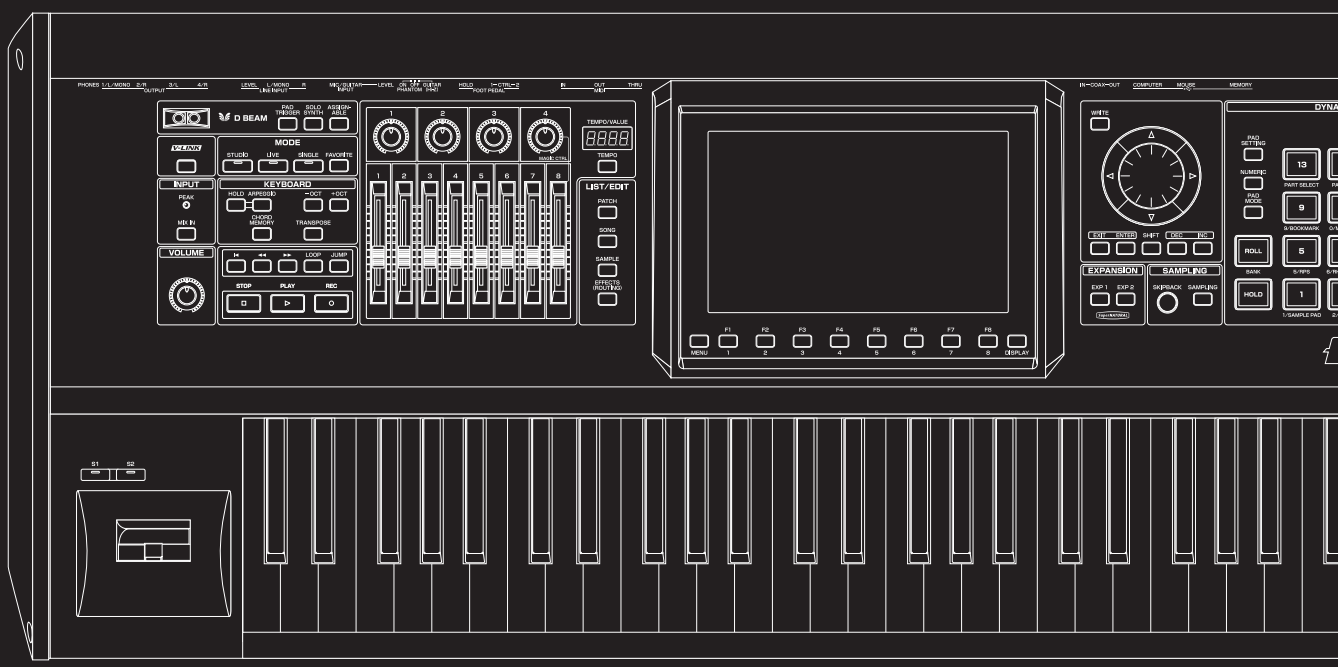
1. **Hold down [SHIFT] and press [CHORD MEMORY].**
   Confirm that the chord form is selected that you want to save.
2. **Press [F7 (Write)].**
   The Chord Form name entry screen will appear (p. 42).
3. **When you have finished entering the name, press [F8 (OK)].**
   A screen will appear, allowing you to select the write destination.
4. **Use ▲ or ▼ to select the write destination.**
5. **Press [F8 (Write)].**
   A message will ask you confirm.
6. **To save the chord form, press [F7 (OK)].**
   Never switch off the Fantom-G while data is being saved.

* *To cancel, press [F8 (EXIT)].*

04: Sound Generator, Section 3 (Creating Sounds)

This chapter explains how to create sounds such as patches, live sets, and effects.

- Patch ..... p. 84
- Rhythm Set ..... p. 112
- Sample Set ..... p. 126
- Live Set/Studio Set ..... p. 132
- Adding Effects ..... p. 150
- Effects List ..... p. 161



Creating a Patch

With the Fantom-G, you have total control over a wide variety of settings. Each item that can be set is known as a **parameter**. When you change the values of parameters, you are doing what is referred to as **Editing**. This chapter explains the procedures used in creating patches, and the functions of the patch parameters.

How to Make Patch Settings

Start with an existing patch and edit it to create a new patch. Since a patch is a combination of up to any four tones, you should listen to how the individual tones sound before you edit.

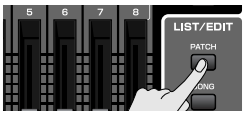
Four Tips for Editing Patches

- **Select a patch that is similar to the sound you wish to create (**p. 47**).**
  It's hard to create a new sound that's exactly what you want if you just select a patch and modify its parameters at random. It makes sense to start with a patch whose sound is related to what you have in mind.
- **Decide which tones will sound (**p. 50**).**
  When creating a patch, it is important to decide which tones you are going to use. In the Patch Pro Edit screen, set Tone Switch 1–4 to specify whether each tone will sound (on), or not (off). It is also important to turn off unused tones to avoid wasting voices, unnecessarily reducing the number of simultaneous notes you can play.
- **Check the Structure setting (**p. 92**).**
  The important Structure parameter determines how the four tones combine. Before you select new tones, make sure you understand how the currently selected tones are affecting each other.
- **Turn Effects off (**p. 150**).**
  Since the Fantom-G effects have such a profound impact on its sounds, turn them off to listen to the sound itself so you can better evaluate the changes you're making. Since you will hear the original sound of the patch itself when the effects are turned off, the results of your modifications will be easier to hear. Actually, sometimes just changing effects settings can give you the sound you want.

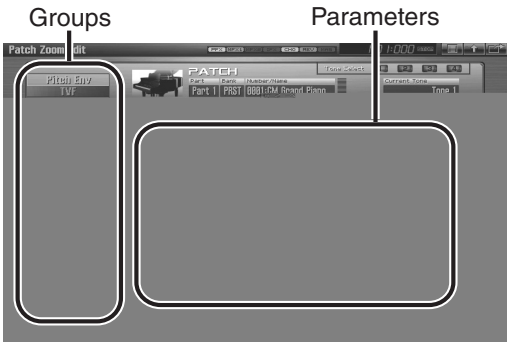
Editing a Patch Quickly (Patch Zoom Edit)

The Patch Zoom Edit screen allows you to edit the most important parameters of a patch. If you want to have access to all of the parameters, use the Patch Pro Edit screen (p. 86).

1. **Select the patch whose settings you want to edit (p. 47).**
2. **Press [PATCH].**



The Patch Zoom Edit screen appears.



F-key operations in the Patch Zoom Edit screen

F-key	Explanation		Page
F1 Group/Up	Moves the edit group tab upward.		–
F2 Group/Down	Moves the edit group tab downward.		–
F4 Util Menu	Patch Initialize	Initializes the settings of the currently selected patch.	p. 87
	Tone Initialize	Initializes the settings of the currently selected tone.	p. 87
	Tone Copy	Copies tone settings from a patch to the specified tone of the currently selected patch.	p. 87
F5 PFX	Accesses the PFX (Patch Multi-effect) editing screen.		p. 157
F6 Pro Edit	Accesses the Patch Pro Edit screen, where you can edit all of the parameters.		p. 86
F7 Part Select	Selects the part to be edited.		–
F8 Tone Sw/Sel	Selects the tones that will sound.		p. 85

3. The parameters are organized into several editing groups. Press [F1 (Up)] or [F2 (Down)] to select the tab for the editing group that contains the parameter you wish to edit.

cf.

For details on each parameter, refer to the following pages.

Parameter name	Page	Parameter name	Page
Pitch Envelope	p. 97	Structure Type	p. 92
TVF	p. 98	LFO1/2	p. 103
TVF Envelope	p. 100	Step LFO	p. 104
TVA Envelope	p. 101		

- **To change the part that you want to edit**
  Press [F7 (Part Select)].

4. Press [CURSOR] button to move the cursor to the parameter you wish to modify.

5. Press [F8 (Tone Sw/Sel)] to select the tone that you want to edit.
The Tone Switch/Select window appears.

Press any one of the [F5 (Select 1)]–[F8 (Select 4)] buttons to select the tone that you want to edit.

- **Simultaneously editing the same parameter of multiple tones**
  To select the tones you want to edit at the same time, simultaneously press two or more of the [F5 (Select 1)]–[F8 (Select 4)] buttons, making them light.
- **To switch a tone on/off**
  Press a [F1 (Sw 1)]–[F4 (Sw 4)] button to switch the corresponding tone on/off.

TIP

You can also use the pads to select tones and switch them on/off.
→ **"7 TONE SEL/SW (Using the Pads to Select Tones or Switch Them On/Off)"** (p. 197)

6. When you have made your selection, press [EXIT].

7. Turn the VALUE dial or press [INC] [DEC] to get the value you want.
If you've selected two or more tones, your editing will modify the parameter values for all selected tones by the same amount.

8. Repeat steps 3–7 to set each parameter you want to edit.

9. If you wish to save the changes you've made, press [WRITE] to perform the Save operation (p. 88). If you do not wish to save changes, press [EXIT].

If you return to the Single Play screen without saving, the " " symbol will be displayed at the right of the patch name, indicating that the patch settings have been edited.

NOTE

The settings you edit are temporary, and will be lost if you turn off the power, switch the sound generator mode, or select a different sound.

Editing All Parameters of a Patch (Patch Pro Edit)

The Patch Pro Edit screen allows you to edit all parameters of a patch.

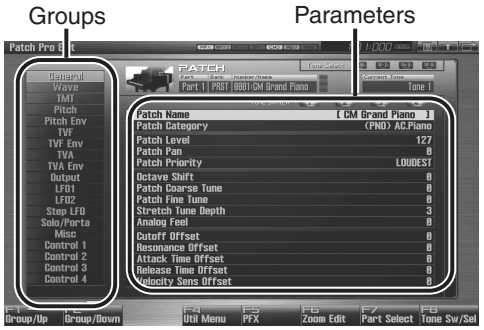
1. Select the patch whose settings you want to edit (p. 47).

TIP

If you want to create a patch from scratch (rather than starting from an existing patch), execute the **Initialize** operation (p. 87).

2. Press [PATCH] twice.

The Patch Pro Edit screen appears.



F-key operations in the Patch Pro Edit screen

F-key	Explanation		Page
F1 Group/Up	Moves the edit group tab upward.		–
F2 Group/Down	Moves the edit group tab downward.		–
F3 Set Stereo	This is shown if you're editing the WAVE group. It recalls the right wave (R) from the left wave (L) of a stereo wave.		p. 91
F4 Util Menu	Patch Initialize	Initializes the settings of the currently selected patch.	p. 87
	Tone Initialize	Initializes the settings of the currently selected tone.	p. 87
	Tone Copy	Copies tone settings from a patch to the specified tone of the currently selected patch.	p. 87
F5 PFX	Accesses the PFX (Patch Multi-effect) editing screen.		p. 157
F6 Zoom Edit	Accesses the Zoom Edit screen, where you can edit the most important parameters.		p. 84
F7 Part Select	Selects the part to be edited.		–
F8 Tone Sw/Sel	Selects the tones that will sound.		p. 85

3. The parameters are organized into several editing groups. Press [F1 (Up)] or [F2 (Down)] to select the tab for the editing group that contains the parameter you wish to edit.

cf.

See **"Functions of Patch Parameters"** (p. 89) for each parameter's functions.

- **To change the part that you want to edit**
  Press [F7 (Part Select)].

4. Press [CURSOR] button to move the cursor to the parameter you wish to modify.

5. Press [F8 (Tone Sw/Sel)] to select the tone that you want to edit.
The Tone Switch/Select window appears.

Press any one of the [F5 (Select 1)]–[F8 (Select 4)] buttons to select the tone that you want to edit.

- **Simultaneously editing the same parameter of multiple tones**
  To select the tones you want to edit at the same time, simultaneously press two or more of the [F5 (Select 1)]–[F8 (Select 4)] buttons, making them light.
- **To switch a tone on/off**
  Press a [F1 (Sw 1)]–[F4 (Sw 4)] button to switch the corresponding tone on/off.

TIP

You can also use the pads to select tones and switch them on/off.
→ **"7 TONE SEL/SW (Using the Pads to Select Tones or Switch Them On/Off)"** (p. 197)

6. When you have made your selection, press [EXIT].

7. Turn the VALUE dial or press [INC] [DEC] to get the value you want.
If you've selected two or more tones, your editing will modify the parameter values for all selected tones by the same amount.

8. Repeat steps 3–7 to set each parameter you want to edit.

9. If you wish to save the changes you've made, press [WRITE] to perform the Save operation (p. 88). If you do not wish to save changes, press [EXIT] to return to the Single Play screen.

If you return to the Single Play screen without saving, the "" symbol will be displayed at the right of the patch name, indicating that the patch settings have been edited.

NOTE

The settings you edit are temporary, and will be lost if you turn off the power, switch the sound generator mode, or select a different sound.

Initializing Patch/Tone Settings (Patch Initialize/Tone Initialize)

"Initialize" means to return the settings of the currently selected sound to a standard set of values.

Patch Initialize will initialize the settings of the currently selected patch.

Tone Initialize will initialize the settings of the currently selected tone.

NOTE

The Initialize operation will affect only the currently selected sound; the sounds that are stored in user memory will not be affected. If you wish to restore all of the Fantom-G's settings to their factory values, perform a Factory Reset (p. 284).

1. **Select the patch that you want to initialize (p. 47).**
2. **Press [PATCH].**

3. **Press [F4 (Util Menu)].**
   The Patch Utility Menu window appears.
4. **Press ▲ or ▼ to choose what you want to initialize (Patch Initialize or Tone Initialize), and then press [F8 (Select)].**
   If you decide to cancel the operation, press [F7 (Cancel)].
   A message will ask you for confirmation.
5. **Press [F7 (OK)] to execute.**
   To cancel, press [F8 (EXIT)].

Copying Patch (Tone) Settings (Patch Tone Copy)

This operation copies the settings of any desired patch to the currently selected patch. You can use this feature to make the editing process faster and easier.

1. **Select that you want to edit and the copy-destination patch (p. 47).**
2. **Press [PATCH].**
3. **Press [F4 (Util Menu)].**
   The Patch Utility Menu window appears.
4. **Press ▲ or ▼ to choose "Patch Tone Copy," and then press [F8 (Select)].**
   If you decide to cancel the operation, press [F7 (Cancel)].
   The Patch Tone Copy window appears.
5. **Press [CURSOR] to move the cursor, select the "Source (copy-source)" bank and number, and patch tone.**
6. **Turn the VALUE dial or use [INC] [DEC] to make settings.**
7. **Press [CURSOR] to move the cursor, select the "Destination (copy-destination)" patch tone number.**
8. **Turn the VALUE dial or use [INC] [DEC] to make settings.**
9. **Press [F8 (Execute)].**
   A message will ask you for confirmation.
10. **Press [F7 (OK)] to return to execute.**
    To cancel, press [F8 (EXIT)].

The Compare Function

For the Patch Tone Copy operations, you can use the Compare function.

The Compare function allows you to hear the copy-source patch in order to verify it.

If you want to play the copy-source patch, press [F6 (Compare)].

NOTE

The patch auditioned using the Compare function may sound slightly different than when it is played normally.

Cautions When Selecting a Waveform

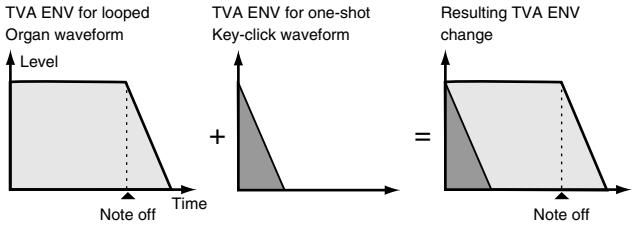
The sounds of the Fantom-G are based on complex PCM waveforms, and if you attempt to make settings that are contrary to the type of the original waveform, the results will not be as you expect.

The internal waveforms of the Fantom-G fall into the following two banks.

One-shot: These waveforms contain sounds that have short decays. A one-shot waveform records the initial rise and fall of the sound. Some of the Fantom-G's one-shot waveforms are sounds that are complete in themselves, such as percussive instrument sounds. The Fantom-G also contains many other one-shot waveforms that are elements of other sounds. These include attack components such as piano-hammer sounds and guitar fret noises.

Looped: These waveforms include sounds with long decays as well as sustained sounds. Loop waveforms repeatedly play back (loop) the portion of the waveform after the sound has reached a relatively steady state. The Fantom-G's looped waveforms also include components of other sounds, such as piano-string resonant vibrations and the hollow sounds of brass instruments.

The following diagram shows an example of sound (electric organ) that combines one-shot and looped waveforms.

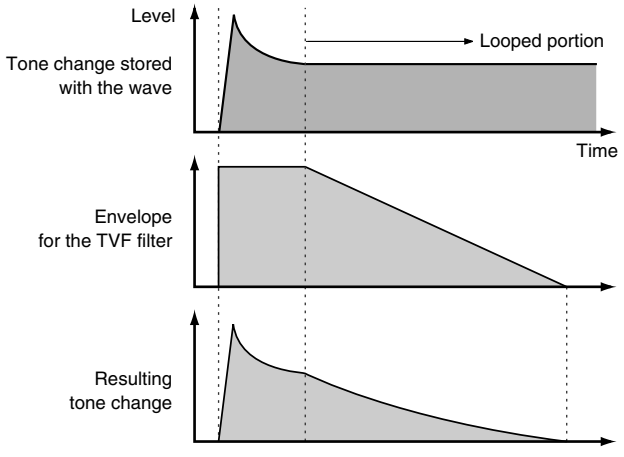


Cautions When Using a One-shot Waveform

It is not possible to use the envelope to modify a one-shot waveform to create a decay that is longer than the original waveform, or to turn it into a sustaining sound. If you were to program such an envelope, you would be attempting to shape a portion of the sound that simply doesn't exist, and the envelope would have no effect.

Cautions When Using a Loop Waveform

With many acoustic instruments such as piano and sax, extreme timbral changes occur during the first few moments of each note. This initial attack is what defines much of the instrument's character. For such waveforms, it is best to use the complex tonal changes of the attack portion of the waveform just as they are, and to use the envelope only to modify the decay portion. If you attempt to use the envelope to modify the attack portion as well, the characteristics of the original waveform may prevent you from getting the sound that you intend.



Saving Patches You've Created (Write)

Edits you make to the settings are temporary, and will be lost if you turn off the power, switch the sound generator mode, or select a different sound. If you want to keep the modified sound, you must save it in the USER bank.

When you edit the patch settings, the "" symbol will appear in the Single Play screen. When you save the patch, the "" symbol will disappear.

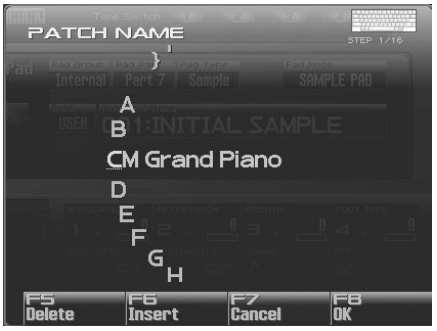
NOTE

When you perform the save procedure, the data that previously occupied the save destination will be lost.

1. **Make sure that the patch you wish to save is selected.**

2. **Press [WRITE].**
   The WRITE MENU window appears.

3. **Select "Patch / Rhythm / Sample Set."**
   Press ▲ or ▼ to select "Patch / Rhythm / Sample Set," and then press [F8 (Select)].
   The Patch Name window appears.



4. **Assign a name to the patch.**

   cf.

   For details on assigning names, refer to **"Assigning a Name"** (p. 42)

5. **When you have finished inputting the name, press [F8 (OK)].**
   A screen will appear, allowing you to select the write-destination patch.

6. Turn the VALUE dial or use [INC] [DEC] to select the patch number.

TIP

By pressing [F6 (Compare)] you can check the save-destination patch (Compare function).

7. Press [F8 (Write)].

A message will ask you for confirmation.

NOTE

Never switch off the Fantom-G while data is being saved.

8. Press [F7 (OK)] to execute the save operation.

To cancel the operation, press [F8 (EXIT)].

Auditioning the Save-Destination Patch (Compare)

Before you save a patch, you can audition the patch which currently occupies the save destination to make sure that it is one you don't mind overwriting. This can help prevent important patches from being accidentally overwritten and lost.

1. Follow the procedure in "Saving Patches You've Created (Write)" through step 6 to select the save destination.

2. Press [F6 (Compare)] to turn on.

3. Play the keyboard or pad to sound the save destination patch, then check whether you really want to overwrite it.

NOTE

The patch auditioned using the Compare function may sound slightly different than when it is played normally.

4. If you wish to change the save destination, re-specify the save-destination patch by turning the VALUE dial.

5. Press [F8 (Write)].

A message will ask you for confirmation.

6. Press [F7 (OK)] once again to execute the Save operation.

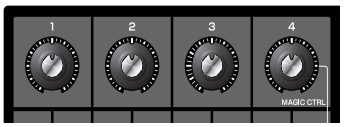
Functions of Patch Parameters

This section explains the functions the different patch parameters have, as well as the composition of these parameters.

MEMO

Parameters marked with a "★" can be controlled using specified MIDI messages (Matrix Control). Settings in Matrix Ctrl screen will determine how these parameters are controlled (p. 109).

If a number is displayed for the parameter name, (1 , 2 , 3 , 4), you can use the realtime controller knob of the corresponding number (the left most knob is number 1, the right most knob is number 4) to set the value.



Settings Common to the Entire Patch (General)

Patch Name

Specifies the name of the patch.

By pressing [ENTER], you can assign a name to the patch.

Value: space, A–Z, a–z, 0–9, ! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | }

cf.

For details on entering a name, refer to **"Assigning a Name"** (p. 42).

Patch Category

Specifies the type (category) of the patch.

It also determines the phrase that will be sounded when using the Phrase Preview function.

cf.

For details on the possible category names, refer to (p. 48).

Patch Level

Specifies the volume of the patch.

Value: 0–127

Patch Pan

Specifies the pan of the patch. "L64" is far left, "0" is center, and "63R" is far right.

Value: L64–0–63R

Patch Priority

This determines how notes will be managed when the maximum polyphony is exceeded (128 voices).

Value

LAST: The last-played voices will be given priority, and currently sounding notes will be turned off in order, beginning with the first-played note.

LOUDEST: The voices with the loudest volume will be given priority, and currently sounding notes will be turned off, beginning with the lowest-volume voice.

Octave Shift

Adjusts the pitch of the patch's sound up or down in units of an octave (+/-3 octaves).

Value: -3– +3

Patch Coarse Tune ★

Adjusts the pitch of the patch's sound up or down in semitone steps (+/-4 octaves).

Value: -48– +48

Patch Fine Tune

Adjusts the pitch of the patch's sound up or down in 1-cent steps (+/-50 cents).

Value: -50– +50

MEMO

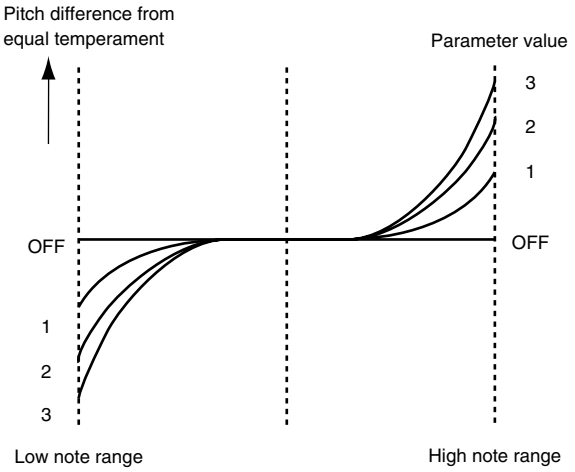
One cent is 1/100th of a semitone.

Stretch Tune Depth

This setting allows you to apply "stretched tuning" to the patch. (Stretched tuning is a system by which acoustic pianos are normally tuned, causing the lower range to be lower and the higher range to be higher than the mathematical tuning ratios would otherwise dictate.) With a setting of "OFF," the patch's tuning will be equal temperament. A setting of "3" will produce the greatest difference in the pitch of the low and high ranges.

Value: OFF, 1–3

The diagram shows the pitch change relative to equal temperament that will occur in the low and high ranges. This setting will have a subtle effect on the way in which chords resonate.



Analog Feel (Analog Feel Depth)

Specifies the depth of 1/f modulation that is to be applied to the patch. (1/f modulation is a pleasant and naturally-occurring ratio of modulation that occurs in a babbling brook or rustling wind.)

By adding this "1/f modulation," you can simulate the natural instability characteristic of an analog synthesizer.

Value: 0–127

Cutoff Offset

Cutoff Frequency Offset alters the cutoff frequency of the overall patch, while preserving the relative differences between the cutoff frequency values set for each tone in the Cutoff Frequency parameters (p. 98).

Value: -63– +63

NOTE

This value is added to the cutoff frequency value of a tone, so if the cutoff frequency value of any tone is already set to "127" (maximum), positive "+" settings here will not produce any change.

Resonance Offset

Resonance Offset alters the resonance of the overall patch, while preserving the relative differences between the resonance values set for each tone in the Resonance parameter (p. 98).

Range: -63– +63

* ***Resonance:*** *emphasizes the overtones in the region of the cutoff frequency, adding character to the sound.*

NOTE

This value is added to the resonance value of a tone, so if the resonance value of any tone is already set to "127" (maximum), positive "+" settings here will not produce any change.

Attack Time Offset

Attack Time Offset alters the attack time of the overall patch, while preserving the relative differences between the attack time values set for each tone in the TVA Env Time 1 parameters (p. 102), TVF Env Time 1 parameters (p. 100).

Range: -63– +63

* ***Attack Time:*** *The time it takes for a sound to reach maximum volume after the key is pressed and sound begun.*

NOTE

This value is added to the attack time value of a tone, so if the attack time value of any tone is already set to "127" (maximum), positive "+" settings here will not produce any change.

Release Time Offset

Release Time Offset alters the release time of the overall patch, while preserving the relative differences between the release time values set for each tone in the TVA Env Time 4 parameters (p. 102), TVF Env Time 4 parameters (p. 100).

Range: -63– +63

* ***Release Time:*** *The time from when you take your finger off the key until the sound disappears.*

NOTE

This value is added to the release time value of a tone, so if the release time value of any tone is already set to "127" (maximum), positive "+" settings here will not produce any change.

Velocity Sens Offset

Velocity Sensitivity Offset alters the Velocity Sensitivity of the overall patch while preserving the relative differences between the Velocity Sensitivity values set for each tone in the parameters below.

Cutoff Velocity Sens parameter (p. 99)

Level Velocity Sens parameter (p. 100)

Range: -63– +63

* ***Velocity:*** *Pressure with which the key is pressed.*

NOTE

This value is added to the velocity sensitivity value of a tone, so if the velocity sensitivity value of any tone is already set to "+63" (maximum), positive "+" settings here will not produce any change.

Modifying Waveforms (Wave)

Wave Group

Selects the group for the waveform that is to be the basis of the tone.

Value

INT:	Waveforms stored in internal
SAMP:	Sample waveforms
MSAM:	Multisample waveforms

Wave Number L (Mono)
Wave Number R

Selects the basic waveform for a tone. Along with the Wave number, the Wave name appears at the lower part of the display.

When in monaural mode, only the left side (L) is specified. When in stereo, the right side (R) is also specified.

Value: OFF, 1– (The upper limit will depend on the wave group.)

NOTE

If you specify only the right side (R), there will be no sound.

MEMO

If you want to select a left/right pair of Waves, select the left (L) Wave number and then press [F3 (Set Stereo)]; the right (R) (Wave) will be recalled.

* *When using a sample in stereo, you must specify the same number for L and R.*

Wave Gain

Sets the gain (amplification) of the waveform. The value changes in 6 dB (decibel) steps—an increase of 6 dB doubles the waveform's gain. If you intend to use the Booster to distort the waveform's sound, set this parameter to its maximum value (p. 94).

Value: -6, 0, +6, +12

Wave Tempo Sync

When you wish to synchronize a Phrase Loop to the clock (tempo), set this to "ON." This is valid only when selected as the sample for a tone.

Value: OFF, ON

NOTE

- If a sample is selected for a tone, you must first set the BPM (tempo) parameter of the sample.
- If a sample is selected for a tone, Wave Tempo Sync will require twice the normal number of voices.
- When the Wave Tempo Sync parameter is set to "ON," set the Delay Time parameter (p. 108) to "0." With other settings, a delay effect will be applied, and you will be not be able to play as you expect.

Phrase Loop

Phrase loop refers to the repeated playback of a phrase that's been pulled out of a song (e.g., by using a sampler). One technique involving the use of Phrase Loops is the excerpting of a Phrase from a pre-existing song in a certain genre, for example dance music, and then creating a new song with that Phrase used as the basic motif. This is referred to as "Break Beats."

Realtime Time Stretch

If the wave group is "SAMP," and the Wave Tempo Sync parameter is turned "ON," you can vary the playback speed of the waveform without affecting the pitch.

FXM Switch

This sets whether FXM will be used (ON) or not (OFF).

Value: OFF, ON

FXM

FXM (Frequency Cross Modulation) uses a specified waveform to apply frequency modulation to the currently selected waveform, creating complex overtones. This is useful for creating dramatic sounds or sound effects.

FXM Color

Specifies how FXM will perform frequency modulation. Higher settings result in a grainier sound, while lower settings result in a more metallic sound.

Value: 1–4

FXM Depth ★

Specifies the depth of the modulation produced by FXM.

Value: 0–16

Changing How a Tone Is Sounded (TMT)

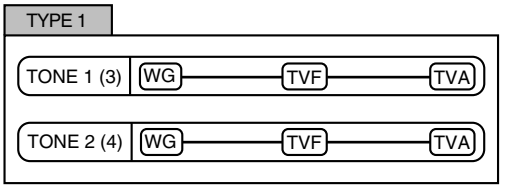
You can use the force with which keys are played, or MIDI messages to control the way each Tone is played. This is referred to as the Tone Mix Table (TMT).

Structure Type 1 & 2, 3 & 4

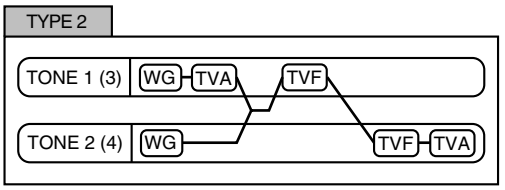
Determines how tone 1 and 2, or tone 3 and 4 are connected.

Value: 1–10

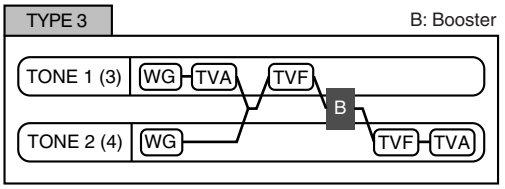
The following 10 different Types of combination are available.



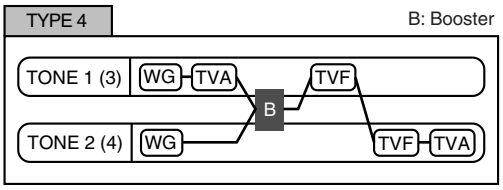
With this type, tones 1 and 2 (or 3 and 4) are independent. Use this type when you want to preserve PCM sounds or create and combine sounds for each tone.



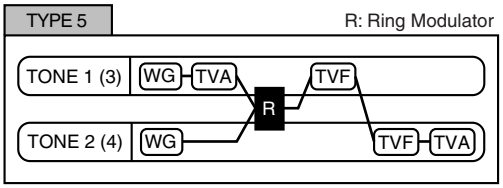
This type stacks the two filters together to intensify the characteristics of the filters. The TVA for tone 1 (or 3) controls the volume balance between the two tones.



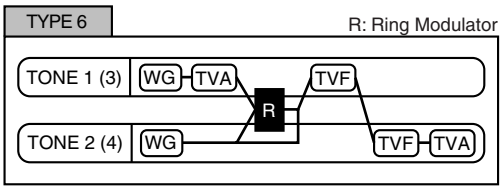
This type mixes the sound of tone 1 (3) and tone 2 (4), applies a filter, and then applies a booster to distort the waveform.



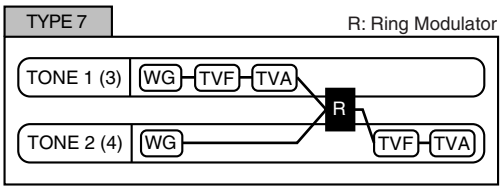
This type applies a booster to distort the waveform, and then combines the two filters. The TVA for tone 1 (or 3) controls the volume balance between the two tones and adjusts booster level.



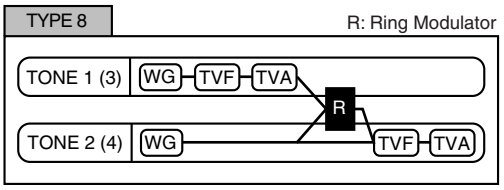
This type uses a ring modulator to create new overtones, and combines the two filters. The tone 1 (3) TVA will control the volume balance of the two tones, adjusting the depth of ring modulator.



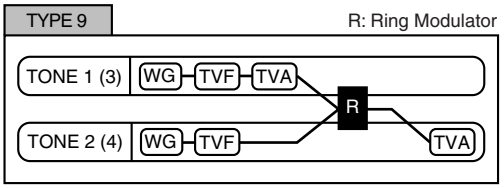
This type uses a ring modulator to create new overtones, and in addition mixes in the sound of tone 2 (4) and stacks the two filters. Since the ring-modulated sound can be mixed with tone 2 (4), tone 1 (3) TVA can adjust the amount of the ring-modulated sound.



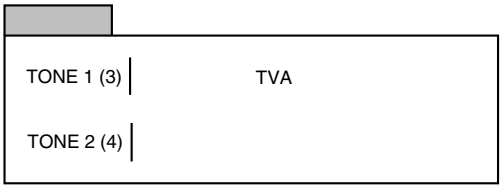
This type applies a filter to tone 1 (3) and ring-modulates it with tone 2 (4) to create new overtones.



This type sends the filtered tone 1 (3) and tone 2 (4) through a ring modulator, and then mixes in the sound of tone 2 (4) and applies a filter to the result.



This type passes the filtered sound of each tone through a ring modulator to create new overtones. The tone 1 (3) TVA will control the volume balance of the two tones, adjusting the depth of ring modulator.



This type passes the filtered sound of each tone through a ring modulator to create new overtones, and also mixes in the sound of tone 2 (4). Since the ring-modulated sound can be mixed with tone 2 (4), tone 1 (3) TVA can adjust the amount of the ring-modulated sound.

NOTE

- When TYPE 2–10 is selected and one tone of a pair is turned off, the other tone will be sounded as TYPE 1 regardless of the displayed setting.
- If you limit the keyboard area in which a tone will sound (Keyboard Range p. 94) or limit the range of velocities for which it will sound (Velocity Range p. 95), the result in areas or ranges where the tone does not sound is just as if the tone had been turned off. This means that if TYPE 2–10 is selected and you create a keyboard area or velocity range in which one tone of a pair does not sound, notes played in that area or range will be sounded by the other tone as TYPE 1 regardless of the displayed setting.

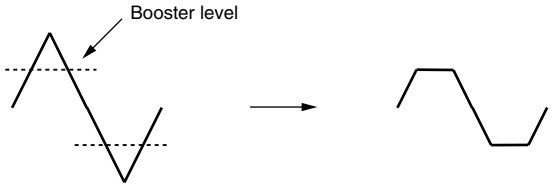
Booster 1&2, 3&4 (Booster Gain 1&2, 3&4)

When a Structure Type of TYPE 3 or TYPE 4 is selected, you can adjust the depth of the booster. The booster increases the input signal in order to distort the sound. This creates the distortion effect frequently used with electric guitars. Higher settings will produce more distortion.

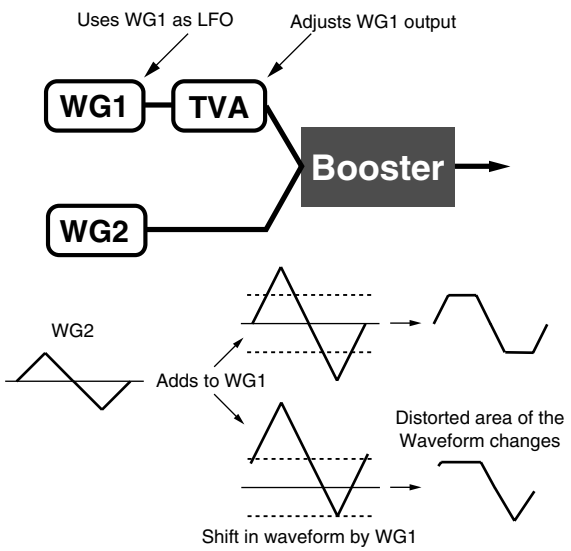
Value: 0, +6, +12, +18

Booster

The Booster is used to distort the incoming signal.



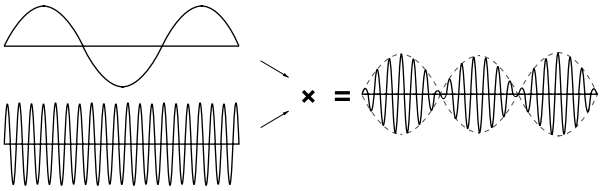
In addition to using this to create distortion, you can use the waveform (WG1) of one of the tones as an LFO which shifts the other waveform (WG2) upward or downward to create modulation similar to PWM (pulse width modulation). This parameter works best when you use it in conjunction with the Wave Gain parameter (p. 92).



Ring Modulator

A ring modulator multiplies the waveforms of two tones with each other, generating many new overtones (in harmonic partials) which were not present in either waveform. (Unless one of the waveforms is a sine wave, evenly-spaced frequency components will not usually be generated.)

As the pitch difference between the two waveforms changes the harmonic structure, the result will be an unpitched metallic sound. This function is suitable for creating metallic sounds such as bells.



Keyboard Fade Width Lower

This determines what will happen to the tone's level when a note that's lower than the tone's specified keyboard range is played. Higher settings produce a more gradual change in volume. If you don't want the tone to sound at all when a note below the keyboard range is played, set this parameter to "0."

Value: 0–127

Keyboard Range Lower

Specifies the lowest note that the tone will sound for each tone.

Value: C-1–UPPER

Keyboard Range Upper

Specifies the highest note that the tone will sound for each tone.

Value: LOWER–G9

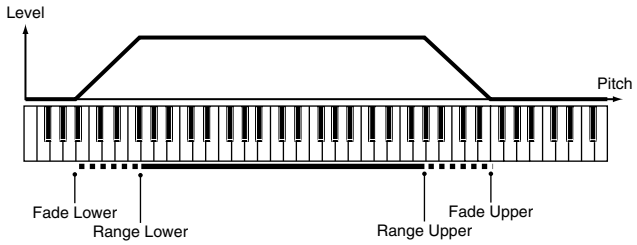
NOTE

If you attempt to raise the lower key higher than the upper key, or to lower the upper key below the lower key, the other value will be automatically modified to the same setting.

Keyboard Fade Width Upper

This determines what will happen to the tone's level when a note that's higher than the tone's specified keyboard range is played. Higher settings produce a more gradual change in volume. If you don't want the tone to sound at all when a note above the keyboard range is played, set this parameter to "0."

Value: 0–127



TMT Velocity Control (TMT Velocity Control Switch)

TMT Velocity Control determines whether a different tone is played (ON) or not (OFF) depending on the force with which the key is played (velocity).

When set to "RANDOM," the patch's constituent tones will sound randomly, regardless of any Velocity messages.

When set to "CYCLE," the patch's constituent tones will sound consecutively, regardless of any Velocity messages.

Value: OFF, ON, RANDOM, CYCLE

MEMO

Use **"Velocity Range Lower"** (p. 95) and **"Velocity Range Upper"** (p. 95) to specify the range of keyboard dynamics.

NOTE

If Velocity Range Lower and Velocity Range Upper are set to the same values, you won't be able to obtain any effect by setting TMT Velocity Control to "RANDOM" or "CYCLE."

NOTE

Instead of using Velocity, you can also have tones substituted using the Matrix Control (p. 109, p. 95). However, the keyboard velocity and the Matrix Control cannot be used simultaneously to make different tones to sound. When using the Matrix Control to switch tones, set the Velocity Control parameter to "OFF."

Velocity Fade Width Lower

This determines what will happen to the tone's level when the tone is played at a velocity lower than its specified velocity range. Higher settings produce a more gradual change in volume. If you want notes played outside the specified key velocity range to not be sounded at all, set this to "0."

Value: 0–127

Velocity Range Lower

This sets the lowest velocity at which the tone will sound. Make these settings when you want different tones to sound in response to notes played at different strengths.

Value: 1–UPPER

Velocity Range Upper

This sets the highest velocity at which the tone will sound. Make these settings when you want different tones to sound in response to notes played at different strengths.

Value: LOWER–127

NOTE

If you attempt to set the Lower velocity limit above the Upper, or the Upper below the Lower, the other value will automatically be adjusted to the same setting.

MEMO

When using the Matrix Control (p. 109) to have different tones played, set the lowest value (Lower) and highest value (Upper) of the value of the MIDI message used.

Velocity Fade Width Upper

This determines what will happen to the tone's level when the tone is played at a velocity greater than its specified velocity range. Higher settings produce a more gradual change in volume. If you want notes played outside the specified key velocity range to not be sounded at all, set this to "0."

Value: 0–127

TMT Control Switch

Use the Matrix Control (p. 109) to enable (ON), or disable (OFF) sounding of different tones.

Value: OFF, ON

NOTE

You can also cause different tones to sound in response to notes played at different strengths (velocity) on the keyboard (p. 95). However, the Matrix Control and the keyboard velocity cannot be used simultaneously to make different tones to sound. When you want to make the different tones to sound, set the Velocity Control parameter (p. 95) to "OFF."

Modifying Pitch (Pitch/Pitch Env)

Pitch

Tone Coarse Tune ★

Adjusts the pitch of the tone's sound up or down in semitone steps (+/-4 octaves).

Value: -48– +48

Tone Fine Tune ★

Adjusts the pitch of the tone's sound up or down in 1-cent steps (+/-50 cents).

Value: -50– +50

MEMO

One cent is 1/100th of a semitone.

Random Pitch Depth

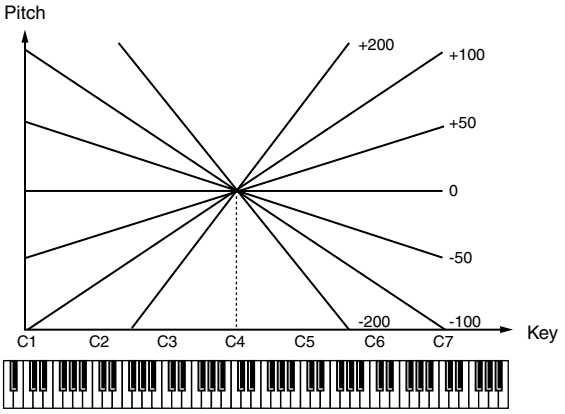
This specifies the width of random pitch deviation that will occur each time a key is pressed. If you do not want the pitch to change randomly, set this to "0." These values are in units of cents (1/100th of a semitone).

Value: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200

Wave Pitch Key Follow

This specifies the amount of pitch change that will occur when you play a key one octave higher (i.e., 12 keys upward on the keyboard). If you want the pitch to rise one octave as on a conventional keyboard, set this to "+100." If you want the pitch to rise two octaves, set this to "+200." Conversely, set this to a negative value if you want the pitch to fall. With a setting of "0," all keys will produce the same pitch.

Value: -200, -190, -180, -170, -160, -150, -140, -130, -120, -110, -100, -90, -80, -70, -60, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +60, +70, +80, +90, +100, +110, +120, +130, +140, +150, +160, +170, +180, +190, +200



Pitch Bend Range Up

Specifies the degree of pitch change in semitones when the Pitch Bend lever is all the way right. For example, if this parameter is set to "12," the pitch will rise one octave when the pitch bend lever is moved to the right-most position.

Value: 0– +48

Pitch Bend Range Down

Specifies the degree of pitch change in semitones when the Pitch Bend lever is all the way left. For example if this is set to "-48" and you move the pitch bend lever all the way to the left, the pitch will fall 4 octaves.

Value: -48–0

Pitch Env Velocity Sens

Keyboard playing dynamics can be used to control the depth of the pitch envelope. If you want the pitch envelope to have more effect for strongly played notes, set this parameter to a positive (+) value. If you want the pitch envelope to have less effect for strongly played notes, set this to a negative (-) value.

Value: -63– +63

Pitch Env Time 1 Velocity Sens

This allows keyboard dynamics to affect the Time 1 of the Pitch envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

Pitch Env Time 4 Velocity Sens

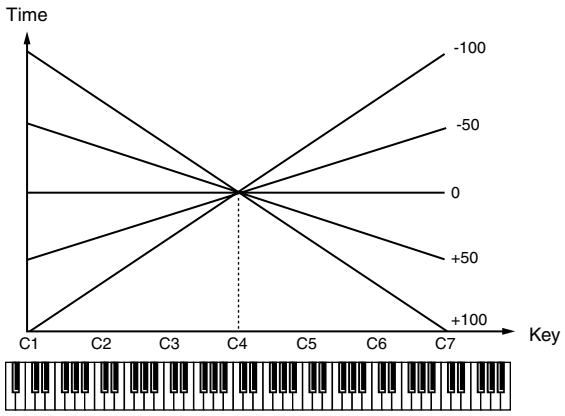
Use this parameter when you want key release speed to affect the Time 4 value of the pitch envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

Pitch Env Time Key Follow

Use this setting if you want the pitch envelope times (Time 2–Time 4) to be affected by the keyboard location. Based on the pitch envelope times for the C4 key, positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Larger settings will produce greater change.

Value: -100, -90, -80, -70, -60, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +60, +70, +80, +90, +100



Hold Bend

This specifies whether pitch bend will be disabled (ON) or enabled (OFF) while it's being held by the pedal and during the release portion of the sound.

Value: OFF, ON

Bend Mode

Specifies what will happen when you operate the pitch bend lever.

Value

NORMAL: The pitch bend lever will apply in the conventional way.

TOUCH: Moving the pitch bend lever will change the pitch smoothly, but the pitch will instantly return to center if you return the lever even slightly.

CATCH: If you play a note-on with the pitch bend lever already moved, the pitch will sound at the center position. The pitch will change only after the lever has passed through the center position.

LAST: The pitch bend lever will apply only to the last-played note.

CATCH+LAST: The operation of "CATCH" and "LAST" will be combined.

Bend Mode Control

This specifies the CC (control change) whose value is used to switch the pitch bend lever's operation between the mode specified by Bend Mode (control values 64 or higher) and conventional operation (control values 63 or lower).

Value: CC01–31, CC32(OFF), CC33–95

Pitch Env (Pitch Envelope)

Pitch Env Depth

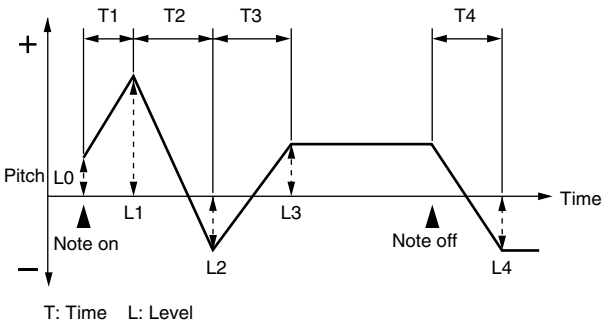
Adjusts the effect of the Pitch Envelope. Higher settings will cause the pitch envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.

Value: -12– +12

Pitch Env Time 1–4 ★

Specify the pitch envelope times (Time 1–Time 4). Higher settings will result in a longer time until the next pitch is reached. (For example, Time 2 is the time over which the pitch changes from Level 1 to Level 2.)

Value: 0–127



Pitch Env Level 0–4

Specify the pitch envelope levels (Level 0–Level 4). It determines how much the pitch changes from the reference pitch (the value set with Coarse Tune or Fine Tune on the Pitch screen) at each point. Positive (+) settings will cause the pitch to be higher than the standard pitch, and negative (-) settings will cause it to be lower.

Value: -63– +63

Modifying the Brightness of a Sound with a Filter (TVF/TVF Env)

TVF

Filter Type

Selects the type of filter. A filter cuts or boosts a specific frequency region to change a sound's brightness, thickness, or other qualities.

Value

OFF: No filter is used.

LPF: Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency (Cutoff Freq) in order to round off, or un-brighten the sound. This is the most common filter used in synthesizers.

BPF: Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency (Cutoff Freq), and cuts the rest. This can be useful when creating distinctive sounds.

HPF: High Pass Filter. This cuts the frequencies in the region below the cutoff frequency (Cutoff Freq). This is suitable for creating percussive sounds emphasizing their higher tones.

PKG: Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency (Cutoff Freq). You can use this to create wah-wah effects by employing an LFO to change the cutoff frequency cyclically.

LPF2: Low Pass Filter 2. Although frequency components above the Cutoff frequency (Cutoff Freq) are cut, the sensitivity of this filter is half that of the LPF. This makes it a comparatively warmer low pass filter. This filter is good for use with simulated instrument sounds such as the acoustic piano.

LPF3: Low Pass Filter 3. Although frequency components above the Cutoff frequency (Cutoff Freq) are cut, the sensitivity of this filter changes according to the Cutoff frequency. While this filter is also good for use with simulated acoustic instrument sounds, the nuance it exhibits differs from that of the LPF2, even with the same TVF Envelope settings.

NOTE

If you set "LPF2" or "LPF3," the setting for the Resonance parameter will be ignored (p. 98).

Cutoff Frequency ★

Selects the frequency at which the filter begins to have an effect on the waveform's frequency components.

Value: 0–127

With "LPF/LPF2/LPF3" selected for the Filter Type parameter, lower cutoff frequency settings reduce a tone's upper harmonics for a more rounded, warmer sound. Higher settings make it sound brighter.

If "BPF" is selected, harmonic components will change depending on the TVF Cutoff Frequency setting. This can be useful when creating distinctive sounds.

With "HPF" selected, higher Cutoff Frequency settings will reduce lower harmonics to emphasize just the brighter components of the sound.

With "PKG" selected, the harmonics to be emphasized will vary depending on Cutoff Frequency setting.

TIP

To edit the overall patch while preserving the relative differences in the Cutoff Frequency values set for each tone, set the Cutoff Offset parameter (p. 90).

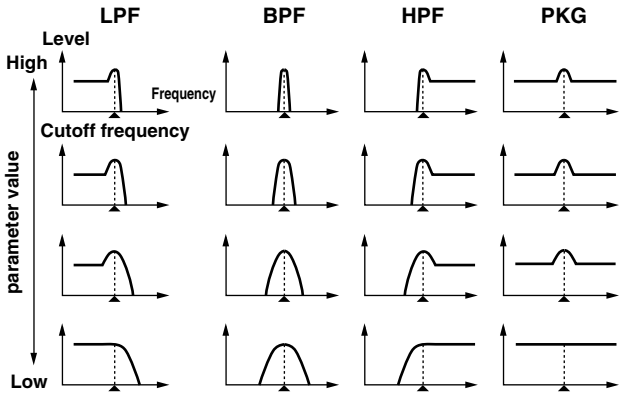
Resonance ★

Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort.

Value: 0–127

TIP

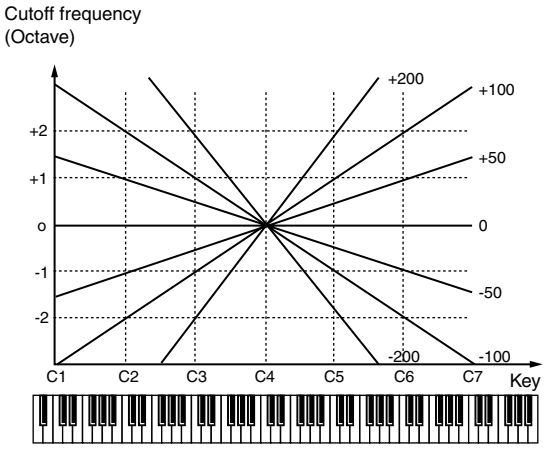
To edit the overall patch while preserving the relative differences in the Resonance values set for each tone, set the Resonance Offset parameter (p. 91).



TVF Cutoff Key follow

Use this parameter if you want the cutoff frequency to change according to the key that is pressed. Relative to the cutoff frequency at the C4 key (center C), positive (+) settings will cause the cutoff frequency to rise for notes higher than C4, and negative (-) settings will cause the cutoff frequency to fall for notes higher than C4. Larger settings will produce greater change.

Value: -200, -190, -180, -170, -160, -150, -140, -130, -120, -110, -100, -90, -80, -70, -60, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +60, +70, +80, +90, +100, +110, +120, +130, +140, +150, +160, +170, +180, +190, +200



Cutoff Velocity Curve

Selects one of the following seven curves that determine how keyboard playing dynamics (velocity) influence the cutoff frequency. Set this to "FIXED" if you don't want the Cutoff frequency to be affected by the keyboard velocity.

Value: FIXED, 1–7

Cutoff Velocity Sens

Use this parameter when changing the cutoff frequency to be applied as a result of changes in playing velocity. If you want strongly played notes to raise the cutoff frequency, set this parameter to positive (+) settings. If you want strongly played notes to lower the cutoff frequency, use negative (-) settings.

Value: -63– +63

TIP

To edit the overall patch while preserving the relative differences in the Cutoff Frequency Velocity Sensitivity values set for each tone, set the Velocity Sens Offset parameter (p. 91). However, this setting is shared by the Level Velocity Sens parameter (p. 100).

Resonance Velocity Sens

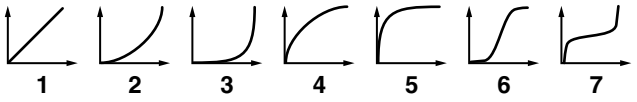
This allows keyboard velocity to modify the amount of Resonance. If you want strongly played notes to have a greater Resonance effect, set this parameter to positive (+) settings. If you want strongly played notes to have less Resonance, use negative (-) settings.

Value: -63– +63

TVF Env Velocity Curve

Selects one of the following 7 curves that will determine how keyboard playing dynamics will affect the TVF envelope. Set this to "FIXED" if you don't want the TVF Envelope to be affected by the keyboard velocity.

Value: FIXED, 1–7



TVF Env Velocity Sens

Specifies how keyboard playing dynamics will affect the depth of the TVF envelope. Positive (+) settings will cause the TVF envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less.

Value: -63– +63

TVF Env Time 1 Velocity Sens

This allows keyboard dynamics to affect the Time 1 of the TVF envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

TVF Env Time 4 Velocity Sens

The parameter to use when you want key release speed to control the Time 4 value of the TVF envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

TVF ENV (TVF Envelope)

TVF Env Depth

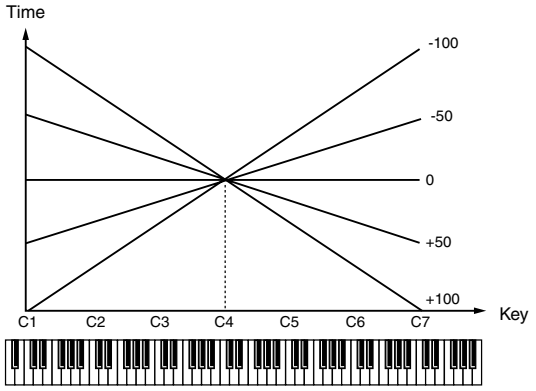
Specifies the depth of the TVF envelope. Higher settings will cause the TVF envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.

Value: -63– +63

TVF Env Time Key Follow

Use this setting if you want the TVF envelope times (Time 2–Time 4) to be affected by the keyboard location. Based on the TVF envelope times for the C4 key (center C), positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Larger settings will produce greater change.

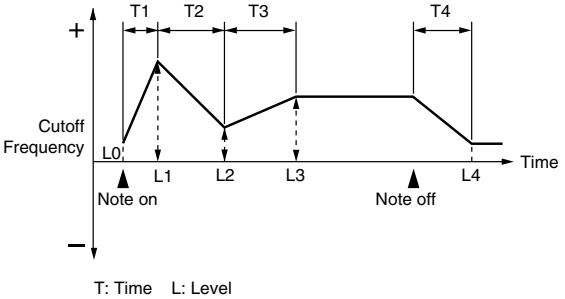
Value: -100, -90, -80, -70, -60, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +60, +70, +80, +90, +100



TVF Env Time 1–4 ★

Specify the TVF envelope times (Time 1–Time 4). Higher settings will lengthen the time until the next cutoff frequency level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.)

Value: 0–127



TVF Env Level 0–4

Specify the TVF envelope levels (Level 0–Level 4). These settings specify how the cutoff frequency will change at each point, relative to the standard cutoff frequency (the cutoff frequency value specified in the TVF screen).

Value: 0–127

Adjusting the Volume (TVA/TVA Env)

TVA

Tone Level ★

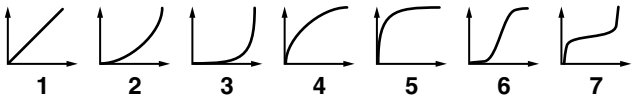
Sets the volume of the tone. This setting is useful primarily for adjusting the volume balance between tones.

Value: 0–127

Level Velocity Curve (TVA Level Velocity Curve)

You can select from seven curves that determine how keyboard playing strength will affect the volume. If you do not want the volume of the tone to be affected by the force with which you play the key, set this to "FIXED."

Value: FIXED, 1–7



Level Velocity Sens (TVA Level Velocity Sensitivity)

Set this when you want the volume of the tone to change depending on the force with which you press the keys. Set this to a positive (+) value to have the changes in tone volume increase the more forcefully the keys are played; to make the tone play more softly as you play harder, set this to a negative (-) value.

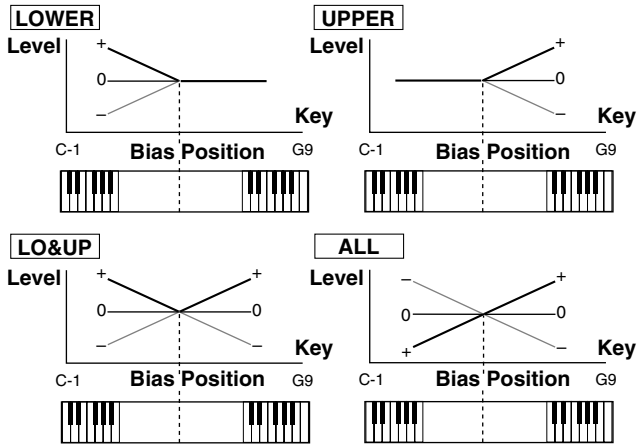
Value: -63– +63

TIP

If you wish to make adjustments to the entire patch while maintaining the relative values of TVA Level Velocity Sensitivity among tones, adjust the Velocity Sens Offset parameter (p. 91). However, this setting is shared by the Cutoff Velocity Sens parameter (p. 99).

Bias

Bias causes the volume to be affected by the keyboard position. This is useful for changing volume through keyboard position (pitch) when playing acoustic instruments.



Bias Level

Adjusts the angle of the volume change that will occur in the selected Bias Direction. Larger settings will produce greater change. Negative (-) values will invert the change direction.

Value: -100, -90, -80, -70, -60, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +60, +70, +80, +90, +100

Bias Position

Specifies the key relative to which the volume will be modified.

Value: C-1–G9

Bias Direction

Selects the direction in which change will occur starting from the Bias Position.

Value

LOWER: The volume will be modified for the keyboard area below the Bias Point.

UPPER: The volume will be modified for the keyboard area above the Bias Point.

LO&UP: The volume will be modified symmetrically toward the left and right of the Bias Point.

ALL: The volume changes linearly with the bias point at the center.

Tone Pan ★

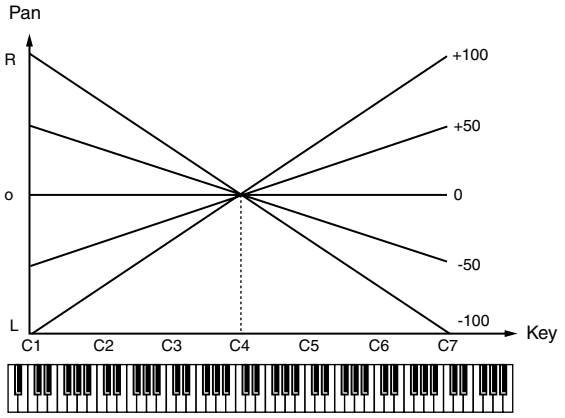
Sets the pan of the tone. "L64" is far left, "0" is center, and "63R" is far right.

Value: L64–0–63R

Tone Pan Key Follow

Use this parameter if you want key position to affect panning. Positive (+) settings will cause notes higher than C4 key (center C) to be panned increasingly further toward the right, and negative (-) settings will cause notes higher than C4 key (center C) to be panned toward the left. Larger settings will produce greater change.

Value: -100– +100



Random Pan Depth

Use this parameter when you want the stereo location to change randomly each time you press a key. Higher settings will produce a greater amount of change.

Value: 0–63

Alternate Pan Depth

This setting causes panning to be alternated between left and right each time a key is pressed. Higher settings will produce a greater amount of change. "L" or "R" settings will reverse the order in which the pan will alternate between left and right. For example if two tones are set to "L" and "R" respectively, the panning of the two tones will alternate each time they are played.

Value: L63–0–63R

NOTE

When any value from Type "2"–"10" is selected for the Structure parameter in the Pan Key Follow, Rnd Pan Depth, Alter Pan Depth parameter settings, the output of tones 1 and 2 are joined in tone 2, and the output of tones 3 and 4 are joined in tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 92).

TVA Env (TVA Envelope)

TVA Env Time 1 Velocity Sens

This allows keyboard dynamics to affect the Time 1 of the TVA envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

TVA Env Time 4 Velocity Sens

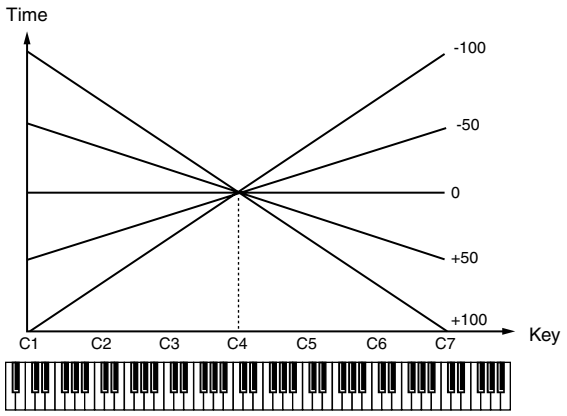
The parameter to use when you want key release speed to control the Time 4 value of the TVA envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

TVA Env Time Key Follow

Use this setting if you want the TVA envelope times (Time 2–Time 4) to be affected by the keyboard location. Based on the TVA envelope times for the C4 key (center C), positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Larger settings will produce greater change.

Value: -100, -90, -80, -70, -60, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +60, +70, +80, +90, +100



TVA Env Time 1–4 ★

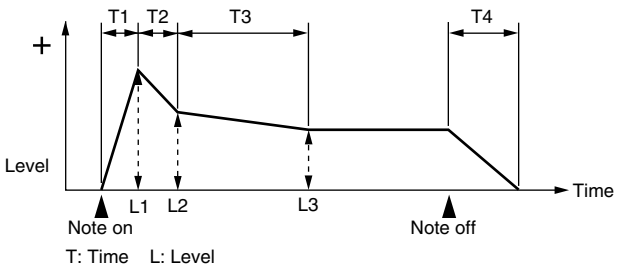
Specify the TVA envelope times (Time 1– Time 4). Higher settings will lengthen the time until the next volume level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.)

Value: 0–127

TVA Env Level 1–3

Specify the TVA envelope levels (Level 1–Level 3). These settings specify how the volume will change at each point, relative to the standard volume (the Tone Level value specified in the TVA screen).

Value: 0–127



Output

Tone Output Assign

Specifies how the direct sound of each tone will be output.

Value:

PFX: Output through patch multi-effects.
DRY: Output without passing through patch multi-effects.

Tone Output Level

Specifies the signal level of each tone.

Value: 0–127

Tone Chorus Send Level

Specifies the level of the signal sent to the chorus for each tone.

Value: 0–127

Tone Reverb Send Level

Specifies the level of the signal sent to the reverb for each tone.

Value: 0–127

Modulating Sounds (LFO1/2/Step LFO)

MEMO

An LFO (Low Frequency Oscillator) causes change over a cycle in a sound. Each tone has two LFOs (LFO1/LFO2), and these can be used to cyclically change the pitch, cutoff frequency and volume to create modulation-type effects such as vibrato, wah and tremolo. Both LFOs have the same parameters so only one explanation is needed.

LFO1/2

Waveform (LFO1/LFO2 Waveform)

Selects the waveform of the LFO.

Value

SIN: Sine wave

TRI: Triangle wave

SAW-U: Sawtooth wave

SAW-D: Sawtooth wave (negative polarity)

SQR: Square wave

RND: Random wave

BND-U: Once the attack of the waveform output by the LFO is allowed to develop in standard fashion, the waveform then continues without further change.

BND-D: Once the decay of the waveform output by the LFO is allowed to develop in standard fashion, the waveform then continues without further change.

TRP: Trapezoidal wave

S&H: Sample & Hold wave (one time per cycle, LFO value is changed)

CHAOS: Chaos wave

VSIN: Modified sine wave. The amplitude of a sine wave is randomly varied once each cycle.

STEP: A waveform generated by the data specified by LFO Step 1–64. This produces stepped change with a fixed pattern similar to a step modulator.

NOTE

If you set this to "BND-U" or "BND-D," you must turn the Key Trigger parameter to "ON." If this is "OFF," it will have no effect.

Rate (LFO1/LFO2 Rate) ★

Adjusts the modulation rate, or speed, of the LFO.

Value: 0–127, Note

LFO Rate sets the beat length for the synchronized tempo is synchronized with the tempo set in a sequencer.

(Example)

For a tempo of 120 (120 quarter notes occur in 1 minute (60 seconds))

Setting	LFO Rate
𝅗𝅥 (half note)	1 second (60 / 60 =1 (second))
♩ (quarter note)	0.5 seconds (60 / 120= 0.5 (seconds))
♪ (eighth note)	0.25 seconds (60 / 240= 0.25 (seconds))

NOTE

This setting will be ignored if the Waveform parameter is set to "CHAOS."

Rate Detune (LFO1/LFO2 Rate Detune)

LFO Rate Detune makes subtle changes in the LFO cycle rate (Rate parameter) each time a key is pressed. Higher settings will cause greater change. This parameter is invalid when Rate is set to "note."

Value: 0–127

Offset (LFO1/LFO2 Offset)

Raises or lowers the LFO waveform relative to the central value (pitch or cutoff frequency). Positive (+) settings will move the waveform so that modulation will occur from the central value upward. Negative (-) settings will move the waveform so that modulation will occur from the central value downward.

Value: -100, -50, 0, +50, +100

Delay Time (LFO1/LFO2 Delay Time)

Delay Time (LFO Delay Time) specifies the time elapsed before the LFO effect is applied (the effect continues) after the key is pressed (or released).

Value: 0–127

cf.

After referring to **"How to Apply the LFO"** (p. 104), change the setting until the desired effect is achieved.

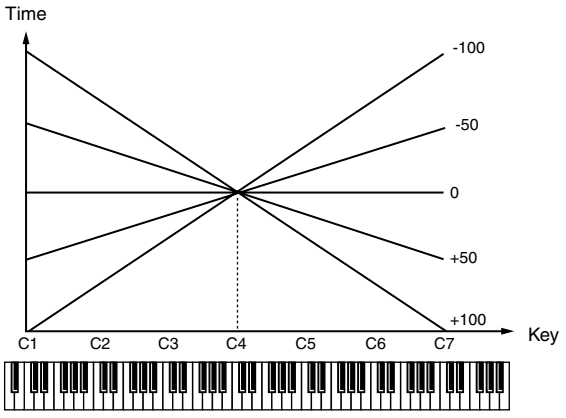
TIP

When using violin, wind, or certain other instrument sounds in a performance, rather than having vibrato added immediately after the sounds are played, it can be effective to add the vibrato after the note is drawn out somewhat. If you set the Delay Time in conjunction with the Pitch Depth parameter and Rate parameter, the vibrato will be applied automatically following a certain interval after the key is pressed. This effect is called **Delay Vibrato**.

LFO1/LFO2 Delay Time Key Follow

Adjusts the value for the Delay Time parameter depending on the key position, relative to the C4 key (center C). To decrease the time that elapses before the LFO effect is applied (the effect is continuous) with each higher key that is pressed in the upper registers, select a positive value; to increase the elapsed time, select a negative value. Larger settings will produce greater change. If you do not want the elapsed time before the LFO effect is applied (the effect is continuous) to change according to the key pressed, set this to "0."

Value: -100, -90, -80, -70, -60, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +60, +70, +80, +90, +100



Fade Mode (LFO1/LFO2 Fade Mode)

Specifies how the LFO will be applied.

Value: ON <, ON >, OFF <, OFF >

cf.

After referring to **"How to Apply the LFO"** (p. 104), change the setting until the desired effect is achieved.

Fade Time (LFO1/LFO2 Fade Time)

Specifies the time over which the LFO amplitude will reach the maximum (minimum).

Value: 0–127

cf.

After referring to **"How to Apply the LFO"** (p. 104), change the setting until the desired effect is achieved.

Key Trigger (LFO1/LFO2 Key Trigger)

This specifies whether the LFO cycle will be synchronized to begin when the key is pressed (ON) or not (OFF).

Value: OFF, ON

Pitch Depth (LFO1/LFO2 Pitch Depth) ★

Specifies how deeply the LFO will affect pitch.

Value: -63– +63

TVF Depth (LFO1/LFO2 TVF Depth) ★

Specifies how deeply the LFO will affect the cutoff frequency.

Value: -63– +63

TVA Depth (LFO1/LFO2 TVA Depth) ★

Specifies how deeply the LFO will affect the volume.

Value: -63– +63

Pan Depth (LFO1/LFO2 Pan Depth) ★

Specifies how deeply the LFO will affect the pan.

Value: -63– +63

TIP

Positive (+) and negative (-) settings for the Depth parameter result in differing kinds of change in pitch and volume. For example, if you set the Depth parameter to a positive (+) value for one tone, and set another tone to the same numerical value, but make it negative (-), the modulation phase for the two tones will be the reverse of each other. This allows you to shift back and forth between two different tones, or combine it with the Pan setting to cyclically change the location of the sound image.

NOTE

When the Structure parameter is set to any value from "2" through "10," the output of tones 1 and 2 will be combined into tone 2, and the output of tones 3 and 4 will be combined into tone 4. This applies to the Pan Depth parameter settings. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 92).

Step LFO

LFO Step Type

When generating an LFO waveform from the data specified in LFO Step1–64, specify whether the level will change abruptly at each step or will be connected linearly.

Value: TYPE1 (stair-step change), TYPE2 (linear change)

Step 1–64 (LFO Step 1–64)

Specifies the data for the Step LFO. If the LFO Pitch Depth is +63, each +1 unit of the step data corresponds to a pitch of +50 cents.

Value: -36– +36

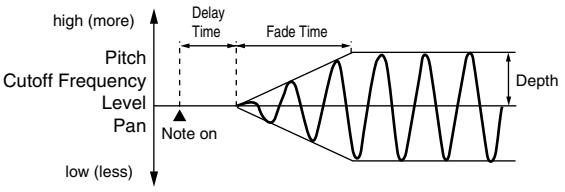
LFO End Step

Specifies the number of LFO steps.

Value: 1, 2, 4, 8, 16, 32, 64

How to Apply the LFO

● Apply the LFO gradually after the key is pressed

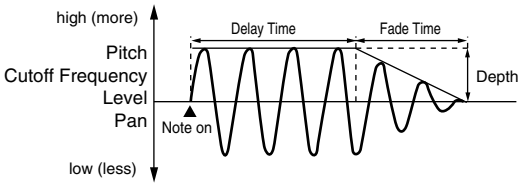


Fade Mode: ON <

Delay Time: The time from when the keyboard is played until the LFO begins to be applied.

Fade Time: The time over which the LFO amplitude will reach the maximum after the Delay Time has elapsed.

- **Apply the LFO immediately when the key is pressed, and then gradually begin to decrease the effect**

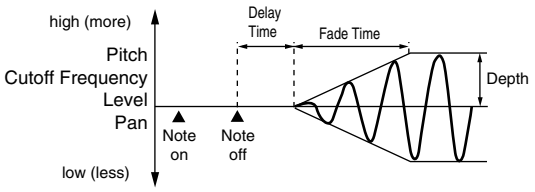


Fade Mode: ON >

Delay Time: The time that the LFO will continue after the keyboard is played.

Fade Time: The time over which the LFO amplitude will reach the minimum after the Delay Time has elapsed.

- **Apply the LFO gradually after the key is released**

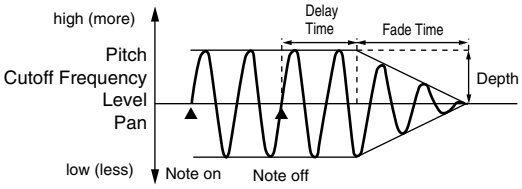


Fade Mode: OFF <

Delay Time: The time from when the keyboard is released until the LFO begins to be applied.

Fade Time: The time over which the LFO amplitude will reach the maximum after the Delay Time has elapsed.

- **Apply the LFO from when the key is pressed until it is released, and gradually begin to decrease the effect when the key is released**



Fade Mode: OFF >

Delay Time: The time that the LFO will continue after the keyboard is released.

Fade Time: The time over which the LFO amplitude will reach the minimum after the Delay Time has elapsed.

Apply Portamento or Legato to the Sound (Solo/Porta)

Mono/Poly

Specifies whether the patch will play polyphonically (POLY) or monophonically (MONO). The "MONO" setting is effective when playing a solo instrument patch such as sax or flute.

Value

MONO: Only the last-played note will sound.

POLY: Two or more notes can be played simultaneously.

Legato Switch

Legato Switch is valid when the Mono/Poly parameter is set to "MONO." This setting specifies whether the Legato Switch will be used (LEGATO) or not (OFF).

With the Legato Switch parameter "LEGATO," pressing a key while continuing to press a previous key causes the note to change pitch to the pitch of the most recently pressed key, sounding all the while. This creates a smooth transition between notes, which is effective when you wish to simulate the hammering-on and pulling-off techniques used by a guitarist.

If you choose "SUSTAIN," the legato effect is applied while you hold down the hold pedal.

Value: OFF, LEGATO, SUSTAIN, LEGATO+SUSTAIN

Legato Retrigger (Legato Retrigger Switch)

Legato Retrigger is available if the Mono/Poly parameter is set to "MONO" and the Legato Switch parameter has a setting other than "OFF." The setting determines whether sounds are replayed (ON) or not (OFF) when performing legato. Normally you will leave this parameter "ON." If this is turned "OFF," pressing a second key while still holding down the first key will cause only the pitch to change; there will be no attack sound for the second key you pressed. Set this to "OFF" when performing wind and string phrases or when using modulation with the mono synth keyboard sound.

If this is set to "AUTO," retriggering will occur only if you play a key that is one octave or farther away.

Value: OFF, ON, AUTO

Let's say you have the Legato Switch set to "LEGATO," and the Legato Retrigger set to "OFF." When you try to sound a legato (by pressing a higher key while a lower key is held down), the pitch may sometimes not be able to rise all the way to the intended pitch (stopping instead at an intermediate pitch). This can occur because the limit of pitch rise, as determined at the wave level, has been exceeded. Additionally, if differing upper pitch limits are used for the waves of a Patch that uses multiple tones, it may stop being heard in MONO. When making large pitch changes, set the Legato Retrigger to "ON."

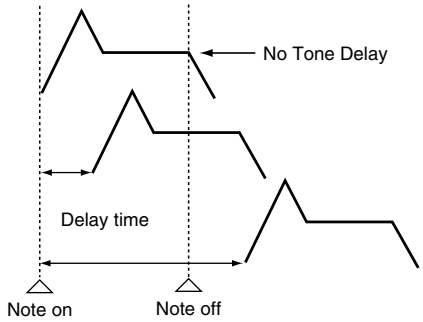
Miscellaneous Settings (Misc)

Tone Delay Mode

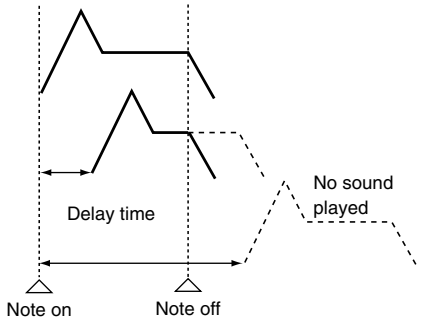
Selects the type of tone delay.

Value

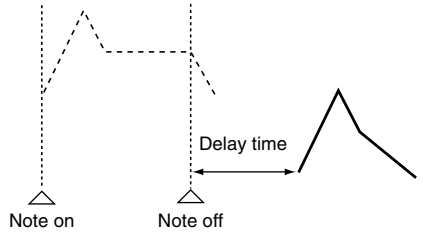
NORM: The tone begins to play after the time specified in the Delay Time parameter has elapsed.



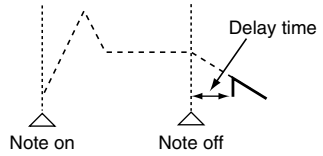
HOLD: Although the tone begins to play after the time specified in the Delay Time parameter has elapsed, if the key is released before the time specified in the Delay Time parameter has elapsed, the tone is not played.



OFF-N: Rather than being played while the key is pressed, the tone begins to play once the period of time specified in the Delay Time parameter has elapsed after release of the key. This is effective in situations such as when simulating noises from guitars and other instruments.



OFF-D: Rather than being played while the key is pressed, the tone begins to play once the period of time specified in the Delay Time parameter has elapsed after release of the key. Here, however, changes in the TVA Envelope begin while the key is pressed, which in many cases means that only the sound from the release portion of the envelope is heard.



NOTE

If you have selected a waveform that is a decay-type sound (i.e., a sound that fades away naturally even if the key is not released), selecting "OFF-N" or "OFF-D" may result in no sound being heard.

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. You can also make settings that shift the timing at which each tone is sounded. This differs from the Delay in the internal effects, in that by changing the sound qualities of the delayed tones and changing the pitch for each tone, you can also perform arpeggio-like passages just by pressing one key. You can also synchronize the tone delay time to the tempo of the sequencer.

NOTE

If you are not going to use Tone Delay, set the Delay Mode parameter to "NORM" and Delay Time parameter to "0."

- If the Structure parameters set in the range of "2"–"10," the output of tones 1 and 2 will be combined into tone 2, and the output of tones 3 and 4 will be combined into tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 92).

Tone Delay Time

Specifies the time from when the key is pressed (or if the Delay Mode parameter is set to "OFF-N" or "OFF-D," the time from when the key is released) until when the tone will sound.

Value: 0–127, Note

Tone Delay Time specifies the beat length for the synchronized tempo when the tempo that specifies the elapsed time until the tone is sounded (Patch Tempo) is synchronized with the tempo set in a sequencer.

(Example)

For a tempo of 120 (120 quarter notes occur in 1 minute (60 seconds))

Setting	Delay time
𝅗𝅥 (half note)	1 second (60 / 60 =1 (second))
♩ (quarter note)	0.5 seconds (60 / 120= 0.5 (seconds))
♪ (eighth note)	0.25 seconds (60 / 240= 0.25 (seconds))

Tone Env Mode

When a loop waveform (p. 88) is selected, the sound will normally continue as long as the key is pressed. If you want the sound to decay naturally even if the key remains pressed, set this to "NO SUS."

Range: NO SUS, SUST

NOTE

If a one-shot type Wave (p. 88) is selected, it will not sustain even if this parameter is set to "SUST."

Tone Receive Bender (Tone Receive Pitch Bend Switch)

For each tone, specify whether MIDI Pitch Bend messages will be received (ON), or not (OFF).

Value: OFF, ON

Tone Receive Expression (Tone Receive Expression Switch)

For each tone, specify whether MIDI Expression messages will be received (ON), or not (OFF).

Value: OFF, ON

Tone Receive Hold-1 (Tone Receive Hold Switch)

For each tone, specify whether MIDI Hold-1 messages will be received (ON), or not (OFF).

Value: OFF, ON

NOTE

If "NO SUS" is selected for Env Mode parameter, this setting will have no effect.

Tone Receive Pan Mode

For each tone, specify how pan messages will be received.

Value

CONT: Whenever Pan messages are received, the stereo position of the tone will be changed.

K-ON: The pan of the tone will be changed only when the next note is played. If a pan message is received while a note is sounding, the panning will not change until the next key is pressed.

NOTE

If **"PFX (Patch Multi-Effects)"** (p. 157) is on, the Tone Rx Pan Mode setting is ignored.

NOTE

The channels cannot be set so as not to receive Pan messages.

Tone Redamper Switch

You can specify, on an individual tone basis, whether or not the sound will be held when a Hold 1 message is received after a key is released, but before the sound has decayed to silence. If you want to sustain the sound, set this "ON." When using this function, also set the Tone Receive Hold-1 parameter "ON." This function is effective for piano sounds.

Value: OFF, ON

Matrix Control Settings (Control 1–4)

Matrix Control

Ordinarily, if you wanted to change tone parameters using an external MIDI device, you would need to send System Exclusive messages—MIDI messages designed exclusively for the Fantom-G. However, System Exclusive messages tend to be complicated, and the amount of data that needs to be transmitted can get quite large.

For that reason, a number of the more typical of the Fantom-G's tone parameters have been designed so they accept the use of Control Change (or other) MIDI messages for the purpose of making changes in their values. This provides you with a variety of means of changing the way patches are played.

You can change the sound of a patch in various ways, for example by using the pitch bend lever to change the speed of the LFO, or using your keyboard playing dynamics to open or close a filter.

The function which allows you use MIDI messages to make these changes in realtime to the tone parameters is called the **Matrix Control**. Up to four Matrix Controls can be used in a single patch.

To use the Matrix Control, specify which MIDI message (Source parameter) will be used to control which parameter (Destination parameter), and how greatly (Sns parameter), and the tone to which the effect is applied (Tone parameter).

Control 1–4 Source

Sets the MIDI message used to change the tone parameter with the Matrix Control.

Value

OFF: Matrix control will not be used.

CC01–31, CC32(OFF), 33–95: Control Change

PITCH BEND: Pitch Bend

AFTERTOUCH: Aftertouch

SYS CTRL1–SYS CTRL4: MIDI messages used as common matrix controls.

VELOCITY: Velocity (pressure you press a key with)

KEY FOLLOW: Key follow (keyboard position with C4 as 0)

TEMPO: The specified tempo (sequencer tempo) or the tempo of an external MIDI sequencer.

LFO1: LFO 1

LFO2: LFO 2

PITCH ENV: Pitch envelope

TVF ENV: TVF envelope

TVA ENV: TVA envelope

MEMO

Velocity and Key follow correspond to Note messages.

TIP

Although there are no MIDI messages for LFO 1 through TVA Envelope, they can be used as Matrix Control. In this case, you can change the tone settings in realtime by playing patches.

- If you want to use common controllers for the entire Fantom-G, select "SYS CTRL1"–"SYS CTRL4." MIDI messages used as System Control 1–4 are set with the System Ctrl 1–4 Source parameters (p. 301).

NOTE

There are parameters that determine whether or not Pitch Bend, Controller Number 11 (Expression) and Controller Number 64 (Hold 1) are received (p. 108). When these settings are "ON," and the MIDI messages are received, then when any change is made in the settings of the desired parameter, the Pitch Bend, Expression, and Hold 1 settings also change simultaneously. If you want to change the targeted parameters only, then set these to "OFF."

- The value of CC#67 (soft) is applied at the moment the note begins; any changes that occur during the note will not affect the parameters.

Control Destination 1–4 (Matrix Control Destination 1–4)

Matrix Control Destination selects the tone parameter that is to be controlled when using the Matrix Control. The following parameters can be controlled. When not controlling parameters with the Matrix Control, set this to "OFF." Up to four parameters can be specified for each Matrix Control, and controlled simultaneously.

MEMO

In this manual, Parameters that can be controlled using the Matrix Control are marked with a "★."

● Opening and Closing the Filter

CUTOFF: Changes the cutoff frequency.

RESONANCE: Emphasizes the overtones in the region of the cutoff frequency, adding character to the sound.

● Changing the Volume, Pan, and Pitch

LEVEL: Changes the volume level.

PAN: Changes the pan.

PITCH: Changes the pitch.

Changing How the Effects Are Applied

OUTPUT LEVEL: Changes the amount of original sound.

CHORUS SEND: Changes the amount of chorus.

REVERB SEND: Changes the amount of reverb.

Applying LFO to Modulate Sounds

LFO1/LFO2 PITCH DEPTH: Changes the vibrato depth.

LFO1/LFO2 TVF DEPTH: Changes the wah depth.

LFO1/LFO2 TVA DEPTH: Changes the tremolo depth.

LFO1/LFO2 PAN DEPTH: Changes the effect that the LFO will have on pan.

LFO1/LFO2 RATE: Changes the speed of the LFO cycles. The speed will not change if LFO Rate is set to "note."

Changing the Pitch Envelope

PIT ENV A-TIME: Changes the Env Time 1 parameter of the pitch envelope.

PIT ENV D-TIME: Changes the Env Time 2 and Env Time 3 parameters of the pitch envelope.

PIT ENV R-TIME: Changes the Env Time 4 parameter of the pitch envelope.

Changing the TVF Envelope

TVF ENV A-TIME: Changes the Env Time 1 parameter of the TVF envelope.

TVF ENV D-TIME: Changes the Env Time 2 and Env Time 3 parameters of the TVF envelope.

TVF ENV R-TIME: Changes the Env Time 4 parameter of the TVF envelope.

Changing the TVA Envelope

TVA ENV A-TIME: Changes the Env Time 1 parameter of the TVA envelope.

TVA ENV D-TIME: Changes the Env Time 2 and Env Time 3 parameters of the TVA envelope.

TVA ENV R-TIME: Changes the Env Time 4 parameter of the TVA envelope.

Splitting Tones That Are Played

TMT

TIP

If the Matrix Control is used to split tones, set the TMT Velocity Control parameter to "OFF," and the TMT Control Switch parameter to "ON" (p. 95).

- If the Matrix Control is used to split tones, we recommend setting the Control Sens to "+63." Selecting a lower value may prevent switching of the tones. Furthermore, if you want to reverse the effect, set the value to "-63."
- If you want to use matrix control to switch smoothly between tones, use the Velocity Fade Width Lower and Velocity Fade Width Upper parameters (p. 95). The higher the values set, the smoother the switch is between the tones.

Changing the Depth of Frequency Modulation for FXM

FXM DEPTH

Changing Specific PFX Parameters

PFX 1–4: Change the parameter that was specified by PFX Control (p. 157) parameter.

NOTE

If you have not made the necessary settings for using the PFX, the PFX will not be applied even if you attempt to control it as a Matrix Control destination.

If you're not using Matrix Control

OFF: Matrix Control will not be used.

Control Sens 1–4 (Matrix Control Sens 1–4)

Sets the amount of the Matrix Control's effect that is applied. If you wish to modify the selected parameter in a positive (+) direction – i.e., a higher value, toward the right, or faster etc. – from its current setting, select a positive (+) value. If you wish to modify the selected parameter in a negative (-) direction – i.e., a lower value, toward the left, or slower etc. – from its current setting, select a negative (-) value. For either positive or negative settings, greater absolute values will allow greater amounts of change. Set this to "0" if you don't want to apply the effect.

Value: -63– +63

Control Tone 1–4 (Tone Control Switch 1–4)

Matrix Control Tone selects the tone to which the effect is applied when using the Matrix Control.

Value

OFF: The effect will not be applied.

ON: The effect will be applied.

REVS: The effect will be applied in reverse.

Setting Effects for a Patch (PFX)

Press the [F5 (PFX)] button to access the PFX (Patch Multi-effect) editing screen (p. 157).

cf.

For details regarding effect settings, refer to the pages shown below.

- **"Making Effect Settings"** (p. 151)
- **"Making Patch Multi-Effects Settings (PFX)"** (p. 157)

Creating a Rhythm Set

With the Fantom-G, you have total control over a wide variety of settings. Each item that can be set is known as a **parameter**. When you change the values of parameters, you are doing what is referred to as **Editing**. This chapter explains the procedures used in creating rhythm sets, and the functions of the rhythm set parameters.

How to Make Rhythm Set Settings

Start with an existing rhythm set and edit it to create a new rhythm set. Rhythm sets are created from a collection of multiple rhythm tones (percussion instruments). You can change the assignments of the rhythm tones for each key with rhythm set edit.

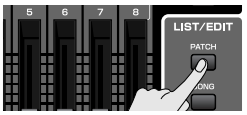
The rhythm tone assigned to each key consists of up to four waves. Rhythm tones and waves are related in the same way that patches and tones are related.

Editing a Rhythm Set Quickly (Patch Zoom Edit)

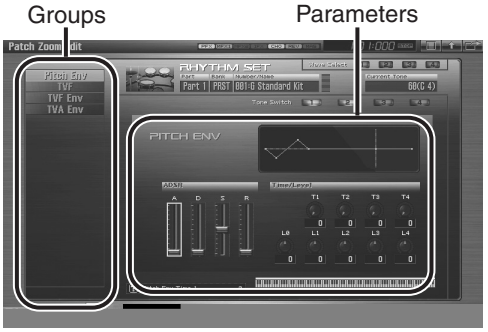
The Patch Zoom Edit screen allows you to edit the most important parameters of a patch. If you want to have access to all of the parameters, use the Patch Pro Edit screen (p. 114).

1. Select the rhythm set whose settings you want to edit (p. 52).

2. Press [PATCH].



The Patch Zoom Edit screen appears.



F-key operations in the Patch Zoom Edit screen

F-key	Explanation		Page
F1 Group/Up	Moves the edit group tab upward.		–
F2 Group/Down	Moves the edit group tab downward.		–
F4 Util Menu	Rhythm Set Initialize	Initializes the settings of the currently selected rhythm set.	p. 115
	Rhythm Key Initialize	Initializes the settings of the currently selected rhythm key.	p. 115
	Rhythm Tone Copy	Copies settings from a desired rhythm set to the currently selected rhythm set.	p. 115
F5 PFX	Accesses the PFX (Patch Multi-effect) editing screen.		p. 157
F6 Pro Edit	Accesses the Patch Pro Edit screen, where you can edit all of the parameters.		p. 114
F7 Part Select	Selects the part to be edited.		–
F8 Wave Sw/Sel	Selects the tones that will sound.		p. 113

3. The parameters are organized into several editing groups. Press [F1 (Up)] or [F2 (Down)] to select the tab for the editing group that contains the parameter you wish to edit.

TIP

For details on each parameter, refer to the following pages.

Parameter name	Page
Pitch Envelope	p. 121
TVF	p. 122
TVF Envelope	p. 124
TVA Envelope	p. 125

- **To change the part that you want to edit**
  Press [F7 (Part Select)].

4. Press [CURSOR] button to move the cursor to the parameter you wish to modify.

5. Press [F8 (Wave Sw/Sel)] to select the wave that you want to edit.
The Wave Switch/Select window will appears.

Press any one of the [F5 (Select 1)]–[F8 (Select 4)] buttons to select the wave that you want to edit.

- **Simultaneously editing the same parameter of multiple waves**
  To select the waves you want to edit at the same time, simultaneously press two or more of the [F5 (Select 1)]–[F8 (Select 4)] buttons.
- **To switch a wave on/off**
  Press a [F1 (Sw 1)]–[F4 (Sw 4)] button to switch the corresponding wave on/off.

TIP

You can also use the pads to select waves and switch them on/off.
→ p. 197

6. When you have made your selection, press [EXIT].

7. Turn the VALUE dial, or Press [INC] [DEC] to set a value.
If you've selected several waves for editing, their values will change while maintaining the difference between them.

8. Repeat steps 3–7 to set each parameter you want to edit.

9. If you wish to save the changes you've made, press [WRITE] to perform the Save operation (p. 116). If you do not wish to save changes, press [EXIT] to return to the Single Play screen.

If you return to the Single Play screen without saving, the "" symbol will be displayed at the right of the rhythm set name, indicating that the rhythm set settings have been edited.

NOTE

The settings you edit are temporary, and will be lost if you turn off the power, switch the sound generator mode, or select a different sound.

Editing All Parameters (Patch Pro Edit)

The Patch Pro Edit screen allows you to edit all parameters of a patch.

1. Select the rhythm set whose settings you want to edit (p. 52).

TIP

If you want to create a rhythm set from scratch (rather than starting from an existing rhythm set), execute the **Initialize** operation (p. 115).

2. Press [PATCH] twice.

The Patch Pro Edit screen appears.

F-key operations in the Patch Pro Edit screen

3. The parameters are organized into several editing groups. Press [F1 (Up)] or [F2 (Down)] to select the tab for the editing group that contains the parameter you wish to edit.

cf.

See **"Functions of Rhythm Set Parameters"** (p. 117) for each parameter's functions.

- **To change the part that you want to edit**

  Press [F7 (Part Select)].

4. Use or to move the cursor to the parameter you wish to modify.

5. Press [F8 (Wave Sw/Sel)] to select the wave that you want to edit.

The Wave Switch/Select window will appears.

Press any one of the [F5 (Select 1)]–[F8 (Select 4)] buttons to select the wave that you want to edit.

- **Simultaneously editing the same parameter of multiple waves**

  To select the waves you want to edit at the same time, simultaneously press two or more of the [F5 (Select 1)]–[F8 (Select 4)] buttons.

- **To switch a wave on/off**

  Press a [F1 (Sw 1)]–[F4 (Sw 4)] button to switch the corresponding wave on/off.

TIP

You can also use the pads to select waves and switch them on/off. → p. 197

6. When you have made your selection, press [EXIT].

7. Turn the VALUE dial, or Press [INC] [DEC] to set a value.

8. Repeat steps 3–7 to set each parameter you want to edit.

9. If you wish to save the changes you've made, press [WRITE] to perform the Save operation (p. 116). If you do not wish to save changes, press [EXIT] to return to the Single Play screen.

If you return to the Single Play screen without saving, the " " symbol will be displayed at the right of the rhythm set name, indicating that the rhythm set settings have been edited.

NOTE

The settings you edit are temporary, and will be lost if you turn off the power, switch the sound generator mode, or select a different sound.

Initializing Rhythm Set/Key Settings (Rhythm Set Initialize/Rhythm Key Initialize)

"Initialize" means to return the settings of the currently selected sound to a standard set of values or to the factory settings.

NOTE

The Initialize operation will affect only the currently selected sound. If you wish to restore all of the Fantom's settings to their factory values, perform a Factory Reset (p. 284).

1. **Select the rhythm set that you want to initialize (p. 52).**
2. **Press [PATCH].**

3. **Press [F4 (Util Menu)].**
   The Rhythm Set Utility Menu window appears.
4. **Press ▲ or ▼ to choose what you want to initialize, and then press [F8 (Select)].**
   - **Rhythm Set Initialize:**
     All keys of the rhythm set will be initialized. (This is the same as the rhythm set initialize procedure described above.)
   - **Rhythm Key Initialize:**
     One key will be initialized.
5. **Press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
   A message will ask you for confirmation.
6. **Press [F7 (OK)] to execute.**
   To cancel, press [F8 (EXIT)].

Copying Rhythm Tone Settings (Rhythm Tone Copy)

This operation copies the settings of any desired rhythm set to the currently selected rhythm set. You can use this feature to make the editing process faster and easier.

1. **Select the copy-destination Rhythm set (p. 52).**
2. **Press [PATCH].**
3. **Press [F4 (Util Menu)].**
   The Rhythm Utility Menu window appears.
4. **Press ▲ or ▼ to choose "Rhythm Tone Copy," and then press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
   The Rhythm Tone Copy window appears.
5. **Using [CURSOR] to move the cursor, select the "Source (copy-source)" bank and number, and the rhythm tone.**
6. **Turn the VALUE dial or use [INC] [DEC] to make the setting.**
7. **Using [CURSOR] to move the cursor, select the "Destination (copy-destination)" rhythm tone number.**
8. **Turn the VALUE dial or use [INC] [DEC] to make the setting.**
9. **Press [F8 (Execute)].**
   A message will ask for confirmation.
10. **Press [F7 (OK)] to return to the Rhythm Edit screen.**
    To cancel, press [F8 (EXIT)].

The Compare Function

For the Rhythm Tone Copy operations, you can use the Compare function.
If you want to play the copy-source patch, press [F6 (Compare)].

NOTE

The rhythm set auditioned using the Compare function may sound slightly different than when it is played normally.

Cautions When Selecting a Waveform

The sounds of the Fantom-G are based on complex PCM waveforms, and if you attempt to make settings that are contrary to the type of the original waveform, the results will not be as you expect.

The internal waveforms of the Fantom-G fall into the following two groups.

One-shot: These waveforms contain sounds that have short decays. A one-shot waveform records the initial rise and fall of the sound. Some of the Fantom-G's one-shot waveforms are sounds that are complete in themselves, such as percussive instrument sounds. The Fantom-G also contains many other one-shot waveforms that are elements of other sounds. These include attack components such as piano-hammer sounds and guitar fret noises.

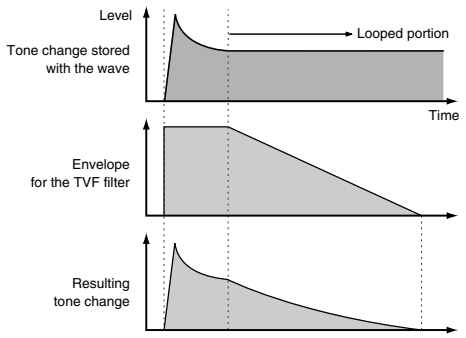
Looped: These waveforms include sounds with long decays as well as sustained sounds. Loop waveforms repeatedly play back (loop) the portion of the waveform after the sound has reached a relatively steady state. The Fantom-G's looped waveforms also include components of other sounds, such as piano-string resonant vibrations and the hollow sounds of brass instruments.

Cautions When Using a One-shot Waveform

It is not possible to use the envelope to modify a one-shot waveform to create a decay that is longer than the original waveform, or to turn it into a sustaining sound. If you were to program such an envelope, you would be attempting to shape a portion of the sound that simply doesn't exist, and the envelope would have no effect.

Cautions When Using a Loop Waveform

With many acoustic instruments such as piano and sax, extreme timbral changes occur during the first few moments of each note. This initial attack is what defines much of the instrument's character. For such waveforms, it is best to use the complex tonal changes of the attack portion of the waveform just as they are, and to use the envelope only to modify the decay portion. If you attempt to use the envelope to modify the attack portion as well, the characteristics of the original waveform may prevent you from getting the sound that you intend.



Saving Rhythm Sets You've Created (Write)

The settings you edit are temporary, and will be lost if you turn off the power, switch the sound generator mode, or select a different sound. If you want to keep the modified sound, you must save it in the user bank.

When you edit the rhythm set settings, the "" symbol will appear in the Single Play screen. When you save the rhythm set, the "" symbol will disappear.

NOTE

When you perform the save procedure, the data that previously occupied the save destination will be lost.

1. **Make sure that the Rhythm Set you wish to save is selected.**

2. **Press [WRITE].**
   The WRITE MENU window appears.

3. **Select "Patch / Rhythm / Sample Set."**
   Press ▲ or ▼ to select "Patch / Rhythm / Sample Set," and then press [F8 (Select)].
   The Rhythm Set Name window appears.

4. **Assign a name to the rhythm set.**

   cf.

   For details on assigning names, refer to **"Assigning a Name"** (p. 42).

5. **When you have finished inputting the name, press [F8 (OK)].**
   A screen will appear, allowing you to select the write-destination rhythm set.

6. Turn the VALUE dial or use [INC] [DEC] to select the rhythm set number.

TIP

By pressing [F6 (Compare)] you can check the save-destination Rhythm set (Compare function).

7. Press [F8 (Write)].
A message will ask you for confirmation.

NOTE

Never switch off the Fantom-G while data is being saved.

8. Press [F7 (OK)] to execute the save operation.
To cancel, press [F8 (EXIT)].

Auditioning the Save-Destination Rhythm Set (Compare)

Before you save a rhythm set, you can audition the rhythm set which currently occupies the save destination to make sure that it is one you don't mind overwriting. This can help prevent important rhythm sets from being accidentally overwritten and lost.

1. Follow the procedure in "Saving Rhythm Sets You've Created (Write)" through step 5 to select the save destination.

2. Press [F6 (Compare)] to turn on.
The Rhythm Compare window appears, making it possible to sound the currently selected save destination rhythm set.

3. Play the keyboard or pad to sound the save destination rhythm set, then check whether you really want to overwrite it.

NOTE

The rhythm set auditioned using the Compare function may sound slightly different than when it is played normally.

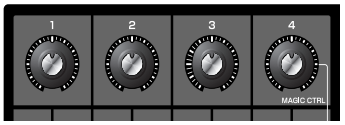
4. If you wish to change the save destination, re-specify the save-destination rhythm set by turning the VALUE dial.

5. Press [F8 (Write)].
A message will ask you for confirmation.

6. Press [F7 (OK)] once again to execute the Save operation.

Functions of Rhythm Set Parameters

This section explains the functions the different rhythm set parameters have, as well as the composition of these parameters. If a number is displayed for the parameter name, (1 , 2 , 3 , 4), you can use the realtime controller knob of the corresponding number (the left most knob is number 1, the right most knob is number 4) to set the value.



Making Settings Common to the Entire Rhythm Set (General)

NOTE

Rhythm Set Name and Rhythm Level applies to the entire rhythm set; the other parameters are set individually for each rhythm tone.

Rhythm Set Name

Specifies the name of the rhythm set.
By pressing [ENTER], you can assign a name to the rhythm set.

Value: space, A–Z, a–z, 0–9, ! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | }

cf.

For details on entering a name, refer to **"Assigning a Name"** (p. 42).

Rhythm Level (Rhythm Set Level)

Sets the volume of the rhythm set.
Value: 0–127

TIP

The volume levels of the tones from which the rhythm set is composed is set with the Tone Level parameter (p. 124). The volume levels of the Waves from which the rhythm tone is composed is set with the Wave Level parameter (p. 120).

Rhythm Tone Name

You can assign a name of up to 12 characters to the rhythm tone.

By pressing [ENTER], you can assign a name to the rhythm tone.

Value: space, A-Z, a-z, 0-9, ! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | }

cf.

For details on assigning names, refer to **"Assigning a Name"** (p. 42)

Assign Type

Assign Type sets the way sounds are played when the same key is pressed a number of times.

Value

MULTI: Layer the sound of the same keys. Even with continuous sounds where the sound plays for an extended time, such as with crash cymbals, the sounds are layered, without previously played sounds being eliminated.

SINGLE: Only one sound can be played at a time when the same key is pressed. With continuous sounds where the sound plays for an extended time, the previous sound is stopped when the following sound is played.

Mute Group

On an actual acoustic drum set, an open hi-hat and a closed hi-hat sound can never occur simultaneously. To reproduce the reality of this situation, you can set up a Mute Group.

The Mute Group function allows you to designate two or more rhythm tones that are not allowed to sound simultaneously. Up to 31 Mute Groups can be used. rhythm tones that are not belong to any such group should be set to "OFF."

Value: OFF, 1–31

Tone Env Mode (Rhythm Tone Envelope Mode)

When a loop waveform (p. 116) is selected, the sound will normally continue as long as the key is pressed. If you want the sound to decay naturally even if the key remains pressed, set this to "NO-SUS."

Value: NO-SUS, SUSTAIN

NOTE

If a one-shot type Wave (p. 116) is selected, it will not sustain even if this parameter is set to "SUSTAIN."

Tone Pitch Bend Range (Rhythm Tone Pitch Bend Range)

Specifies the amount of pitch change in semitones (4 octaves) that will occur when the Pitch Bend Lever is moved. The amount of change when the lever is tilted is set to the same value for both left and right sides.

Value: 0–48

Tone Receive Expression (Rhythm Tone Receive Expression Switch)

For each rhythm tone, specify whether MIDI Expression messages will be received (ON), or not (OFF).

Value: OFF, ON

Tone Receive Hold-1 (Rhythm Tone Receive Hold-1 Switch)

For each rhythm tone, specify whether MIDI Hold-1 messages will be received (ON), or not (OFF).

Value: OFF, ON

NOTE

If "NO-SUS" is selected for Env Mode parameter (p. 118), this setting will have no effect.

Tone Receive Pan Mode (Rhythm Tone Receive Pan Mode)

For each rhythm tone, specify how pan messages will be received.

Value

CONTINUOUS: Whenever Pan messages are received, the stereo position of the tone will be changed.

KEY-ON: The pan of the tone will be changed only when the next note is played. If a pan message is received while a note is sounding, the panning will not change until the next key is pressed.

NOTE

If **"PFX (Patch Multi-Effects)"** (p. 157) is on, the Tone Receive Pan Mode setting is ignored.

NOTE

The channels cannot be set so as not to receive Pan messages.

One Shot Mode

The sound will play back until the end of the waveform (or the end of the envelope, whichever comes first). The result will be the same as when the envelope's Tone Env Mode parameter (p. 118) is set to NO-SUS. If you have set Wave Group (p. 119) to Sample, the loop setting will be forced to ONE SHOT.

Value: OFF, ON

Modifying Waveforms (Wave)

MEMO

With rhythm tones, sounds are created by combining up to four Waves (eight for stereo).

Tips on Creating a Rhythm Tone

The Waves for the bass drum, snare, hi-hat, toms, and other percussion instruments are each assigned to one rhythm tone. When adding 3D effects to the sound, make the Pan settings for each rhythm tone individually.

Wave Group

Select the groups containing the Waves comprising the rhythm tone.

Value

INT: Waveforms stored in internal

SAMP: Sample waveforms

Wave Number L (Mono)
Wave Number R

This selects the Waves comprising the rhythm tone. Along with the Wave number, the Wave name appears at the lower part of the display.

When in monaural mode, only the left side (L) is specified. When in stereo, the right side (R) is also specified.

Value: OFF, 1– (The upper limit will depend on the wave group.)

MEMO

If you want to select a left/right pair of Waves, select the left (L) Wave number and then press [F3 (Set Stereo)]; the right (R) (Wave) will be recalled.

* *When using a sample in stereo, you must specify the same number for L and R.*

Wave Gain

Sets the gain (amplification) of the waveform. The value changes in 6 dB (decibel) steps—an increase of 6 dB doubles the waveform's gain.

Value: -6, 0, +6, +12

Wave Tempo Sync

When you wish to synchronize a Phrase Loop to the clock (tempo), set this to "ON." This is valid only when selected as the sample for a wave.

Value: OFF, ON

NOTE

- If a sample is selected for a tone, you must first set the BPM (tempo) parameter of the sample.
- If a sample is selected for a tone, Wave Tempo Sync will require twice the normal number of voices.

Phrase Loop

Phrase loop refers to the repeated playback of a phrase that's been pulled out of a song (e.g., by using a sampler). One technique involving the use of Phrase Loops is the excerpting of a Phrase from a pre-existing song in a certain genre, for example dance music, and then creating a new song with that Phrase used as the basic motif. This is referred to as "Break Beats."

Realtime Time Stretch

If the wave group is "SAMP," and the Wave Tempo Sync parameter is turned "ON," you can vary the playback speed of the waveform without affecting the pitch.

Wave FXM Switch

This sets whether FXM will be used (ON) or not (OFF).

Value: OFF, ON

FXM

FXM (Frequency Cross Modulation) uses a specified waveform to apply frequency modulation to the currently selected waveform, creating complex overtones. This is useful for creating dramatic sounds or sound effects.

Wave FXM Color

Specifies how FXM will perform frequency modulation. Higher settings result in a grainier sound, while lower settings result in a more metallic sound.

Value: 1–4

Wave FXM Depth

Specifies the depth of the modulation produced by FXM.

Value: 0–16

NOTE

When the Tempo Sync parameter is set to "ON," settings related to Pitch (p. 121) and FXM (p. 120) are disabled.

Changing How a Rhythm Tone Is Sounded (WMT)

The WMT (Wave Mix Table) uses key velocity to control the four waveforms assigned to the rhythm tone.

Wave Coarse Tune

Adjusts the pitch of the waveform's sound up or down in semitone steps (+/-4 octaves).

Value: -48– +48

TIP

The Coarse Tune of the entire rhythm tone is set by the Tone Coarse parameter (p. 121).

Wave Fine Tune

Adjusts the pitch of the waveform's sound up or down in 1-cent steps (+/-50 cents).

Value: -50– +50

MEMO

One cent is 1/100th of a semitone.

TIP

The Fine Tune of the entire rhythm tone is set by the Tone Fine Tune parameter (p. 121).

Wave Level

You can set the volume of the waveform.

Value: 0–127

TIP

The volume level of each rhythm tone is set with the Tone Level parameter; the volume levels of the entire rhythm set is set with the Rhythm Level parameter (p. 117).

Wave Pan

This specifies the pan of the waveform. "L64" is far left, "0" is center, and "63R" is far right.

Value: L63–0–63R

Wave Random Pan Switch

Use this setting to cause the waveform's panning to change randomly each time a key is pressed (ON) or not (OFF).

Value: OFF, ON

* *The range of the panning change is set by the Rnd Pan Depth parameter (p. 124).*

Wave Alternate Pan Switch

This setting causes panning of the waveform to be alternated between left and right each time a key is pressed. Set Alternate Pan Switch to "ON" to pan the Wave according to the Alter Pan Depth parameter (p. 125) settings, or to "REV" 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."

Range: OFF, ON, REV

WMT Velocity Control (WMT Velocity Control Switch)

WMT Velocity Control determines whether a different rhythm tone is played (ON) or not (OFF) depending on the force with which the key is played (velocity).

When set to "RND," the rhythm set's constituent rhythm tones will sound randomly, regardless of any Velocity messages.

Value: OFF, ON, RANDOM

Velocity Fade Width Lower

This determines what will happen to the tone's level when the tone is played at a velocity lower than its specified velocity range. Higher settings produce a more gradual change in volume. If you want notes played outside the specified key velocity range to not be sounded at all, set this to "0."

Value: 0–127

Velocity Range Lower

This sets the lowest velocity at which the waveform will sound. Make these settings when you want different waveforms to sound in response to notes played at different strengths.

Value: 1–UPPER

Velocity Range Upper

This sets the highest velocity at which the waveform will sound. Make these settings when you want different waveforms to sound in response to notes played at different strengths.

Value: LOWER–127

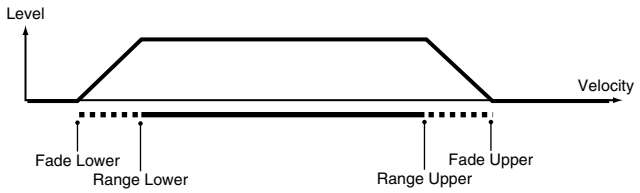
NOTE

If you attempt to set the Lower velocity limit above the Upper, or the Upper below the Lower, the other value will automatically be adjusted to the same setting.

Velocity Fade Width Upper

This determines what will happen to the tone's level when the tone is played at a velocity greater than its specified velocity range. Higher settings produce a more gradual change in volume. If you want notes played outside the specified key velocity range to not be sounded at all, set this to "0."

Value: 0–127



Modifying Pitch (Pitch/Pitch Env)

Pitch

Tone Coarse Tune (Rhythm Tone Coarse Tune)

Selects the pitch at which a rhythm tone sounds.

Value: C-1– G9

TIP

Set the coarse tuning for Waves comprising the rhythm tones with the Wave Coarse Tune parameter (p. 120).

Tone Fine Tune (Rhythm Tone Fine Tune)

Adjusts the pitch of the rhythm tone's sound up or down in 1-cent steps (+/-50 cents).

Value: -50– +50

MEMO

One cent is 1/100th of a semitone.

TIP

Set the fine tuning for Waves comprising the rhythm tones with the Wave Fine Tune parameter (p. 120).

Tone Random Pitch Depth

This specifies the width of random pitch deviation that will occur each time a key is pressed. If you do not want the pitch to change randomly, set this to "0." These values are in units of cents (1/100th of a semitone).

Value: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200

Pitch Env (Pitch Envelope)

Pitch Env Depth

Adjusts the effect of the Pitch Envelope. Higher settings will cause the pitch envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.

Value: -12– +12

Pitch Env Velocity Sens

Keyboard playing dynamics can be used to control the depth of the pitch envelope. If you want the pitch envelope to have more effect for strongly played notes, set this parameter to a positive (+) value. If you want the pitch envelope to have less effect for strongly played notes, set this to a negative (-) value.

Value: -63– +63

Pitch Env Time 1 Velocity Sens

This allows keyboard dynamics to affect the Time 1 of the Pitch envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

Pitch Env Time 4 Velocity Sens

Use this parameter when you want key release speed to affect the Time 4 value of the pitch envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

Pitch Env Time 1–4

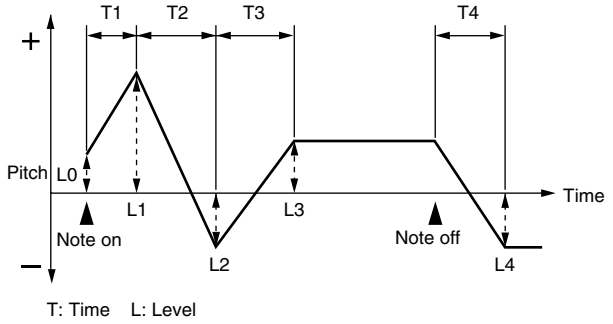
Specify the pitch envelope times (Time 1–Time 4). Higher settings will result in a longer time until the next pitch is reached. (For example, Time 2 is the time over which the pitch changes from Level 1 to Level 2.)

Value: 0–127

Pitch Env Level 0–4

Specify the pitch envelope levels (Level 0–Level 4). It determines how much the pitch changes from the reference pitch (the value set with Coarse Tune or Fine Tune on the Pitch screen) at each point. Positive (+) settings will cause the pitch to be higher than the standard pitch, and negative (-) settings will cause it to be lower.

Value: -63– +63



Modifying the Brightness of a Sound with a Filter (TVF/TVF Env)

TVF

Filter Type

Selects the type of filter. A filter cuts or boosts a specific frequency region to change a sound's brightness, thickness, or other qualities.

Value

OFF: No filter is used.

LPF: Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency (Cutoff Freq) in order to round off, or un-brighten the sound. This is the most common filter used in synthesizers.

BPF: Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency (Cutoff Frequency), and cuts the rest. This can be useful when creating distinctive sounds.

HPF: High Pass Filter. This cuts the frequencies in the region below the cutoff frequency (Cutoff Frequency). This is suitable for creating percussive sounds emphasizing their higher ones.

PKG: Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency (Cutoff Frequency). You can use this to create wah-wah effects by employing an LFO to change the cutoff frequency cyclically.

LPF2: Low Pass Filter 2. Although frequency components above the Cutoff frequency (Cutoff Frequency) are cut, the sensitivity of this filter is half that of the LPF. This makes it a comparatively warmer low pass filter. This filter is good for use with simulated instrument sounds such as the acoustic piano.

LPF3: Low Pass Filter 3. Although frequency components above the Cutoff frequency (Cutoff Frequency) are cut, the sensitivity of this filter changes according to the Cutoff frequency. While this filter is also good for use with simulated acoustic instrument sounds, the nuance it exhibits differs from that of the LPF2, even with the same TVF Envelope settings.

NOTE

If you set "LPF2" or "LPF3," the setting for the Resonance parameter will be ignored.

Cutoff Frequency

Selects the frequency at which the filter begins to have an effect on the waveform's frequency components.

Value: 0–127

With "LPF/LPF2/LPF3" selected for the Filter Type parameter, lower cutoff frequency settings reduce a tone's upper harmonics for a more rounded, warmer sound. Higher settings make it sound brighter.

If "BPF" is selected, harmonic components will change depending on the TVF Cutoff Frequency setting. This can be useful when creating distinctive sounds.

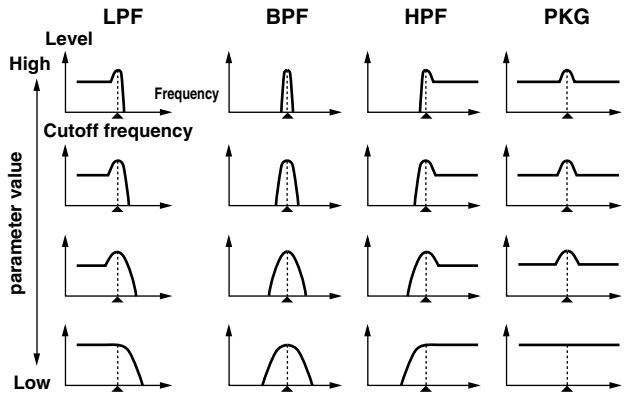
With "HPF" selected, higher Cutoff Frequency settings will reduce lower harmonics to emphasize just the brighter components of the sound.

With "PKG" selected, the harmonics to be emphasized will vary depending on Cutoff Frequency setting.

Resonance

Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings can produce oscillation, causing the sound to distort.

Value: 0–127



Cutoff Velocity Curve

Selects one of the following seven curves that determine how keyboard playing dynamics (velocity) influence the cutoff frequency. Set this to "FIXED" if you don't want the Cutoff frequency to be affected by the keyboard velocity.

Value: FIXED, 1–7

Cutoff Velocity Sens

Use this parameter when changing the cutoff frequency to be applied as a result of changes in playing velocity. If you want strongly played notes to raise the cutoff frequency, set this parameter to positive (+) settings. If you want strongly played notes to lower the cutoff frequency, use negative (-) settings.

Value: -63– +63

Resonance Velocity Sens

This allows keyboard velocity to modify the amount of Resonance. If you want strongly played notes to have a greater Resonance effect, set this parameter to positive (+) settings. If you want strongly played notes to have less Resonance, use negative (-) settings.

Value: -63– +63

TVF Env Velocity Curve

Selects one of the following 7 curves that will determine how keyboard playing dynamics will affect the TVF envelope. Set this to "FIXED" if you don't want the TVF Envelope to be affected by the keyboard velocity.

Value: FIXED, 1–7

TVF Env Velocity Sens

Specifies how keyboard playing dynamics will affect the depth of the TVF envelope. Positive (+) settings will cause the TVF envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less.

Value: -63– +63

TVF Env Time 1 Velocity Sens

This allows keyboard dynamics to affect the Time 1 of the TVF envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

TVF Env Time 4 Velocity Sens

The parameter to use when you want key release speed to control the Time 4 value of the TVF envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

TVF Env

TVF Env Depth

Specifies the depth of the TVF envelope. Higher settings will cause the TVF envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.

Value: -63– +63

TVF Env Time 1–4 (TVF Envelope Time 1–4)

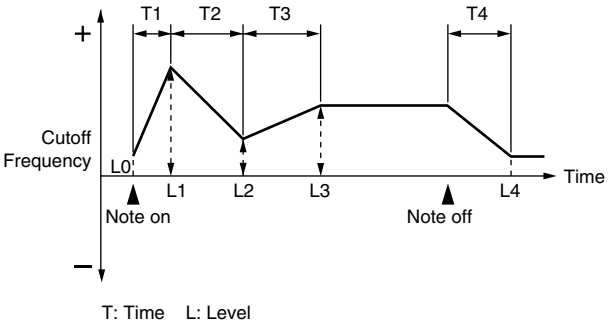
Specify the TVF envelope times (Time 1– Time 4). Higher settings will lengthen the time until the next cutoff frequency level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.)

Value: 0–127

TVF Env Level 0–4 (TVF Envelope Level 0–4)

Specify the TVF envelope levels (Level 0–Level 4). These settings specify how the cutoff frequency will change at each point, relative to the standard cutoff frequency (the cutoff frequency value specified in the TVF screen).

Value: 0–127



Adjusting the Volume (TVA/TVA Env)

TVA

Tone Level (Rhythm Tone level)

Sets the volume of the rhythm tone. Use this parameter to adjust the volume balance between rhythm tones.

Value: 0–127

TIP

The volume levels of the Waves from which the rhythm tone is composed is set with the WMT1–4 Wave Level parameter (p. 120).

Level Velocity Curve

You can select from seven curves that determine how keyboard playing strength will affect the volume. If you do not want the volume of the rhythm tone to be affected by the force with which you press the key, select "FIXED."

Value: FIXED, 1–7

Level Velocity Sens

Set this when you want the volume of the rhythm tone to change depending on the force with which you press the keys. Set this to a positive (+) value to have the changes in rhythm tone volume increase the more forcefully the keys are played; to make the tone play more softly as you play harder, set this to a negative (-) value.

Value: -63– +63

Tone Pan (Rhythm Tone Pan)

Sets the pan for the rhythm tone. "L64" is far left, "0" is center, and "63R" is far right.

Value: L64–0–63R

TIP

Set the Pan for Waves comprising the rhythm tones with the Wave Pan parameter (p. 120).

Random Pan Depth

Use this parameter when you want the stereo location to change randomly each time you press a key. Higher settings will produce a greater amount of change.

Value: 0–63

NOTE

This will affect only waves whose Wave Rnd Pan Sw parameter (p. 120) is ON.

Alternate Pan Depth

This setting causes panning to be alternated between left and right each time a key is pressed. Higher settings will produce a greater amount of change. "L" or "R" settings will reverse the order in which the pan will alternate between left and right. For example if two rhythm tones are set to "L" and "R" respectively, the panning of the two rhythm tones will alternate each time they are played.

Value: L63–0–63R

NOTE

This will affect only waves whose Wave Alter Pan Sw parameter (p. 120) is ON or REV.

Relative Level

Corrects for the volume of the rhythm tone.
This parameter is set by the key-based controller system exclusive message. Normally, you should leave it set to 0.

Value: -64– +63

NOTE

If the rhythm tone level is set to 127, the volume will not increase beyond that point.

TVA Env

TVA Env Time 1 Velocity Sens

This allows keyboard dynamics to affect the Time 1 of the TVA envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

TVA Env Time 4 Velocity Sens

The parameter to use when you want key release speed to control the Time 4 value of the TVA envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

TVA Env Time 1–4

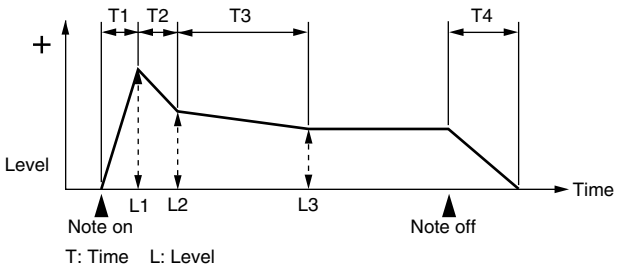
Specify the TVA envelope times (Time 1– Time 4). Higher settings will lengthen the time until the next volume level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.)

Value: 0–127

TVA Env Level 1–3

Specify the TVA envelope levels (Level 1–Level 3). These settings specify how the volume will change at each point, relative to the standard volume (the Rhythm Tone Level value specified in the TVA screen).

Value: 0–127



Output Settings (Output)

Tone Output Assign

Specifies how the direct sound of each tone will be output.

Value:

PFX: Output through patch multi-effects.
DRY: Output without passing through patch multi-effects.

Tone Output Level

Specifies the signal level of each tone.

Value: 0–127

Tone Chorus Send Level

Specifies the level of the signal sent to the chorus for each tone.

Value: 0–127

Tone Reverb Send Level

Specifies the level of the signal sent to the reverb for each tone.

Value: 0–127

Setting Effects for a Rhythm Set (PFX)

You can press the [F5 (PFX)] button to access the PFX (Patch Multi-effect) editing screen (p. 157).

cf.

For details regarding effect settings, refer to the pages shown below.

- **"Making Effect Settings"** (p. 151)
- **"Making Patch Multi-Effects Settings (PFX)"** (p. 157)

Creating a Sample Set

With the Fantom-G, you have total control over a wide variety of settings. Each item that can be set is known as a **parameter**. When you change the values of parameters, you are doing what is referred to as **Editing**. This chapter explains the procedures used in creating sample sets, and the functions of the sample set parameters.

How to make Sample Set settings

On the Fantom-G, a waveform (wave) obtained by audio recording or sampling is called a "sample." A sample set consists of sixteen samples handled as a set. You can specify how the samples will play when you press a pad or note on the keyboard.

Here's how to create a new sample set by starting with one of the provided sample sets.

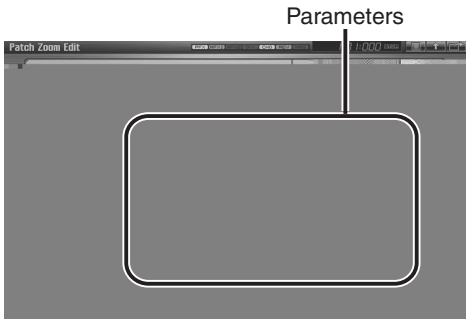
Editing a Sample Set Quickly (Patch Zoom Edit)

The Patch Zoom Edit screen lets you edit the most important parameters. If you want to have access to all parameters, use the Patch Pro Edit screen (p. 127).

1. Select the sample set whose settings you want to edit (p. 53).

2. Press [PATCH].

The Patch Zoom Edit screen appears.



F-key operations in the Patch Zoom Edit screen

F-key	Explanation		Page
F4 Util Menu	Sample Set Initialize	Initializes the settings of the currently selected sample set.	p. 127
F5 PFX	Accesses the PFX (Patch Multi-effect) editing screen.		p. 157
F6 Pro Edit	Accesses the Patch Pro Edit screen, where you can edit all of the parameters.		p. 127
F7 Part Select	Selects the part to be edited.		–

3. Press [CURSOR] button to move the cursor to the parameter you wish to modify.

cf.

For details on each parameter, refer to the following pages.

Parameter name	Page
Wave	p. 130
Pitch	p. 130
Amp	p. 131

- **To change the part that you want to edit**

  Press [F7 (Part Select)].

4. Turn the VALUE dial, or Press [INC] [DEC] to set a value.

5. Repeat steps 3–4 to set each parameter you want to edit.

6. If you wish to save the changes you've made, press [WRITE] to perform the Save operation (p. 128). If you do not wish to save changes, press [EXIT] to return to the Single Play screen.

If you return to the Single Play screen without saving, the "" symbol will be displayed at the right of the sample set name, indicating that the sample set settings have been edited.

NOTE

The settings you edit are temporary, and will be lost if you turn off the power, switch the sound generator mode, or select a different sound.

Editing All Parameters (Patch Pro Edit)

The Patch Pro Edit screen allows you to edit all parameters.

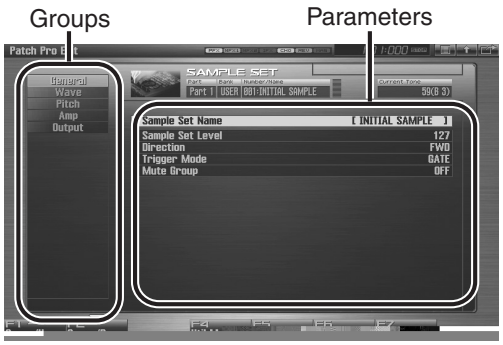
1. Select the sample set whose settings you want to edit (p. 53).

TIP

If you want to create a sample set from scratch (rather than starting from an existing sample set), execute the **Initialize** operation (p. 127).

2. Press [PATCH] twice.

The Patch Pro Edit screen appears.



F-key operations in the Patch Pro Edit screen

F-key	Explanation		Page
F1 Group/Up	Moves the edit group tab upward.		–
F2 Group/Down	Moves the edit group tab downward.		–
F3 Set Stereo	This is shown if you're editing the WAVE group. It recalls the right wave (R) from the left wave (L) of a stereo wave.		p. 130
F4 Util Menu	Sample Set Initialize	Initializes the settings of the currently selected sample set.	p. 127
F5 PFX	Accesses the PFX (Patch Multi-effect) editing screen.		p. 157
F6 Zoom Edit	Accesses the Patch Zoom Edit screen, where you can edit the most important parameters.		p. 126
F7 Part Select	Selects the part to be edited.		–

3. The parameters are organized into several editing groups. Press [F1 (Up)] or [F2 (Down)] to select the tab for the editing group that contains the parameter you wish to edit.

cf.

For details on how the parameters are grouped, refer to **"Functions of Sample Set Parameters"** (p. 129).

- **To change the part that you want to edit**

  Press [F7 (Part Select)].

4. Use ▲ or ▼ to move the cursor to the parameter you wish to modify.

5. Turn the VALUE dial, or Press [INC] [DEC] to set a value.

6. Repeat steps 3–5 to set each parameter you want to edit.

7. If you wish to save the changes you've made, press [WRITE] to perform the Save operation (p. 128). If you do not wish to save changes, press [EXIT] to return to the Single Play screen.

If you return to the Single Play screen without saving, the "" symbol will be displayed at the right of the sample set name, indicating that the sample set settings have been edited.

NOTE

The settings you edit are temporary, and will be lost if you turn off the power, switch the sound generator mode, or select a different sound.

Initializing Sample Set Settings (Sample Set Initialize)

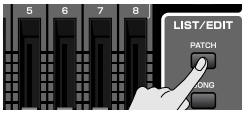
"Initialize" means to return the settings of the currently selected sound to a standard set of values or to the factory settings.

NOTE

The Initialize operation will affect only the currently selected sound; the sounds that are stored in user memory will not be affected. If you wish to restore all of the Fantom's settings to their factory values, perform a Factory Reset (p. 284).

1. Select the sample set that you want to initialize (p. 53).

2. Press [PATCH].



3. Press [F4 (Util Menu)].

The Utility Menu window appears.

4. Press ▲ or ▼ to choose "Sample Set Initialize," and then press [F8 (Select)].

To cancel, press [F7 (Cancel)].

A message will ask for confirmation.

5. Press [F7 (OK)].

To cancel, press [F8 (EXIT)].

Saving Sample Sets You've Created (Write)

Changes you make to sound settings are temporary, and will be lost if you turn off the power or select another sound. If you want to keep the modified sound, you must save it in the user bank.

When you edit the sample set settings, the "" symbol will appear in the Single Play screen. When you save the sample set, the "" symbol will disappear.

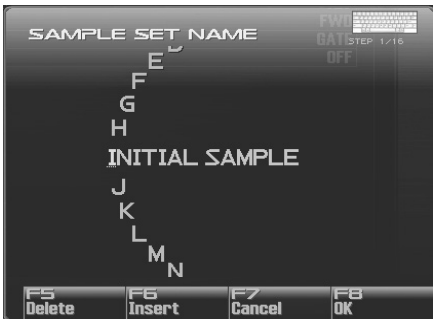
NOTE

When you perform the save procedure, the data that previously occupied the save destination will be lost.

1. **Make sure that the Sample Set you wish to save is selected.**

2. **Press [WRITE].**
   The WRITE MENU window appears.

3. **Select "Patch / Rhythm / Sample Set."**
   Press ▲ or ▼ to select "Patch / Rhythm / Sample Set," and then press [F8 (Select)].
   The Sample Set Name window appears.



4. **Assign a name to the sample set.**

   cf.

   For details on assigning names, refer to **"Assigning a Name"** (p. 42)

5. **When you have finished inputting the name, press [F8 (OK)].**
   A screen will appear, allowing you to select the write-destination sample set.

6. **Turn the VALUE dial or use [INC] [DEC] to select the sample set number.**

7. **Press [F8 (Write)].**
   A message will ask you for confirmation.

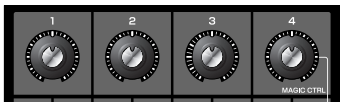
   NOTE

   Never switch off the Fantom-G while data is being saved.

8. **Press [F7 (OK)] to execute the save operation.**
   To cancel, press [F8 (EXIT)].

Functions of Sample Set Parameters

This section explains the functions the different sample set parameters have, as well as the composition of these parameters.
If a number is displayed for the parameter name, (, , ,), you can use the realtime controller knob of the corresponding number (the left most knob is number 1, the right most knob is number 4) to set the value.



Making Settings Common to the Entire Sample Set (General)

NOTE

Sample Set Level, Sample Set MFX Switch, Sample Set Chorus Switch and Sample Set Reverb Switch applies to the entire sample set; the other parameters are set individually for each sample set tone.

Sample Set Name

Specifies the name of the sample set.

By pressing [ENTER], you can assign a name to the sample set.

Value: space, A–Z, a–z, 0–9, ! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | }

cf.

For details on entering a name, refer to **"Assigning a Name"** (p. 42).

Sample Set Level

Sets the volume of the sample set.

Value: 0–127

TIP

The volume levels of the tones from which the sample set is composed is set with the Tone Level parameter (p. 131).

Direction

Specifies the direction in which the sample will play.

Value:

FWD: Play forward.

REV: Play backward.

Trigger Mode

Specifies how the sample will play when you press a pad (or key).

Value:

GATE: The sample will stop playing when you release the pad (or key).

DRUM: The sample will continue playing even after you release the pad (or key).

NOTE

The sample will begin playing when you press the pad, and will stop automatically when the end of the sample is reached. If you select the DRUM setting, the Loop setting is ignored; the sample will play only once. Note that if you select DRUM, you will not be able to interrupt the sound, so use this setting with caution if the sample is extremely long.

Mute Group

On an actual acoustic drum set, an open hi-hat and a closed hi-hat sound can never occur simultaneously. To reproduce the reality of this situation, you can set up a Mute Group.

The Mute Group function allows you to designate two or more sample tones that are not allowed to sound simultaneously. Up to 16 Mute Groups can be used. sample tones that are not belong to any such group should be set to "OFF."

Value: OFF, 1–16

Modifying Waveforms (Wave)

Sample Number L (Mono)
Sample Number R

This selects the Samples comprising the sample tone. Along with the Sample number, the Sample name appears at the lower part of the display.

When in monaural mode, only the left side (L) is specified. When in stereo, the right side (R) is also specified.

Value: OFF, 0001–2000

MEMO

If you want to select a left/right pair of Samples, select the left (L) Sample number and then press [F3 (Set Stereo)]; the right (R) (Sample) will be recalled.

* *When using a sample in stereo, you must specify the same number for L and R.*

Wave Gain

Sets the gain (amplification) of the waveform. The value changes in 6 dB (decibel) steps—an increase of 6 dB doubles the waveform's gain.

Value: -6, 0, +6, +12

Tempo Sync (Wave Tempo Sync)

When you wish to synchronize a Phrase Loop to the clock (tempo), set this to "ON."

Value: OFF, ON

NOTE

- If a sample is selected for a tone, you must first set the BPM (tempo) parameter of the sample.
- If a sample is selected for a tone, Wave Tempo Sync will require twice the normal number of voices.

Phrase Loop

Phrase loop refers to the repeated playback of a phrase that's been pulled out of a song (e.g., by using a sampler). One technique involving the use of Phrase Loops is the excerpting of a Phrase from a pre-existing song in a certain genre, for example dance music, and then creating a new song with that Phrase used as the basic motif. This is referred to as "Break Beats."

Realtime Time Stretch

If the Wave Tempo Sync parameter is turned "ON," you can vary the playback speed of the waveform without affecting the pitch.

Modifying Pitch (Pitch)

Tone Coarse Tune (Sample Tone Coarse Tune)

Selects the pitch at which a sample tone sounds.

Value: -48– +48

Tone Fine Tune (Sample Tone Fine Tune)

Adjusts the pitch of the sample tone's sound up or down in 1-cent steps (+/-50 cents).

Value: -50– +50

MEMO

One cent is 1/100th of a semitone.

Adjusting the Volume (Amp)

Tone Level (Sample Tone level)

Sets the volume of the sample tone. Use this parameter to adjust the volume balance between sample tones.

Value: 0–127

Tone Pan (Sample Tone Pan)

Sets the pan for the sample tone. "L64" is far left, "0" is center, and "63R" is far right.

Value: L64–0–63R

Level Velocity Sens

Set this when you want the volume of the sample tone to change depending on the force with which you press the keys. Set this to a positive (+) value to have the changes in sample tone volume increase the more forcefully the keys are played; to make the tone play more softly as you play harder, set this to a negative (-) value.

Value: -63– +63

Output Settings (Output)

Tone Output Level

Specifies the signal level for each tone.

Value: 0–127

Tone Chorus Send Level

Specifies the level of the signal sent to the chorus for each tone.

Value: 0–127

Tone Reverb Send Level

Specifies the level of the signal sent to the reverb for each tone.

Value: 0–127

Tone Output Assign

Specifies how the direct sound of each tone will be output.

Value:

PFX:	Output through patch multi-effects.
DRY:	Output without passing through patch multi-effects.

Setting Effects for a Sample Set (PFX)

By pressing the [F5 (PFX)] button you can access the PFX (Patch Multi-effect) editing screen (p. 157).

cf.

For details regarding effect settings, refer to the pages shown below.

- **"Making Effect Settings"** (p. 151)
- **"Making Patch Multi-Effects Settings (PFX)"** (p. 157)

Creating a Live/Studio Set

With the Fantom-G, you have total control over a wide variety of settings. Each item that can be set is known as a **parameter**. When you change the values of parameters, you are doing what is referred to as **Editing**. This chapter explains the procedures used in creating Live/Studio Sets, and the functions of the Live/Studio Set parameters.

Common Settings (Utility)

Here's how to make settings that are common to the entire live set (or studio set).

1. **Press [LIVE] (or [STUDIO]).**
2. **Press [F2 (Utility)].**
   The Utility screen will appear.
3. **The parameters are organized into several editing groups. Press [F1 (Up)] or [F2 (Down)] to select the tab for the editing group that contains the parameter you wish to edit.**
4. **Press ▲ or ▼ to move the cursor to the parameter you wish to modify.**
5. **Turn the VALUE dial or press [INC] [DEC] to get the value you want.**
6. **If you wish to save the changes you've made, press [WRITE] to perform the Save operation (p. 148). If you do not wish to save changes, press [EXIT].**

   If you return to the Play screen without saving, the " " symbol will be displayed at the right of the live/studio set name, indicating that the patch settings have been edited.

NOTE

The settings you edit are temporary, and will be lost if you turn off the power, switch the sound generator mode, or select a different sound.

NAME

Live Set Name
Studio Set Name

Specifies the name of the live/studio set.

By pressing [ENTER], you can assign a name to the live/studio set.

Value: space, A–Z, a–z, 0–9, ! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | }

For details on entering a name, refer to **"Assigning a Name"** (p. 42).

Live Set Memo
Studio Set Memo

You can assign a memo of up to 32 characters.

By pressing [ENTER], you can assign a memo to the live/studio set.

Value: space, A–Z, a–z, 0–9, ! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | }

Part Info

In this display you can check the receive status of various types of MIDI message for each MIDI channel. This is a convenient way to check that the sound generator is responding correctly to messages from the keyboard or external MIDI controllers.

Modulation:	Modulation messages
Breath:	Breath messages
Foot Type:	Foot type messages
Volume:	Volume messages
Panpot:	Panpot messages
Expression:	Expression messages
Hold 1:	Hold 1 messages
Pitch Bend:	Pitch Bend messages
Aftertouch:	Aftertouch messages

Part Settings (Part View)

You can view the part settings as a list. This is called the "**Part View**" screen. In this screen you can view a list that shows settings for all parts at once, such as the patch assigned to each part, and its volume and pan settings. You can also edit these settings here.

1. **Press [LIVE] (or [STUDIO]).**

2. **Press [F3 (Part View)].**
   The Part View screen will appear.

3. **The parameters are organized into several editing groups. Press [F1 (Up)] or [F2 (Down)] to select the tab for the editing group that contains the parameter you wish to edit.**

   MEMO

   You can use the F-keys to switch the part group that is shown.

F-key	Explanation
F3 Internal	Internal (internal sound generator)
F4 EXP 1	Expansion board 1
F5 EXP 2	Expansion board 2
F6 External	External MIDI output

   In the Part View screen, the edit groups that are shown will depend on the part group that's selected.

Edit Group	F3 Internal	F4/F5 EXP 1/2	F6 External
Level/Pan	✓	✓	✓
Keyboard	✓	✓	✓
Output/EFX	✓	✓	
Pitch	✓	✓	
Scale Tune	✓	✓	
Vibrato	✓		
Offset	✓		
Mono/Poly/Legato	✓		
Voice Reserve	✓		
MIDI Rx Filter	✓	✓	✓

4. **Use [CURSOR] to move the cursor to the parameter that you want to edit.**

   MEMO

   In this screen, the name of the parameter selected by the cursor is shown in the " " area in the lower left of the screen. The value of the current setting is also shown here.

5. **Turn the VALUE dial or press [INC] [DEC] to get the value you want.**

6. **If you wish to save the changes you've made, press [WRITE] to perform the Save operation (p. 148). If you do not wish to save changes, press [EXIT].**

   If you return to the Play screen without saving, the " " symbol will be displayed at the right of the live/studio set name, indicating that the patch settings have been edited.

   NOTE

   The settings you edit are temporary, and will be lost if you turn off the power, switch the sound generator mode, or select a different sound.

Level/Pan (When the Part Group is Internal/EXP1/EXP2)

Patch Type

Sets the assignment of a patch (Patch), rhythm set (Rhythm) or sample set (Sample) to each of the parts.

Value: PATCH, RHYTHM, SAMPLE

* *EXP 1 and EXP 2 parts will depend on the expansion board that is installed.*

Patch Bank

Selects the group to which the desired patch or rhythm set belongs.

Value

USER: User

PRST: Preset

USAM: User Sample

GM: GM (GM2)

* *EXP 1 and EXP 2 parts will depend on the expansion board that is installed.*

Patch Number

Selects the desired patch, rhythm set or sample set by its number.

Value: 001–

* *EXP 1 and EXP 2 parts will depend on the expansion board that is installed.*

Mute Switch

Mutes (MUTE) or un-mutes (OFF) each part.

Use this setting when, for example, you want to use the instrument for karaoke by muting the part playing the melody, or when you want to play something using a separate sound module.

Value: OFF, MUTE

MEMO

The Mute Switch parameter does not turn the part off, but sets the volume to minimum so that no sound is heard. Therefore, MIDI messages are still received.

Part Level

Adjust the volume of each part. This setting's main purpose is to adjust the volume balance between parts.

Value: 0–127

Part Pan

Adjust the pan of each part. "L64" is far left, "0" is center, and "63R" is far right.

Value: L64–0–63R

Receive Switch

For each part, specify whether MIDI messages will be received (ON), or not (OFF).

If this is "OFF," the part will not respond. Normally, you should leave this "ON," but you can turn it "OFF" when you do not want a specific part to be playing during song playback.

Value: OFF, ON

Receive Channel

Specifies the MIDI receive channel for each part

Value: 1–16

Level/Pan (When the Part Group is External)

External Bank Select MSB

If you want a Bank Select number MSB (controller number 0) to also be transmitted when you switch Live/Studio Sets, specify the value that you want to transmit (0–127) for each part. If you do not want this message to be transmitted, set this to "---."

Value: 0–127, ---

NOTE

The data of the part for which the Keyboard Switch is turned off will not be transmitted.

External Bank Select LSB

If you want a Bank Select number LSB (controller number 32) to also be transmitted when you switch Live/Studio Sets, specify the value that you want to transmit (0–127) for each part.

Value: 0–127, ---

NOTE

The data of the part for which the Keyboard Switch is turned off will not be transmitted.

External Program Number (External Program Change Number)

If you want a Program Change number to also be transmitted when you switch Live/Studio Sets, specify the value that you want to transmit (0–128) for each part. If you do not want this message to be transmitted, set this to "---."

Value: 1–128, ---

NOTE

The data of the part for which the Keyboard Switch is turned off will not be transmitted.

External Level

If you want Volume messages to also be transmitted when you select a Live/Studio Set, specify the desired value (0–127) for the part. If you do not want this message to be transmitted, set this to "---."

Value: 0–127, ---

NOTE

The data of the part for which the Keyboard Switch is turned off will not be transmitted.

External Pan

If you want Pan messages to also be transmitted when you select a Live/Studio Set, specify the desired value (L64–0–63R) for the part. If you do not want this message to be transmitted, set this to "---."

Value: L64–0–63R, ---

NOTE

These messages will not be transmitted by parts whose Keyboard Switch is turned off.

Key Range

Keyboard Switch

Specifies, for each part, whether or not the keyboard controller section will be connected to the internal sound generator. Normally you will leave this off; you can turn it on if you want to layer sounds.

Value: On, OFF

Keyboard Range Lower (Part Keyboard Range Lower)

Specifies the lowest note that the tone will sound for each part.

Value: C–UPPER

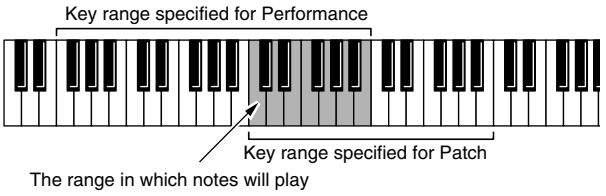
Keyboard Range Upper (Part Keyboard Range Upper)

Specifies the highest note that the tone will sound for each part.

Value: LOWER–G9

NOTE

When the Key Range (p. 94) is set for each individual tone in a patch, sounds are produced in the range where the Key Range of each tone and the Key Range for the part overlap.



* *Keyboard Range is valid only for parts whose **"Keyboard Switch"** (p. 135) is on.*

Velocity Range Lower

For each part, specifies the bottom of the velocity range.

Value: 1–127

Velocity Range Upper

For each part, specifies the top of the velocity range.

Value: 1–127

* *Velocity Range is valid only for parts whose **"Keyboard Switch"** (p. 135) is on.*

NOTE

When the Velocity Range (p. 95) is set for each individual tone in a patch, sounds are produced in the range where the Key Range of each tone and the Key Range for the part overlap.

Part Velocity Sens Offset

This changes the volume and cutoff frequency for each part according to the velocity with which the keys are pressed. If you want strongly played notes to raise the volume/cutoff frequency, set this parameter to positive (+) settings. If you want strongly played notes to lower the volume/cutoff frequency, use negative (-) settings. Set Velocity Sensitivity to "0" when you want sounds played at a fixed volume and cutoff frequency, regardless of the force with which the keys are played.

Value: -63– +63

NOTE

Patches also contain a Velocity Sensitivity Offset setting (p. 91). The ultimate Velocity Sensitivity Offset value is the sum of the part's and the patch's Velocity Sensitivity Offsets. Accordingly, if the patch's Velocity Sensitivity Offset parameter is set to "127" (maximum), there will be no change in the part's Velocity Sensitivity Offset, even when this is set to a positive value.

* *EXP 1, EXP 2, and External parts do not have this item.*

Arpeggio Part Switch

Specifies the part that will use the Arpeggio function.

Value: OFF, ON

Sample Pad Part Switch

Specifies the Sample Pad Part.

Value: OFF, ON

Rhythm Pad Part Switch

Specifies the Rhythm Pad Part.

Value: OFF, ON

Output/EFX

Part Output Assign

Specifies for each part how the direct sound will be output.

Value

A, B: Output to the OUTPUT A (MIX) jack or OUTPUT B jack in stereo without passing through multi-effects.

1–4: Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects.

MFX1, MFX2:
Output in stereo through multi-effects. *Studio set only

In the case of parts EXP1, EXP2:

DRY: Output without being passed through the expansion board's MFX.

EXP: Accords with the settings of the expansion board.

NOTE

If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack. This is due to the mechanism of the INDIVIDUAL 1 and 2 jacks.

MEMO

If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 298).

TIP

Chorus are output in mono at all times.

- The output destination of the signal after passing through the chorus is set with the Chorus Output Select (p. 153) and the Chorus Output Assign (p. 153).
- The output destination of the signal after passing through the reverb is set with the Reverb Output Assign (p. 153).

* *EXP 1 and EXP 2 parts will depend on the expansion board that is installed.*

* *External parts do not have this item.*

Part Output Level

Set the level of the signal that is sent to the output destination specified by Part Output Assign.

Value: 0–127

* *EXP 1 and EXP 2 parts will depend on the expansion board that is installed.*

* *External parts do not have this item.*

Part Chorus Send Level

Sets the level of the signal sent to chorus for each part.

Value: 0–127

* *External parts do not have this item.*

Part Reverb Send Level

Sets the level of the signal sent to reverb for each part.

Value: 0–127

* *External parts do not have this item.*

Part EFX1 Send Level (Expansion part effect 1: Send Level)

Sets the level of the signal sent to "EFX 1 (Effect 1)" for each part of the expansion board.

Value: 0–127

* *"EFX1 (Effect 1)" is an effect on the expansion board. The content of the effect will depend on the expansion board that's installed.*

* *Internal and External parts do not have this item.*

Part EFX2 Send Level (Expansion part effect 2: Send Level)

Sets the level of the signal sent to "EFX 2 (Effect 2)" for each part of the expansion board.

Value: 0–127

* *"EFX2 (Effect 2)" is an effect on the expansion board. The content of the effect will depend on the expansion board that's installed.*

* *Internal and External parts do not have this item.*

Pitch

Part Octave Shift

Adjusts the pitch of the part's sound up or down in units of an octave (+/-3 octaves).

Value: -3– +3

Part Transpose

Adjusts the pitch of the part's sound up or down in semitone steps.

Value: -5– +6

Part Coarse Tune

Adjusts the pitch of the part's sound up or down in semitone steps (+/-4 octaves).

Value: -48– +48

* *EXP 1 and EXP 2 parts will depend on the expansion board that is installed.*

* *External parts do not have this item.*

Coarse Tune and Octave Shift

The Coarse Tune and Fine Tune parameters, along with the Octave Shift parameter, can all be seen as doing the same thing to the sound, i.e., changing the pitch of the sound. For example, if C4 (Middle C) is played with the Coarse Tune parameter set to "+12," the note produced is C5 (one octave above C4). For example, if C4 (Middle C) is played with the Octave Shift parameter set to "+1," the note produced is C5 (one octave above C4).

However, internally these function very differently. When the Coarse Tune parameter is set to "+12," the pitch itself is raised one octave. On the other hand, when the Octave Shift parameter is set to "+1," it is the same as pressing the keys one octave up. In other words, use the Coarse Tune parameter when changing the pitch, and the Octave Shift parameter when you want to shift the entire keyboard, for example, when the number of keys is insufficient.

Part Fine Tune

Adjusts the pitch of the part's sound up or down in 1-cent steps (+/-50 cents).

Value: -50– +50

MEMO

One cent is 1/100th of a semitone.

* *EXP 1 and EXP 2 parts will depend on the expansion board that is installed.*

* *External parts do not have this item.*

Part Pitch Bend Range

Specifies the amount of pitch change in semitones (2 octaves) that will occur when the Pitch Bend Lever is moved. The amount of change when the lever is tilted is set to the same value for both left and right sides. If you want to use the Pitch Bend Range setting of the patch assigned to the part (p. 96), set this to "PATCH."

Value: 0–24, PATCH

* *EXP 1 and EXP 2 parts will depend on the expansion board that is installed.*

* *External parts do not have this item.*

Part Portamento Switch

Specify whether portamento will be applied. Turn this parameter "ON" when you want to apply Portamento and "OFF" when you don't. If you want to use the Portamento Switch setting of the patch assigned to the part (p. 106), set this to "PATCH."

Value: OFF, ON, PATCH

* *EXP 1, EXP 2, and External parts do not have this item.*

Part Portamento Time

When portamento is used, this specifies the time over which the pitch will change. Higher settings will cause the pitch change to the next note to take more time. If you want to use the Portamento Time setting of the patch assigned to the part (p. 106), set this to "PATCH."

Value: 0–127, PATCH

NOTE

This setting is ignored for parts to which a rhythm set is assigned.

* *EXP 1, EXP 2, and External parts do not have this item.*

Scale Tune

Part Scale Tune C–B

Make scale tune settings for each part.

Value: -64– +63

NOTE

Scale Tune is switched on/off by means of the Scale Tune Switch parameter (p. 300).

* *EXP 1 and EXP 2 parts will depend on the expansion board that is installed.*

* *External parts do not have this item.*

Equal Temperament

This tuning divides the octave into 12 equal parts, and is the most widely used method of temperament used in Western music. The Fantom-G employs equal temperament when the Scale Tune Switch is set to "OFF."

Just Temperament (Tonic of C)

Compared with equal temperament, the principle triads sound pure in this tuning. However, this effect is achieved only in one key, and the triads will become ambiguous if you transpose.

Arabian Scale

In this scale, E and B are a quarter note lower and C#, F# and G# are a quarter-note higher compared to equal temperament. The intervals between G and B, C and E, F and G#, Bb and C#, and Eb and F# have a natural third—the interval between a major third and a minor third. On the Fantom-G, you can use Arabian temperament in the three keys of G, C and F.

<Example>

Note name	Equal temperament	Just Temperament (tonic C)	Arabian Scale
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
Eb	0	+16	-12
E	0	-14	-51
F	0	-2	-8
F#	0	-10	+43
G	0	+2	-4
G#	0	+14	+47
A	0	-16	0
Bb	0	+14	-10
B	0	-12	-49

Vibrato

Part Vibrato Rate

For each part, adjust the vibrato speed (the rate at which the pitch is modulated). The pitch will be modulated more rapidly for higher settings, and more slowly with lower settings.

Value: -64– +63

* *EXP 1, EXP 2, and External parts do not have this item.*

Part Vibrato Depth

For each part, this adjusts the depth of the vibrato effect (the depth at which the pitch is modulated). The pitch will be modulated more greatly for higher settings, and less with lower settings.

Value: -64– +63

* *EXP 1, EXP 2, and External parts do not have this item.*

Part Vibrato Delay

For each part, this adjusts the time delay until the vibrato (pitch modulation) effect begins. Higher settings will produce a longer delay time before vibrato begins, while lower settings produce a shorter time.

Value: -64– +63

* *EXP 1, EXP 2, and External parts do not have this item.*

Offset

Part Cutoff Offset

Adjusts the cutoff frequency for the patch, rhythm set or sample set assigned to a part.

Value: -64– +63

NOTE

Patches also have a Cutoff Offset setting (p. 90). The final Cutoff frequency value is the sum of the tone Cutoff Frequency value and the patch and part Cutoff Offset values. If the tone's cutoff frequency is already set to "127" (maximum), there will be no change produced by setting the Cutoff Offset to a positive value.

* *EXP 1, EXP 2, and External parts do not have this item.*

Part Resonance Offset

Adjusts the Resonance for the patch, rhythm set or sample set assigned to a part.

Value: -64– +63

NOTE

Patches also have a Resonance Offset setting (p. 91). The final Resonance value is the sum of the tone Resonance value and the patch and part Resonance Offset values. If the tone's resonance is already set to "127" (maximum), there will be no change produced by setting the resonance offset to a positive value.

* *EXP 1, EXP 2, and External parts do not have this item.*

Part Attack Time Offset

Adjusts the TVA/TVF Envelope Attack Time for the patch, rhythm set or sample set assigned to a part.

Value: -64– +63

NOTE

Patches also contain the Attack Time Offset setting (p. 91). The final TVA Envelope attack time value is therefore the sum of the tone's TVA Envelope Time 1 setting, the patch's Attack Time Offset, and the part's Attack Time Offset. If the tone's Time 1 parameter is already set to "127" (maximum), there will be no change produced by setting the Attack Time Offset to a positive value.The same applies to the TVF envelope.

* *EXP 1, EXP 2, and External parts do not have this item.*

Part Decay Time Offset

Adjusts the TVA/TVF Envelope Decay Time for the patch or rhythm set assigned to a part.

Value: -64– +63

NOTE

This setting is ignored for parts to which a sample set is assigned.

* *EXP 1, EXP 2, and External parts do not have this item.*

Part Release Time Offset

Adjusts the TVA/TVF Envelope Release Time for the patch, rhythm set or sample set assigned to a part.

Value: -64– +63

NOTE

Patches also contain a Release Time Offset setting (p. 91). The final TVA Envelope release time value is therefore the sum of the tone's TVA Envelope Time 4 setting, the patch's Release Time Offset, and the part's Release Time Offset. If the tone's Time 4 parameter is set to "127" (maximum), there will be no change in the Release Time Offset, even when this is set to a positive value.The same applies to the TVF envelope.

* *EXP 1, EXP 2, and External parts do not have this item.*

Mono/Poly/Legato

Part Mono/Poly

Set this parameter to "MONO" when the patch assigned to the part is to be played monophonically, or to "POLY" when the patch is to be played polyphonically. If you want to use the Mono/Poly setting of the patch assigned to the part (p. 105), set this to "PATCH."

Value: MONO, POLY, PATCH

NOTE

This setting is ignored for parts to which a rhythm set is assigned.

* *EXP 1, EXP 2, and External parts do not have this item.*

Part Legato Switch

You can add legato when performing monophonically. The term "legato" refers to a playing style in which notes are smoothly connected to create a flowing feel. This creates a smooth transition between notes, which is effective when you wish to simulate the hammering-on and pulling-off techniques used by a guitarist.

Turn this parameter "ON" when you want to use the Legato feature and "OFF" when you don't. If you want to use the Legato Switch setting of the patch assigned to the part (p. 105), set this to "PATCH."

Value: OFF, ON, PATCH

NOTE

This setting is ignored for parts to which a rhythm set is assigned.

* *EXP 1, EXP 2, and External parts do not have this item.*

Voice Reserve

Part Voice Reserve

This setting specifies the number of voices that will be reserved for each part when more than 128 voices are played simultaneously.

Value: 0–63, FULL

NOTE

It is not possible for the settings of all parts to total an amount greater than 64. The remaining number of available voices will be displayed at (rest=). Pay attention to this readout as you make Voice Reserve settings.

NOTE

When playing audio tracks in a song, audio track playback will take priority over voice reserve settings. This means that if audio tracks are playing back, it may not be possible to guarantee the polyphony specified by the voice reserve settings.

Calculating the Number of Voices Being Used

The Fantom-G is able to play up to 128 notes simultaneously. The polyphony, or the number of voices (sounds) does not refer only to the number of sounds actually being played, but changes according to the number of tones used in the patches, and the number of Waves used in the tones. The following method is used to calculate the number of sounds used for one patch being played.

(Number of Sounds Being Played) x (Number of Tones Used by Patches Being Played) x (Number of Waves Used in the Tones)

Realtime Stretch requires twice the normal polyphony.

Voice Monitor

Here's how you can see a graphic indication of the number of voices used by the sound generator.

MIDI Rx Filter

Receive Program Change (Receive Program Change Switch)

For each MIDI channel, specify whether MIDI Program Change messages will be received (ON), or not (OFF).

Receive Bank Select (Receive Bank Select Switch)

For each MIDI channel, specify whether MIDI Bank Select messages will be received (ON), or not (OFF).

Receive Bender (Receive Pitch Bend Switch)

For each MIDI channel, specify whether MIDI Pitch Bend messages will be received (ON), or not (OFF).

Receive Polyphonic Key Pressure (Receive Polyphonic Key Pressure Switch)

For each MIDI channel, specify whether MIDI polyphonic key pressure messages will be received (ON), or not (OFF).

Receive Channel Pressure (Receive Channel Pressure Switch)

For each MIDI channel, specify whether MIDI Channel Pressure messages will be received (ON), or not (OFF).

Receive Modulation (Receive Modulation Switch)

For each MIDI channel, specify whether MIDI Modulation messages will be received (ON), or not (OFF).

Receive Volume (Receive Volume Switch)

For each MIDI channel, specify whether MIDI Volume messages will be received (ON), or not (OFF).

Receive Pan (Receive Pan Switch)

For each MIDI channel, specify whether MIDI Pan messages will be received (ON), or not (OFF).

Receive Expression (Receive Expression Switch)

For each MIDI channel, specify whether MIDI Expression messages will be received (ON), or not (OFF).

Receive Hold-1 (Receive Hold 1 Switch)

For each MIDI channel, specify whether MIDI Hold 1 messages will be received (ON), or not (OFF).

Phase Lock (Phase Lock Switch)

Set Phase Lock to "ON" when you want to suppress discrepancies in timing of parts played on the same MIDI channel.

NOTE

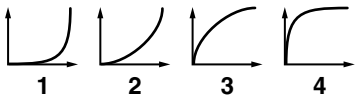
When the Phase Lock parameter is set to "ON," parts on the same MIDI channel are put in a condition in which their timing is matched, enabling them to be played at the same time. Accordingly, a certain amount of time may elapse between reception of the Note messages and playing of the sounds. Turn this setting to "ON" only as needed.

* *This will not affect expansion boards.*

Velocity Curve Type

Velocity Curve selects for each MIDI channel one of the four following Velocity Curve types that best matches the touch of the connected MIDI keyboard. Set this to "OFF" if you are using the MIDI keyboard's own velocity curve.

Value: OFF, 1–4



* *This will not affect expansion boards.*

Selecting the Parameter Controlled by the Realtime Controllers or D Beam Controller (Control Setting)

The Fantom-G lets you assign the parameters that will be affected when you operate the realtime control knobs, assignable switches, D Beam, pitch bend, or modulation lever. This lets you modify the sound in a variety of ways by operating the controllers.

1. **Press [LIVE] (or [STUDIO]).**
2. **Press [F4 (Control)].**
   The Control Setting screen appears.

3. **The parameters are organized into several editing groups. Press [F1 (Up)] or [F2 (Down)] to select the tab for the editing group that contains the parameter you wish to edit.**
4. **Use [CURSOR] to move the cursor to the parameter that you want to edit.**
5. **Turn the VALUE dial or press [INC] [DEC] to get the value you want.**
6. **Repeat steps 3-5 to set each parameter you want to edit.**
7. **The settings for the Solo Synth are saved for the system settings. Press [F7 (Sys Write)] to execute the write operation.**
8. **The settings in the Control Setting screen are saved independently for each live/studio set. If you wish to save the changes you've made, press [WRITE] to perform the Save operation (p. 148). If you do not wish to save changes, press [EXIT].**

   If you return to the Play screen without saving, the " " symbol will be displayed at the right of the live/studio set name, indicating that the patch settings have been edited.

   NOTE

   The settings you edit are temporary, and will be lost if you turn off the power, switch the sound generator mode, or select a different sound.

Keyboard Mode

Keyboard Mode

If you choose RPS or RHYTHM-PTN, you can use the keyboard to play RPS or Rhythm Pattern Sets. The keys that will play RPS / Rhythm Pattern Sets can be specified as described in **"Note Number"** (p. 195, p. 196).

Value

NORMAL: Normal keyboard performance mode

RPS: RPS performance mode

RHYTHM-PTN: Rhythm Pattern performance mode

MEMO

The Keyboard Mode setting is not saved in Single mode. When you press [SINGLE], the Keyboard Mode will be initialized to NORMAL.

D Beam

D Beam Switch

Specifies the operating mode of the D Beam controller.

Value:

OFF: The D Beam will not be used.

PAD TRIGGER: This allows you to use the D Beam controller to sound the pads as an alternative to striking the pads.

SOLO SYNTH: This allows you to use the D Beam controller as a monophonic synthesizer.

ASSIGNABLE: The Fantom-G will control the function you assign.

MEMO

The parameters shown in the screen will depend on the choice you make here.

D Beam: PAD TRIGGER

Instead of striking the pads themselves, you can also use the D Beam controller to control the sounding of the pads.

Beam Trigger Pad

Specifies the pad number affected by the D Beam.

Value: Pad 1–Pad 16

Beam Trigger Velo (Beam Trigger Velocity)

Specifies the strength of the pad sound played by the D Beam controller.

Value: 1–127

Beam Trigger Mode

This specifies how the D Beam will behave when it is obstructed. If this is set to MOMENTARY, the parameter will be on only while the D Beam is obstructed, and will turn off when you stop obstructing it. If this is set to LATCH, the parameter will alternately be switched on/off each time you obstruct the D Beam.

Value: MOMENTARY, LATCH

D Beam: SOLO SYNTH

You can use the D Beam controller to perform in a way similar to on a mono synth.

TIP

Settings for the Solo Synth are saved for system settings. Press [F7 (Sys Write)] to execute the write operation.

MEMO

In this screen, the name of the parameter selected by the cursor is shown in the " " area in the lower left of the screen. The current value of the setting is also shown here.

OSC 1/2 Waveform

Select the waveform. **SAW** is a sawtooth wave, and **SQR** is a square wave.

Value: SAW, SQR

OSC 1/2 Pulse Width

Specifies the pulse width of the waveform. By cyclically modifying the pulse width you can create subtle changes in the tone.

* *The Pulse Width is activated when "SQR" is selected with OSC1/2 waveform.*

Value: 0–127

LFO Osc 1 Pulse Width Depth

Specifies the depth to which the LFO will modulate the pulse width of the OSC1 waveform.

* *The Pulse Width is activated when "SQR" is selected with OSC1/2 waveform.*

Value: -63– +63

LFO Osc 2 Pulse Width Depth

Specifies the depth to which the LFO will modulate the pulse width of the OSC2 waveform.

* *The Pulse Width is activated when "SQR" is selected with OSC1/2 waveform.*

Value: -63– +63

LFO Osc 1 Pitch Depth

Specifies the depth to which the LFO will modulate the OSC1 pitch.

Value: -63– +63

LFO Osc 2 Pitch Depth

Specifies the depth to which the LFO will modulate the OSC2 pitch.

Value: -63– +63

OSC 1/2 Coarse Tune

Adjusts the pitch of the tone's sound up or down in semitone steps (+/-4 octaves).

Value: -48– +48

OSC 1/2 Fine Tune

Adjusts the pitch of the tone's sound up or down in 1-cent steps (+/-50 cents).

Value: -50– +50

OSC Sync Switch

Turning this switch on produces a complex sound with many harmonics. This is effective when the OSC1 pitch is higher than the OSC2 pitch.

Value: OFF, ON

OSC2 Level

Adjust the level.

Value: 0–127

Filter Type

Selects the type of filter.

OFF: No filter is used.

LPF: Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency (Cutoff Freq) in order to round off, or un-brighten the sound.

BPF: Band Pass Filter. This leaves only the frequencies in the region of the cutoff frequency, and cuts the rest.

HPF: High Pass Filter. This cuts the frequencies in the region below the cutoff frequency.

PKG: Peaking Filter. This emphasizes the frequencies in the region of the cutoff frequency.

Cutoff

Selects the frequency at which the filter begins to have an effect on the waveform's frequency components.

Value: 0–127

Resonance

Emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound.

Value: 0–127

LFO Rate

Adjusts the modulation rate, or speed, of the LFO.

Value: 0–127

Range (Solo synth range)

Specifies the range in which the pitch of the solo synth will vary.

Value: 2 OCTAVES, 4 OCTAVES, 8 OCTAVES

Chorus Send Level

Sets the level of the signal sent to chorus.

Value: 0–127

Reverb Send Level

Sets the level of the signal sent to reverb.

Value: 0–127

Level

Sets the volume.

Value: 0–127

D Beam: ASSIGNABLE

By assigning a variety of functions to the D Beam controller you can apply different effects to the sound in real time.

TIP

The settings for the ASSIGNABLE are saved independently for each live/studio set as part of the live/studio set settings. This lets you create live/studio sets that make effective use of controller settings.

Type (Assignable Type)

Specifies the function controlled by the D Beam controller.

Value

OFF: Off

CC01–31, CC32(OFF), 33–95: Control Change

AFTERTOUCH: Aftertouch

BEND UP: Controls the pitch as specified by the "Pitch Bend Range Up" setting (p. 96).

BEND DOWN: Controls the pitch as specified by the "Pitch Bend Range Down" setting (p. 96).

ARPEGGIO ACCENT: Arpeggio accent rate

ARPEGGIO SHUFFLE: Arpeggio shuffle rate

ARPEGGIO OCT UP: The range in which the arpeggio is sounded will rise in steps of an octave.

ARPEGGIO OCT DOWN: The range in which the arpeggio is sounded will lower in steps of an octave.

Range Min (D Beam Range Lower)

Specify the lower limit of the range of the D Beam controller.

Value: 0–127

Range Max (D Beam Range Upper)

Specify the upper limit of the range of the D Beam controller. By setting Range Max below Range Min you can invert the range of change.

Value: 0–127

Knob

Knob Assign 1–4

Specify the functions that will be controlled by the knobs.

Value

OFF: Off

CC01–31, CC32(OFF), 33–95: Control Change

AFTERTOUCH: Aftertouch

PITCH BEND: Pitch Bend

ARPEGGIO ACCENT: Arpeggio accent rate

ARPEGGIO SHUFFLE: Arpeggio shuffle rate

ARPEGGIO OCT UP: The range in which the arpeggio is sounded will rise in steps of an octave.

ARPEGGIO OCT DOWN: The range in which the arpeggio is sounded will lower in steps of an octave.

MASTER LEVEL: Master Level (p. 297)

DIGITAL/USB INPUT LEVEL: Digital/USB Input Level (p. 258)

* *The system setting will be used if the system parameter **"Knob Assign Source"** (p. 293) is set to "System," and the setting of the live set or studio set will be used if it is set to "TEMP."*

Slider

Slider 1–8 Assign

Specify the functions that will be controlled by the sliders.

Value

OFF: Off

CC01–31, CC32(OFF), 33–95: Control Change

AFTERTOUCH: Aftertouch

PITCH BEND: Pitch Bend

ARPEGGIO ACCENT: Arpeggio accent rate

ARPEGGIO SHUFFLE: Arpeggio shuffle rate

ARPEGGIO OCT UP: The range in which the arpeggio is sounded will rise in steps of an octave.

ARPEGGIO OCT DOWN: The range in which the arpeggio is sounded will lower in steps of an octave.

* *The system setting will be used if the system parameter **"Slider Assign Source"** (p. 293) is set to "System," and the setting of the live set or studio set will be used if it is set to "TEMP."*

Switch S1/S2

Switch S1/S2 Assign

Specify the functions that will be controlled by the [S1] [S2] switches.

Value

Live Set: OFF, CC01 - CC31, CC32 (OFF), CC33 - CC95, AFTERTOUCH, MONO/POLY, PFX SWITCH, MFX SWITCH, RESERVE, CHORUS SWITCH, REVERB SWITCH, MASTERING SWITCH, MASTER KEY UP, MASTER KEY DOWN, SCALE TUNE SWITCH

Studio Set: OFF, CC01 - CC31, CC32 (OFF), CC33 - CC95, AFTERTOUCH, MONO/POLY, PFX SWITCH, MFX1 SWITCH, MFX2 SWITCH, CHORUS SWITCH, REVERB SWITCH, MASTERING SWITCH, MASTER KEY UP, MASTER KEY DOWN, SCALE TUNE SWITCH

Switch S1/S2 Assign Mode

Turns the [S1] [S2] switches function LATCH/MOMENTARY.

Value

LATCH: The on/off status will alternate each time you press [S1] [S2].

MOMENTARY: The status will be on only while you hold down [S1] [S2].

Arpeggio

Arpeggio Switch

Turns the Arpeggio function (p. 78) on/off.

Value: ON, OFF

Arpeggio Hold

Turns the Arpeggio Hold function (p. 78) on/off.

Value: ON, OFF

Arpeggio Number

Specifies the arpeggio number.

Value: 001–128

Arpeggio Part Group

Selects the part group that will use the Arpeggio function: internal (INT), expansion board 1 (EXP1), expansion board 2 (EXP2), or external MIDI output (EXT).

Value: INT, EXP1, EXP2, EXT

Arpeggio Part Number

Specifies the part that will use the Arpeggio function.

Value: Part1–16

Chord Memory

Chord Switch

Turns the Chord Memory function (p. 81) on/off.

Value: ON, OFF

Chord Form

Specifies the Chord Form (p. 81).

Value: 001–128

Rolled Chord

Turns the Rolled Chord function (p. 82) on/off.

Value: ON, OFF

Rolled Chord Type

Specifies the Rolled Chord Type (p. 82).

Value

UP: Notes will be sounded in order from bottom to top.

DOWN: Notes will be sounded in order from top to bottom.

ALTERNATE: The order in which the notes are sounded will change each time you play the keyboard.

L-DOWN: The lowest note will be sounded first, and then notes will be sounded in order from the top down.

* *If you press C E G B, the notes will be sounded as C B G E.*

U-UP: The highest note will be sounded first, and then notes will be sounded in order from the bottom up.

* *If you press C E G B, the notes will be sounded as B C E G.*

Dynamic Pad

Rhythm Pad Part Group

Selects the rhythm pad part group: internal (INT), expansion board 1 (EXP1), expansion board 2 (EXP2), or external MIDI output (EXT).

Value: INT, EXP1, EXP2, EXT

Rhythm Pad Part Number

Specifies the Rhythm Pad Part.

Value: Part1–16

Sample Pad Part Number

Specifies the Sample Pad Part.

Value: Part1–16

Ctrl Switch

You can change controller switch on/off settings for each part.

MEMO

You can use the F-keys to switch the part group that is displayed.

F-key	Explanation
F3 Internal	Internal (internal sound generator)
F4 EXP 1	Expansion board 1
F5 EXP 2	Expansion board 2
F6 External	External MIDI output

MEMO

In this screen, the name of the parameter selected by the cursor is shown in the " " area in the lower left of the screen. The current value of the setting is also shown here.

Control Bender (Control Pitch Bend Switch)

For each part, specify whether MIDI Pitch Bend messages will be transmitted (ON), or not (OFF).

Value: OFF, ON

Control Aftertouch (Control Aftertouch Switch)

For each part, specify whether MIDI Aftertouch messages will be transmitted (ON), or not (OFF).

Value: OFF, ON

Control Modulation (Control Modulation Switch)

For each part, specify whether MIDI Modulation messages will be transmitted (ON), or not (OFF).

Value: OFF, ON

Control Hold Pedal (Control Hold Pedal Switch)

For each part, you can specify whether control messages from a pedal connected to the HOLD PEDAL jacks will be transmitted (ON), or not (OFF).

Value: OFF, ON

Control Pedal 1, 2 (Control Pedal 1, 2 Switch)

For each part, you can specify whether control messages from a pedal connected to the CONTROL PEDAL 1, 2 jacks will be transmitted (ON), or not (OFF).

Value: OFF, ON

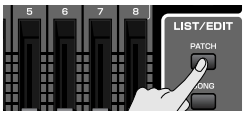
Changing the Settings of the Patch Assigned to a Part

When using patches in Live/Studio Mode, some settings such as effects settings will be affected by Live/Studio Set settings. If you wish to edit a patch while hearing how it will sound in the Live/Studio Set, use this procedure:

* *Here we explain how to change the setting of a patch assigned to a part. The procedure for changing the settings of rhythm sets or sample sets is the same. Substitute "rhythm set" or "sample set" wherever "patch" appears in a sentence.*

1. Make sure the Live Mode (or the Studio Mode) is selected.

2. Press [PATCH] twice.



The patch assigned to the part is displayed in the Patch Pro Edit screen.

3. The rest of the procedure is the same as when making changes in Single mode (p. 84).

Initializing Live/Studio Set Settings (Init)

"Initialize" means to return the settings of the currently selected sound to a standard set of values.

NOTE

The Initialize operation will affect only the currently selected sound; the sounds that are stored in user memory will not be affected. If you wish to restore all of the Fantom-G's settings to their factory values, perform a Factory Reset (p. 284).

1. **Select the Live/Studio Set that you wish to initialize.**
2. **Press [F2 (Utility)].**
3. **Press [F6 (Initialize)].**
   The Live/Studio Set Initialize Menu window will appear.
4. **Press ▲ or ▼ to select the initialization type.**
   - **Default:** Resets the currently selected Live/Studio set in the Temporary memory to the standard values. Use this setting when you wish to create a sound from scratch.
   - **Sound Control:** Initializes the values of the following part parameters. Cutoff Offset, Resonance Offset, Attack Time Offset, Release Time Offset, Decay Time Offset, Vibrato Rate, Vibrato, Depth, Vibrato Delay
5. **Press [F8 (Select)].**
   A message will ask you for confirmation.
6. **Press [F7 (OK)] to execute.**
   To cancel, press [F8 (EXIT)].

Saving a Live/Studio Set You've Created (Write)

The settings you edit are temporary, and will be lost if you turn off the power, switch the sound generator mode, or select a different sound. If you want to keep the modified sound, you must save it in the User bank.

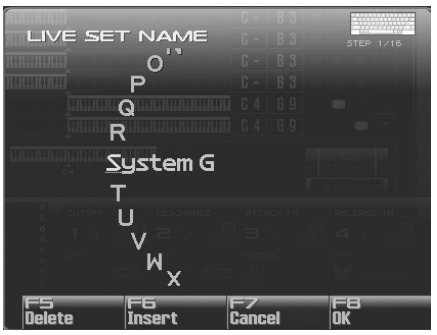
When you modify the settings of a Live/Studio Set, the Live/Studio Play screen will indicate "" Once you save the Live/Studio Set into user area, the "" indication goes away.

NOTE

When you perform the save procedure, the data that previously occupied the save destination will be lost.

1. **Make sure that the live/studio set you wish to save is selected.**
2. **Press [WRITE].**
   The WRITE MENU window appears.

3. **Select "Live Set / Studio Set."**
   Alternatively, you can use CURSOR ▲ or ▼ to select "Live Set / Studio Set" and then press [F8 (Select)].
   The Live Set/Studio Set Name window appears.



4. **Assign a name to the live/studio set.**

cf.

For details on assigning names, refer to **"Assigning a Name"** (p. 42)

5. **When you have finished inputting the name, press [F8 (OK)].**
   A screen will appear, allowing you to select the write-destination live/studio set.

6. **Turn the VALUE dial or use [INC] [DEC] to select the live/studio set number.**

7. **Press [F8 (Write)].**
   A message will ask you for confirmation.

   NOTE
   Never switch off the Fantom-G while data is being saved.

8. **Press [F7 (OK)] to execute the save operation.**
   To cancel the operation, press [F8 (EXIT)].

When Changing the Settings for the patch, rhythm set or sample set assigned to a Part in a Live/Studio Set

If you've edited a patch, rhythm set or sample set assigned to a part in a live/studio set and then try to save the live/studio set without first saving the edited patch, rhythm set or sample set, the following message appears.

Edited patch, rhythm set or sample set will be discard, Are you sure?

In such cases, first save the patches and rhythm sets, and then save the live/studio set.

Adding Effects

This section explains the procedures and settings for applying effects in each mode.

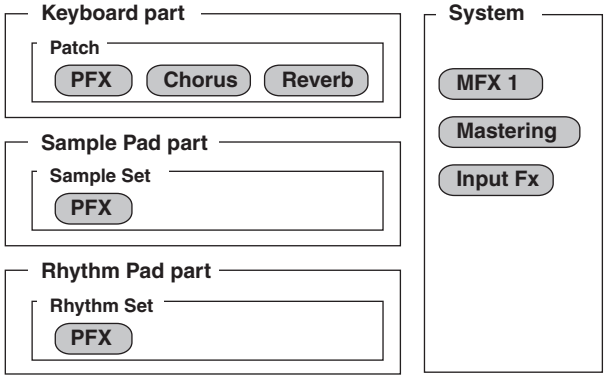
cf.

For details of the Fantom-G's onboard effects, refer to **"About the Internal Effects"** (p. 36).

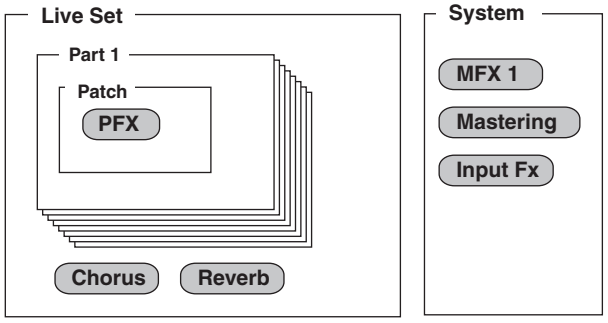
Where Effect Settings are Saved

Effect settings are saved in the locations shown in the illustration below. If you want to save your effect settings, press the [WRITE] button and save them in the patch, live set, studio set, or system.

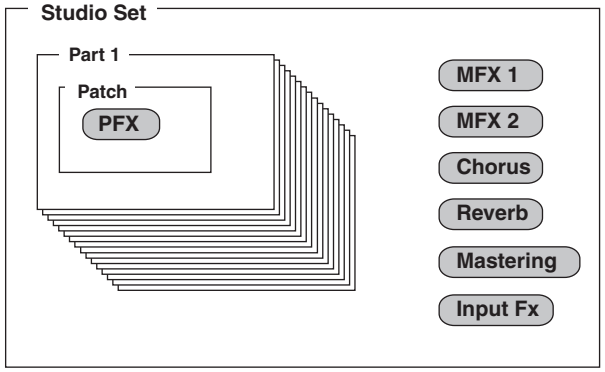
● Single Mode



● Live Mode



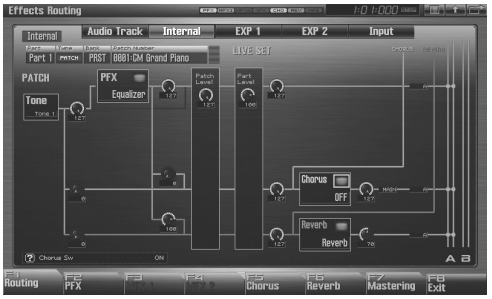
● Studio Mode



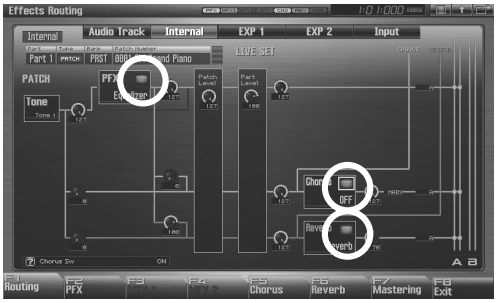
Turning Effects On and Off

The Fantom-G's onboard effects can be turned on/off. Turn these settings OFF when you wish to listen to the unprocessed sound as you create a sound, or when you wish to use external effects processors instead of the built-in effects.

1. Press [EFFECTS (ROUTING)] to access the Effects screen.



2. Use [CURSOR] to move the cursor to the switch for each effect, and turn the VALUE dial or use [INC] [DEC] to turn the switch on/off.



Specifying the effect applied to the external audio input or an audio track

You can change the routing diagram by turning the VALUE dial or using [INC] [DEC] in the Part Group field.

Part Group	Explanation
Internal	Internal (internal sound generator)
EXP 1	Expansion board 1
EXP 2	Expansion board 2
Audio Trk	Audio tracks
Input	Audio input

MEMO

You can switch the part group by holding down [SHIFT] and pressing ◀ or ▶.

Using the pads to switch effects on/off

You can use the pads to directly switch each effect on/off. For the procedure, refer to the following pages.

cf.

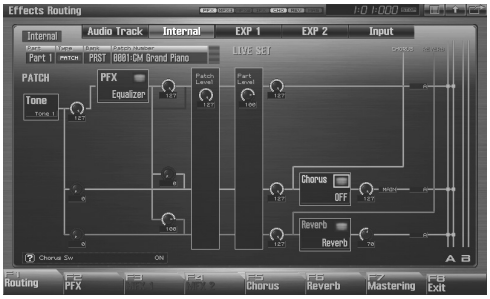
"11 EFFECT SW (Using the Pads to Switch the Effects)" (p. 199)

cf.

"12 PATCH MFX SW (Using the Pads to Switch Patch Multi-effects)" (p. 199)

Making Effect Settings

1. **In the appropriate mode, select the sound to which you want to apply effects.**
2. **Press [EFFECTS (ROUTING)] to access the Effects screen.**
3. **Press one of the [F1 (Routing)]–[F7 (Mastering)] tabs to select the effect that you want to edit.**



4. **Use [CURSOR] to move the cursor to the parameter you wish to modify.**
5. **Turn the VALUE dial or press [INC] [DEC] to get the value you want.**
6. **Press [EXIT] to return to the previous screen.**

F-key operations in the effect screen

F-key	Explanation	Page
F1 Routing	Routing edit screen	p. 151 p. 154
F2 PFX	Patch multi-effect edit screen	p. 157
F3 MFX 1	MFX 1 edit screen	p. 158
F4 MFX 2	MFX 2 edit screen	p. 158
F5 Chorus	Chorus edit screen	p. 159
F6 Reverb	Reverb edit screen	p. 159
F7 Mastering	Mastering edit screen	p. 160
F8 Exit	Returns to the previous screen	–

Applying Effects in Single Mode

Single mode allows you to use patch FX (PFX), chorus, and reverb. These effects will operate according to the effect settings of the patch, rhythm set, or sample set that's assigned to the keyboard part.

cf.

"Specifying How the Sound will be Output (Routing)" (p. 151)

In addition, you can apply a multi-effect (MFX1) to the external audio input or audio tracks.

cf.

"Specifying the effect applied to the external audio input or an audio track" (p. 150)

Applying Effects in Live Mode

Live mode allows you to use patch FX (PFX), chorus, and reverb. These effects will operate according to the effect settings of the live set.

cf.

"Specifying How the Sound will be Output (Routing)" (p. 151)

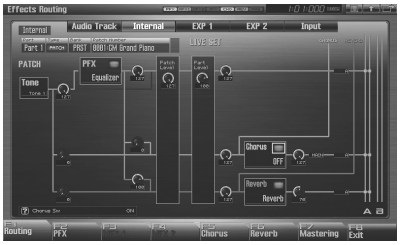
In addition, you can apply a multi-effect (MFX1) to the external audio input or audio tracks.

cf.

"Specifying the effect applied to the external audio input or an audio track" (p. 150)

Specifying How the Sound will be Output (Routing)

Here you can make overall settings for effects, and the output destination and level of each signal.



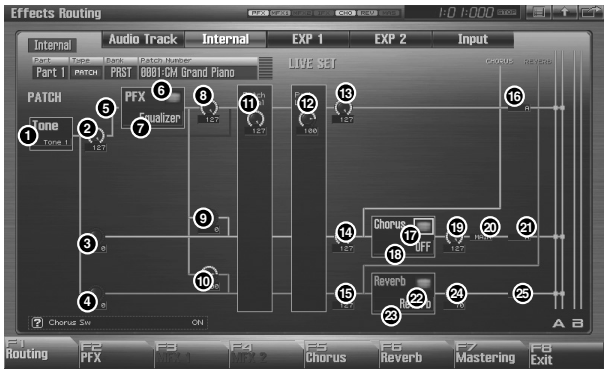
cf.

For details on these settings, refer to **"Making Effect Settings"** (p. 151).

MEMO

In this screen, the name of the parameter selected by the cursor is shown in the " " area in the lower left of the screen. The current value of the parameter is also shown here.

Signal Flow Diagram and Parameters



MEMO

In Single mode and Live mode, MFX 1 (multi-effect) will apply only to the external input or to audio tracks, and therefore is now shown in the internal routing diagram.

❶ Tone Select

Select the tone for which you want to make settings.

Value: ALL, 1–4

MEMO

This parameter is **Rhythm Key Select** when a rhythm set is being selected. You can select the rhythm tone (A0–C8) for which you want to make settings.

❷ Tone Output Level

Set the level of the signal that is sent to the output destination specified by Output Assign.

Value: 0–127

❸ Tone Chorus Send Level

Sets the level of the signal sent to chorus for each tone.

Value: 0–127

❹ Tone Reverb Send Level

Sets the level of the signal sent to reverb for each tone.

Value: 0–127

❺ Tone Output Assign

Specifies how the direct sound of each tone will be output.

Value:

PFX: Output through patch multi-effects (PFX).

DRY: Output without passing through patch multi-effects (PFX).

❻ PFX Sw

Switches the patch multi-effect on/off.

Value: ON, OFF

❼ PFX Type (Patch Multi-Effects Type)

Use this parameter to select from among the 76 available patch multi-effects. For details on patch multi-effects parameters, refer to **"MFX/PFX Parameter"** (p. 161).

Value: 0 (Through)–76

❽ PFX Output Level (Patch Multi-Effects Output Level)

Adjusts the volume of the sound that has passed through the patch multi-effects.

Value: 0–127

❾ PFX Chorus Send Level (Patch Multi-Effects Chorus Send Level)

Adjusts the amount of chorus for the sound that passes through patch multi-effects. If you don't want to add the Chorus effect, set it to "0."

Value: 0–127

❿ PFX Reverb Send Level (Patch Multi-Effects Reverb Send Level)

Adjusts the amount of reverb for the sound that passes through patch multi-effects. If you don't want to add the Reverb effect, set it to "0."

Value: 0–127

⓫ Patch Level

Adjusts the volume of the patch.

Value: 0–127

⓬ Part Level

Adjusts the volume of the part.

Value: 0–127

⓭ Part Output Level

Sets the level of the signal sent to the output destination chosen by Part Output Assign.

Value: 0–127

⓮ Part Chorus Send Level

Sets the level of the signal sent to chorus for each part. If you don't want to add the Chorus effect, set it to "0."

Value: 0–127

⓯ Part Reverb Send Level

Sets the level of the signal sent to reverb for each part. If you don't want to add the Reverb effect, set it to "0."

Value: 0–127

⑯ Part Output Assign

Specifies for each part how the direct sound will be output.

Value:

A, B: Output to the OUTPUT A (MIX) jack or OUTPUT B jack in stereo without passing through multi-effects.

1–4: Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects.

NOTE

If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack.

MEMO

If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 298).

⑰ Chorus Sw

Switches the chorus on/off.

Value: ON, OFF

⑱ Chorus Type

Selects either chorus or delay. For details on chorus parameters, refer to **"Chorus Parameters"** (p. 184).

Value: 0 (Off)–3 (GM2 Chorus)

⑲ Chorus Level

Adjusts the volume of the sound that has passed through chorus.

Value: 0–127

⑳ Chorus Output Select

Specifies how the sound routed through chorus will be output.

Value

MAIN: Output to the OUTPUT jacks in stereo.

REV: Output to reverb in mono.

M+R: Output to the OUTPUT jacks in stereo, and to reverb in mono.

TIP

When set to "MAIN" or "M+R," the OUTPUT jack from which the sound is output is set in Chorus Output Assign.

㉑ Chorus Output Assign

Selects the pair of OUTPUT jacks to which the chorus sound is routed when Chorus Output Select is set to "MAIN" or "M+R."

Value

A: Output to the OUTPUT A (MIX) jacks in stereo.

B: Output to the OUTPUT B jacks in stereo.

NOTE

When Chorus Output Select is set to "REV," this setting will have no effect.

MEMO

If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 298).

㉒ Reverb Sw

Switches the reverb on/off.

Value: ON, OFF

㉓ Reverb Type

Selects the type of reverb. For details on reverb parameters, refer to **"Reverb Parameters"** (p. 185).

Value: 0 (Off)–10 (CHURCH)

㉔ Reverb Level

Adjusts the volume of the sound that has passed through reverb.

Value: 0–127

㉕ Reverb Output Assign

Specifies how the sound routed through reverb will be output.

Value

A: Output to the OUTPUT A (MIX) jacks in stereo.

B: Output to the OUTPUT B jacks in stereo.

MEMO

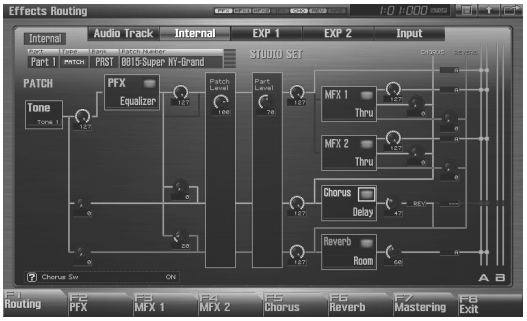
If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 298).

Applying Effects in Studio Mode

Studio mode allows you to use two multi-effects (MFX1, MFX2), one chorus, and one reverb.
These effects will operate according to the effect settings of the studio set.

Specifying How the Sound Will Be Output (Routing)

Here you can make overall settings for effects, and the output destination and level of each signal.



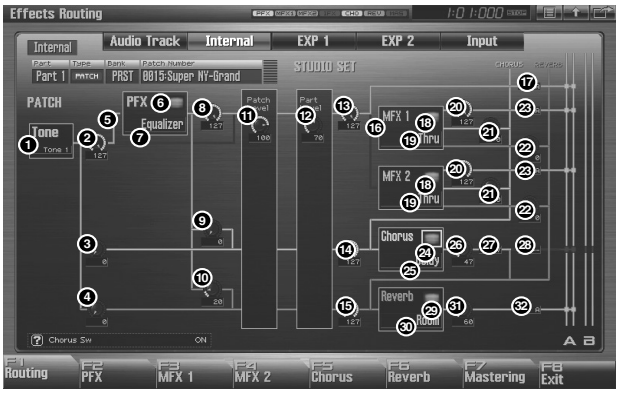
cf.

For details on these settings, refer to **"Making Effect Settings"** (p. 151).

MEMO

In this screen, the name of the parameter selected by the cursor is shown in the " " area in the lower left of the screen. The current value of the parameter is also shown here.

Signal Flow Diagram and Parameters



❶ Tone Select

Select the tone for which you want to make settings.

Value: ALL, 1–4

MEMO

This parameter is **Rhythm Key Select** when a rhythm set is being selected. You can select the rhythm tone (A0–C8) for which you want to make settings.

❷ Tone Output Level

Set the level of the signal that is sent to the output destination specified by Output Assign.

Value: 0–127

❸ Tone Chorus Send Level

Sets the level of the signal sent to chorus for each tone.

Value: 0–127

❹ Tone Reverb Send Level

Sets the level of the signal sent to reverb for each tone.

Value: 0–127

❺ Tone Output Assign

Specifies how the direct sound of each tone will be output.

Value:

PFX: Output through patch multi-effects (PFX).

DRY: Output without passing through patch multi-effects (PFX).

❻ PFX Sw (Patch Multi-Effects Switch)

Switches the patch multi-effect on/off.

Value: ON, OFF

❼ PFX Type (Patch Multi-Effects Type)

Use this parameter to select from among the 76 available patch multi-effects. For details on patch multi-effects parameters, refer to **"MFX/PFX Parameter"** (p. 161).

Value: 0 (Through)–76

⑧ PFX Output Level (Patch Multi-Effects Output Level)

Adjusts the volume of the sound that has passed through the patch multi-effects.

Value: 0–127

⑨ PFX Chorus Send Level (Patch Multi-Effects Chorus Send Level)

Adjusts the amount of chorus for the sound that passes through patch multi-effects. If you don't want to add the Chorus effect, set it to "0."

Value: 0–127

⑩ PFX Reverb Send Level (Patch Multi-Effects Reverb Send Level)

Adjusts the amount of reverb for the sound that passes through patch multi-effects. If you don't want to add the Reverb effect, set it to "0."

Value: 0–127

⑪ Patch Level

Adjusts the volume of the patch.

Value: 0–127

⑫ Part Level

Adjusts the volume of the part.

Value: 0–127

⑬ Part Output Level

Sets the level of the signal sent to the output destination chosen by Part Output Assign.

Value: 0–127

⑭ Part Chorus Send Level

Sets the level of the signal sent to chorus for each part. If you don't want to add the Chorus effect, set it to "0."

Value: 0–127

⑮ Part Reverb Send Level

Sets the level of the signal sent to reverb for each part. If you don't want to add the Reverb effect, set it to "0."

Value: 0–127

⑯ Part MFX Select

Specifies whether MFX will not be used, or which of the two multi-effects will be used.

Value: DRY, MFX-1–MFX-2

⑰ Part Output Assign

Specifies how the original sound will be output for each part. This is available only if Part MFX Select is set to DRY.

Value:

A, B: Output to the OUTPUT A (MIX) jack or OUTPUT B jack in stereo without passing through multi-effects.

1–4: Output to the INDIVIDUAL 1–4 jacks in mono without passing through multi-effects.

NOTE

If you've made settings so that sounds are separately routed to the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, but no plug is actually inserted in the INDIVIDUAL 2 jack, the sounds routed to INDIVIDUAL 1 and INDIVIDUAL 2 will be mixed and output from the INDIVIDUAL 1 jack.

MEMO

If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 298).

⑱ MFX Sw (Multi-Effects Switch)

Switches the multi-effect on/off.

Value: ON, OFF

⑲ MFX Type (Multi-Effects Type)

Use this parameter to select from among the 78 available multi-effects. For details on multi-effects parameters, refer to **"MFX/PFX Parameter"** (p. 161).

Value: 0 (Through)–78

⑳ MFX Output Level (Multi-Effects Output Level)

Adjusts the volume of the sound that has passed through the multi-effects.

Value: 0–127

㉑ MFX Chorus Send Level (Multi-Effects Chorus Send Level)

Adjusts the amount of chorus for the sound that passes through multi-effects. If you don't want to add the Chorus effect, set it to "0."

Value: 0–127

㉒ MFX Reverb Send Level (Multi-Effects Reverb Send Level)

Adjusts the amount of reverb for the sound that passes through multi-effects. If you don't want to add the Reverb effect, set it to "0."

Value: 0–127

㉓ MFX Output Assign (Multi-Effects Output Assign)

Adjusts the output destination of the sound that has passed through the multi-effects.

Value

A: Output to the OUTPUT A (MIX) jacks in stereo.

B: Output to the OUTPUT B jacks in stereo.

MEMO

If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 298).

㉔ Chorus Sw

Switches the chorus on/off.

Value: ON, OFF

㉕ Chorus Type

Selects either chorus or delay. For details on chorus parameters, refer to **"Chorus Parameters"** (p. 184).

Value: 0 (Off)–3 (GM2 Chorus)

㉖ Chorus Level

Adjusts the volume of the sound that has passed through chorus.

Value: 0–127

㉗ Chorus Output Select

Specifies how the sound routed through chorus will be output.

Value

MAIN: Output to the OUTPUT jacks in stereo.

REV: Output to reverb in mono.

M+R: Output to the OUTPUT jacks in stereo, and to reverb in mono.

TIP

When set to "MAIN" or "M+R," the OUTPUT jack from which the sound is output is set in Chorus Output Assign.

㉘ Chorus Output Assign

Selects the pair of OUTPUT jacks to which the chorus sound is routed when Chorus Output Select is set to "MAIN" or "M+R."

Value

A: Output to the OUTPUT A (MIX) jacks in stereo.

B: Output to the OUTPUT B jacks in stereo.

NOTE

When Chorus Output Select is set to "REV," this setting will have no effect.

MEMO

If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 298).

㉙ Reverb Sw

Switches the reverb on/off.

Value: ON, OFF

㉚ Reverb Type

Selects the type of reverb. For details on reverb parameters, refer to **"Reverb Parameters"** (p. 185).

Value: 0 (Off)–10 (CHURCH)

㉛ Reverb Level

Adjusts the volume of the sound that has passed through reverb.

Value: 0–127

㉜ Reverb Output Assign

Specifies how the sound routed through reverb will be output.

Value

A: Output to the OUTPUT A (MIX) jacks in stereo.

B: Output to the OUTPUT B jacks in stereo.

MEMO

If the Mix/Parallel parameter is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 298).

Making Patch Multi-Effects Settings (PFX)

cf.

For details on these settings, refer to **"Making Effect Settings"** (p. 151)

PFX (Patch Multi-Effects)

Type (Patch Multi-Effects Type)

Use this parameter to select from among the 76 available patch multi-effects. For details on patch multi-effects parameters, refer to **"MFX/PFX Parameter"** (p. 161).

Value: 00: Thru–76

In this setting screen, you can edit the parameters of the patch multi-effects that is selected by the Patch Multi-effects Type setting. For details on the parameters that can be edited, refer to **"MFX/PFX Parameter"** (p. 161).

TIP

Patch multi-effect settings allow you to use the Realtime Control knobs to edit up to four pre-specified parameters for each type of patch multi-effect.

MEMO

Parameters marked by C can be selected as a patch multi-effect control destination parameter (p. 157).

PFX Control

Source 1–4 (Multi-Effects Control Source 1–4)

Sets the MIDI message used to change the multi-effects parameter with the multi-effects control.

Value

OFF: Multi-effects control will not be used.

CC01–31, CC32(OFF), 33–95: Control Change

PITCH BEND: Pitch Bend

AFTERTOUCH: Aftertouch

SYS CTRL1–SYS CTRL4: MIDI messages used as common multi-effects controls.

TIP

If you want to use common controllers for the entire Fantom-G, select "SYS CTRL 1"–"SYS CTRL 4." MIDI messages used as System Control 1–4 are set with the Sys Ctrl 1–4 Source parameters (p. 301).

NOTE

In patch/rhythm set/sample set, there are parameters that determine, for each tone/rhythm tone, whether or not Pitch Bend, Controller Number 11 (Expression) and Controller Number 64 (Hold 1) are received (p. 108). When these settings are "ON," and the MIDI messages are received, then when any change is made in the settings of the desired parameter, the Pitch Bend, Expression, and Hold1 settings also change simultaneously. If you want to change the targeted parameters only, then set these to "OFF."

- Live mode and Studio mode provide parameters that let you specify whether specific MIDI messages will be received for each MIDI channel. When using multi-effect control, make sure that reception is enabled for the MIDI messages you're using. If MIDI message reception is disabled, multi-effect control won't work.

Destination 1–4 (Multi-Effects Control Destination 1–4)

Sets the multi-effects parameters to be controlled with the multi-effects control. The multi-effects parameters available for control will depend on the multi-effects type. For details, refer to **"MFX/PFX Parameter"** (p. 161).

Sens 1–4 (Multi-Effects Control Sensitivity 1–4)

Sets the amount of the multi-effects control's effect that is applied. To make an increase in the currently selected value (to get higher values, move to the right, increase rates, and so on), select a positive value; to make a decrease in the currently selected value (to get lower values, move to the left, decrease rates, and so on), select a negative value. For either positive or negative settings, greater absolute values will allow greater amounts of change. Set this to "0" if you don't want to apply the effect.

Value: -63– +63

Multi-Effects Control

If you wanted to change the volume of multi-effects sounds, the delay time of Delay, and the like, using an external MIDI device, you would need to send System Exclusive messages-MIDI messages designed exclusively for the Fantom-G. However, System Exclusive messages tend to be complicated, and the amount of data that needs to be transmitted can get quite large.

For that reason, a number of the more typical of the Fantom-G's multi-effects parameters have been designed so they accept the use of Control Change (or other) MIDI messages for the purpose of making changes in their values. For example, you can use the Pitch Bend lever to change the amount of distortion, or use the keyboard's touch to change the delay time of Delay. The parameters that can be changed are predetermined for each type of multi-effect; among the parameters described in **"MFX/PFX Parameter"** (p. 161), these are indicated by a "#."

In the multi-effect setting screen, a "c" symbol will be shown at the left of the parameter.

The function that allows you use MIDI messages to make these changes in realtime to the multi-effects parameters is called the **Multi-effects Control**. Up to four multi-effects controls can be used in a single patch/rhythm set/sample set/live set/studio set.

When the multi-effects control is used, you can select the amount of control (Sens parameter) applied, the parameter selected (Destination parameter), and the MIDI message used (Source parameter).

TIP

By using the Matrix Control instead of the Multi-effects Control, you can also change the parameters of some popular multi-effects in realtime (p. 109).

Making Multi-Effects Settings (MFX1–2)

cf.

For details on these settings, refer to **"Making Effect Settings"** (p. 151)

Type (Multi-Effects Type)

Use this parameter to select from among the 78 available multi-effects. For details on multi-effects parameters, refer to **"MFX/PFX Parameter"** (p. 161).

Value: 00: Thru–78

In this setting screen, you can edit the parameters of the multi-effects that is selected by the Multi-effects Type setting. For details on the parameters that can be edited, refer to **"MFX/PFX Parameter"** (p. 161).

TIP

Multi-effect settings allow you to use the Realtime Control knobs to edit up to four pre-specified parameters for each multi-effect type.

Making Chorus Settings (Chorus)

cf.

For details on these settings, refer to **"Making Effect Settings"** (p. 151)

Type (Chorus Type)

Selects either chorus or delay. For details on chorus parameters, refer to **"Chorus Parameters"** (p. 184).

Value: 00: OFF–03: GM2 Chorus

* *In this setting screen, you can edit the parameters of the chorus/delay that is selected by the Chorus Type setting. For details on the parameters that can be edited, refer to* ***"Chorus Parameters"*** *(p. 184).*

TIP

If a number (1 – 4) is shown for a parameter in the screen, you can use the corresponding Realtime Control knob (far left knob is 1 – far right knob is 4) to adjust the value of that parameter.

Making Reverb Settings (Reverb)

cf.

For details on these settings, refer to **"Making Effect Settings"** (p. 151)

Type (Reverb Type)

Selects the type of reverb. For details on reverb parameters, refer to **"Reverb Parameters"** (p. 185).

Value: 00: OFF–10: Church

* *In this setting screen, you can edit the parameters of the reverb that is selected by the Reverb Type setting. For details on the parameters that can be edited, refer to* ***"Reverb Parameters"*** *(p. 185).*

TIP

If a number (1 – 4) is shown for a parameter in the screen, you can use the corresponding Realtime Control knob (far left knob is 1 – far right knob is 4) to adjust the value of that parameter.

Mastering Effect

This is a stereo compressor (limiter) that is applied to the final output of the Fantom-G. It has independent high, mid, and low ranges. Independently for the high-frequency, mid-frequency, and low-frequency regions, this compresses any sounds that exceed the specified level, making the volume more consistent. When mixing down to MD, or DAT, or when you procedure your own original audio CD, this lets you master at an optimized level.

* *Mastering effect settings apply to the entire Fantom-G. These settings are not for individual patches or performances.*
* *The mastering effect is applied to the sound that is output from the OUTPUT A (MIX) jacks. It will not be applied to the sound that is output from the OUTPUT B jacks.*

cf.

For details on these settings, refer to **"Making Effect Settings"** (p. 151)

Setting

This recalls settings for the mastering effect.

Value: System (other than Studio Mode), Studio (only in Studio Mode), User, Hard Comp, Soft Comp. Low Boost, Mid Boost, High Boost

MEMO

To save settings for the mastering effect, press the panel [WRITE] button. The settings are saved in the Setting parameter "System" ("Studio" in the case of Studio mode).
The mastering effect settings you save here are saved as system settings in the case of Single mode or Live mode. In the case of Studio mode, they are saved in the studio set.

Attack

Time from when the volume goes up the threshold level until the compressor effect applies

Value: 0–100 ms

Release

Time from when the volume falls below the threshold level until the compressor effect no longer applies

Value: 50–5000 ms

Threshold

Volume level at which compression begins

Value: -36–0 dB

Ratio

Compression ratio

Value: 1.00:1–INF:1 (INF: infinity)

Level

Output volume

Value: 0–24 dB

Split Frequency High

Frequency at which the high-frequency (HI) and mid-frequency (MID) bands are split

Value: 2000–8000 Hz

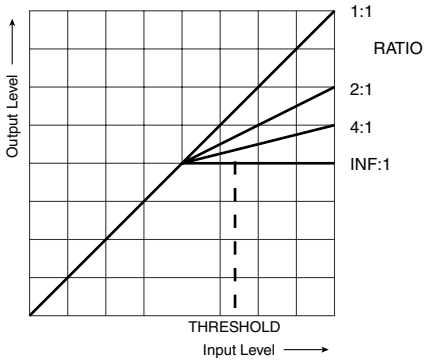
Split Frequency Low

Frequency at which the low-frequency (LO) and mid-frequency (MID) bands are split

Value: 200–800 Hz

About Threshold and Ratio

As shown in the diagram below, these parameters determine how the volume is to be compressed.



Effects List

MFX/PFX Parameter

The MFX (multi-effects) feature 78 different kinds of effects (the PFX: 76 types). Some of the effects consist of two or more different effects connected in series.

Parameters marked with a sharp "#" can be controlled using a specified controller (Two setting items will change simultaneously for "#1" and "#2").

FILTER (10 types)		
01	EQUALIZER	p. 162
02	SPECTRUM	p. 162
03	ISOLATOR	p. 162
04	LOW BOOST	p. 162
05	SUPER FILTER	p. 163
06	STEP FILTER	p. 163
07	ENHANCER	p. 163
08	AUTO WAH	p. 164
09	HUMANIZER	p. 164
10	SPEAKER SIMULATOR	p. 164
MODULATION (12 types)		
11	PHASER	p. 165
12	STEP PHASER	p. 165
13	MULTI STAGE PHASER	p. 165
14	INFINITE PHASER	p. 165
15	RING MODULATOR	p. 166
16	STEP RING MODULATOR	p. 166
17	TREMOLO	p. 166
18	AUTO PAN	p. 166
19	STEP PAN	p. 166
20	SLICER	p. 167
21	ROTARY	p. 167
22	VK ROTARY	p. 167
CHORUS (12 types)		
23	CHORUS	p. 168
24	FLANGER	p. 168
25	STEP FLANGER	p. 168
26	HEXA-CHORUS	p. 169
27	TREMOLO CHORUS	p. 169
28	SPACE-D	p. 169
29	3D CHORUS	p. 169
30	3D FLANGER	p. 170
31	3D STEP FLANGER	p. 170
32	2BAND CHORUS	p. 170
33	2BAND FLANGER	p. 171
34	2BAND STEP FLANGER	p. 171
DYNAMICS (8 types)		
35	OVERDRIVE	p. 172
36	DISTORTION	p. 172
37	VS OVERDRIVE	p. 172
38	VS DISTORTION	p. 172
39	GUITAR AMP SIMULATOR	p. 172
40	COMPRESSOR	p. 173
41	LIMITER	p. 173
42	GATE	p. 173
DELAY (13 types)		
43	DELAY	p. 173
44	LONG DELAY	p. 174
45	SERIAL DELAY	p. 174
46	MODULATION DELAY	p. 174
47	3TAP PAN DELAY	p. 175
48	4TAP PAN DELAY	p. 175
49	MULTI TAP DELAY	p. 175
50	REVERSE DELAY	p. 175
51	SHUFFLE DELAY	p. 176
52	3D DELAY	p. 176
53	TIME CTRL DELAY	p. 176
54	LONG TIME CTRL DELAY	p. 177
55	TAPE ECHO	p. 177
LO-FI (5 types)		
56	LOFI NOISE	p. 177
57	LOFI COMPRESS	p. 178
58	LOFI RADIO	p. 178
59	TELEPHONE	p. 178
60	PHONOGRAPH	p. 178
PITCH (3 types)		
61	PITCH SHIFTER	p. 179
62	2VOICE PITCH SHIFTER	p. 179
63	STEP PITCH SHIFTER	p. 179
COMBINATION (12 types)		
64	OVERDRIVE → CHORUS	p. 179
65	OVERDRIVE → FLANGER	p. 180
66	OVERDRIVE → DELAY	p. 180
67	DISTORTION → CHORUS	p. 180
68	DISTORTION → FLANGER	p. 180
69	DISTORTION → DELAY	p. 180
70	ENHANCER → CHORUS	p. 181
71	ENHANCER → FLANGER	p. 181
72	ENHANCER → DELAY	p. 181
73	CHORUS → DELAY	p. 181
74	FLANGER → DELAY	p. 182
75	CHORUS → FLANGER	p. 182
PIANO (1 type)		
76	SYMPATHETIC RESONANCE	p. 182
REVERB (2 types)	*MFX only	
77	REVERB	p. 183
78	GATED REVERB	p. 183

About Note

Some effect parameters (such as Rate or Delay Time) can be set in terms of a note value.

Such parameters have a num/note switch that lets you specify whether you will set the value as a note value or as a numerical value.

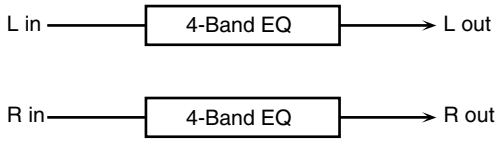
If you want to set Rate (Delay Time) as a numerical value, set the num/note switch to "Hz" ("msec"). If you want to set it as a note value, set the num/note switch to "NOTE."

NOTE

If a parameter whose num/note switch is set to "NOTE" is specified as a destination for multi-effect control, you will not be able to use multi-effect control to control that parameter.

01: EQUALIZER

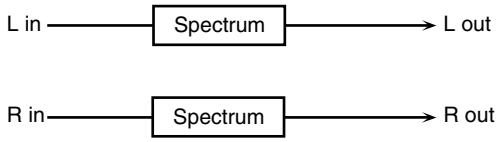
This is a four-band stereo equalizer (low, mid x 2, high).



Parameter	Value	Description
Low Freq	200, 400 Hz	Frequency of the low range
Low Gain #	-15– +15 dB	Gain of the low range
Mid1 Freq	200–8000 Hz	Frequency of the middle range 1
Mid1 Gain	-15– +15 dB	Gain of the middle range 1
Mid1 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 1 Set a higher value for Q to narrow the range to be affected.
Mid2 Freq	200–8000 Hz	Frequency of the middle range 2
Mid2 Gain	-15– +15 dB	Gain of the middle range 2
Mid2 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range 2 Set a higher value for Q to narrow the range to be affected.
High Freq	2000, 4000, 8000 Hz	Frequency of the high range
High Gain #	-15– +15 dB	Gain of the high range
Level #	0–127	Output Level

02: SPECTRUM

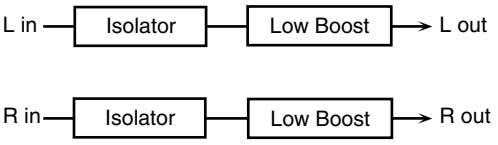
This is a stereo spectrum. Spectrum is a type of filter which modifies the timbre by boosting or cutting the level at specific frequencies.



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

03: ISOLATOR

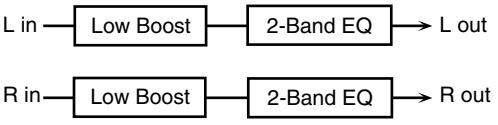
This is an equalizer which cuts the volume greatly, allowing you to add a special effect to the sound by cutting the volume in varying ranges.



Parameter	Value	Description
Boost/ Cut Low #	-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.
Boost/ Cut Mid #		
Boost/ Cut High #		
Anti Phase Low Sw	OFF, ON	Turns the Anti-Phase function on and off for the Low frequency ranges. When turned on, the counter-channel of stereo sound is inverted and added to the signal.
Anti Phase Low Level	0–127	Adjusts the level settings for the Low frequency ranges. Adjusting this level for certain frequencies allows you to lend emphasis to specific parts. (This is effective only for stereo source.)
Anti Phase Mid Sw	OFF, ON	Settings of the Anti-Phase function for the Middle frequency ranges The parameters are the same as for the Low frequency ranges.
Anti Phase Mid Level	0–127	
Low Boost Sw	OFF, ON	Turns Low Booster on/off. This emphasizes the bottom to create a heavy bass sound.
Low Boost Level	0–127	Increasing this value gives you a heavier low end. * Depending on the Isolator and filter settings this effect may be hard to distinguish.
Level	0–127	Output Level

04: LOW BOOST

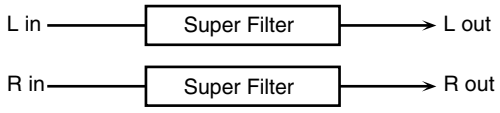
Boosts the volume of the lower range, creating powerful lows.



Parameter	Value	Description
Boost Frequency #	50–125 Hz	Center frequency at which the lower range will be boosted
Boost Gain #	0– +12 dB	Amount by which the lower range will be boosted
Boost Width	WIDE, MID, NARROW	Width of the lower range that will be boosted
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level	0–127	Output level

05: SUPER FILTER

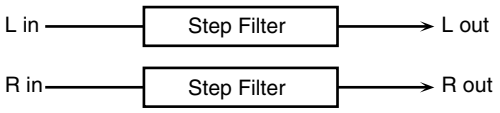
This is a filter with an extremely sharp slope. The cutoff frequency can be varied cyclically.



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 #	0–127	Cutoff frequency of the filter Increasing this value will raise the cutoff frequency.
Filter Resonance #	0–127	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Filter Gain	0– +12 dB	Amount of boost for the filter output
Modulation Sw	OFF,ON	On/off switch for cyclic change
Modulation Wave	TRI, SQR, 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 #	0.05–10.00 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

06: STEP FILTER

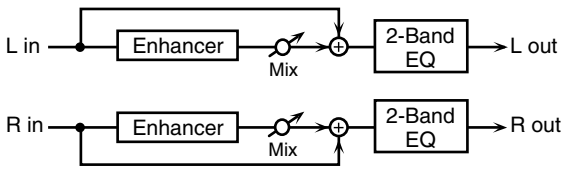
This is a filter whose cutoff frequency can be modulated in steps. You can specify the pattern by which the cutoff frequency will change.



Parameter	Value	Description
Step 01–16	0–127	Cutoff frequency at each step
Rate #	0.05–10.00 Hz, note	Rate of modulation
Attack #	0–127	Speed at which the cutoff frequency changes between steps
Filter Type	LPF, BPF, HPF, NOTCH	Filter type Frequency range that will pass through each filter **LPF:** frequencies below the cutoff **BPF:** frequencies in the region of the cutoff **HPF:** frequencies above the cutoff **NOTCH:** frequencies other than the region of the cutoff
Filter Slope	-12, -24, -36 dB	Amount of attenuation per octave **-12 dB:** gentle **-24 dB:** steep **-36 dB:** extremely steep
Filter Resonance #	0–127	Filter resonance level Increasing this value will emphasize the region near the cutoff frequency.
Filter Gain	0– +12 dB	Amount of boost for the filter output
Level	0–127	Output level

07: ENHANCER

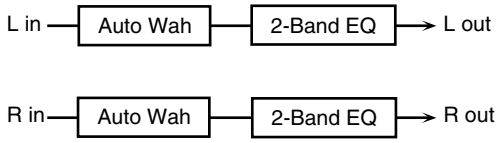
Controls the overtone structure of the high frequencies, adding sparkle and tightness to the sound.



Parameter	Value	Description
Sens #	0–127	Sensitivity of the enhancer
Mix #	0–127	Level of the overtones generated by the enhancer
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

08: AUTO WAH

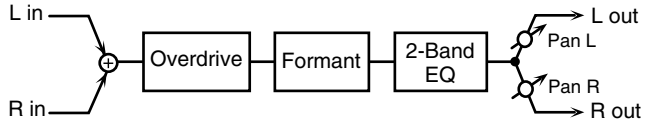
Cyclically controls a filter to create cyclic change in timbre.



Parameter	Value	Description
Filter Type	LPF, BPF	Type of filter **LPF:** The wah effect will be applied over a wide frequency range. **BPF:** The wah effect will be applied over a narrow frequency range.
Manual #	0–127	Adjusts the center frequency at which the effect is applied.
Peak	0–127	Adjusts the amount of the wah effect that will occur in the range of the center frequency. Set a higher value for Q to narrow the range to be affected.
Sens #	0–127	Adjusts the sensitivity with which the filter is controlled.
Polarity	UP, DOWN	Sets the direction in which the frequency will change when the auto-wah filter is modulated. **UP:** The filter will change toward a higher frequency. **DOWN:** The filter will change toward a lower frequency.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth #	0–127	Depth of modulation
Phase #	0–180 deg	Adjusts the degree of phase shift of the left and right sounds when the wah effect is applied.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

09: HUMANIZER

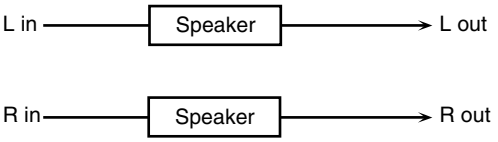
Adds a vowel character to the sound, making it similar to a human voice.



Parameter	Value	Description
Drive Sw	OFF, ON	Turns Drive on/off.
Drive #	0–127	Degree of distortion Also changes the volume.
Vowel1	a, e, i, o, u	Selects the vowel.
Vowel2	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: SPEAKER SIMULATOR

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



Parameter	Value	Description
Speaker Type	(See "Specifications of each Speaker Type")	Type of speaker
Mic Setting	1, 2, 3	Adjusts the location of the mic that is recording the sound of the speaker. This can be adjusted in three steps, with the mic becoming more distant in the order of 1, 2, and 3.
Mic Level #	0–127	Volume of the microphone
Direct Level #	0–127	Volume of the direct sound
Level #	0–127	Output Level

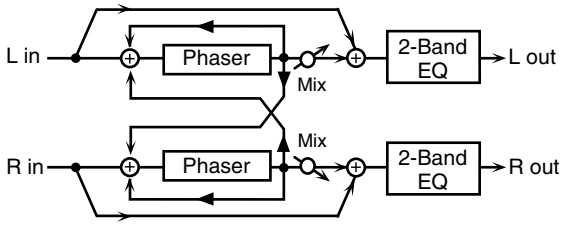
Specifications of each Speaker Type

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

Type	Cabinet	Speaker	Microphone
SMALL 1	small open-back enclosure	10	dynamic
SMALL 2	small open-back enclosure	10	dynamic
MIDDLE	open back enclosure	12 x 1	dynamic
JC-120	open back enclosure	12 x 2	dynamic
BUILT-IN 1	open back enclosure	12 x 2	dynamic
BUILT-IN 2	open back enclosure	12 x 2	condenser
BUILT-IN 3	open back enclosure	12 x 2	condenser
BUILT-IN 4	open back enclosure	12 x 2	condenser
BUILT-IN 5	open back enclosure	12 x 2	condenser
BG STACK 1	sealed enclosure	12 x 2	condenser
BG STACK 2	large sealed enclosure	12 x 2	condenser
MS STACK 1	large sealed enclosure	12 x 4	condenser
MS STACK 2	large sealed enclosure	12 x 4	condenser
METAL STACK	large double stack	12 x 4	condenser
2-STACK	large double stack	12 x 4	condenser
3-STACK	large triple stack	12 x 4	condenser

11: PHASER

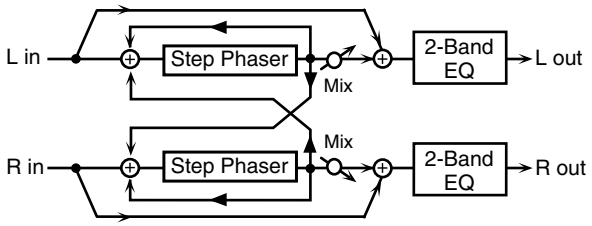
A phase-shifted sound is added to the original sound and modulated.



Parameter	Value	Description
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation will be the same or the opposite. **INVERSE:** The left and right phase will be opposite. When using a mono source, this spreads the sound. **SYNCHRO:** The left and right phase will be the same. Select this when inputting a stereo source.
Resonance #	0–127	Amount of feedback
Cross Feedback	-98– +98 %	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
Mix #	0–127	Level of the phase-shifted sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

12: STEP PHASER

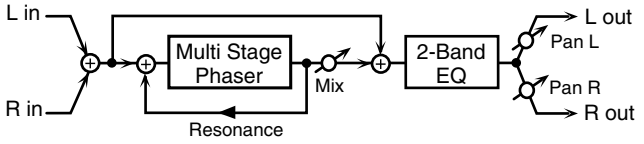
The phaser effect will be varied gradually.



Parameter	Value	Description
Mode	4-STAGE, 8-STAGE, 12-STAGE	Number of stages in the phaser
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation will be the same or the opposite. **INVERSE:** The left and right phase will be opposite. When using a mono source, this spreads the sound. **SYNCHRO:** The left and right phase will be the same. Select this when inputting a stereo source.
Resonance #	0–127	Amount of feedback
Cross Feedback	-98– +98 %	Adjusts the proportion of the phaser sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate #	0.10–20.00 Hz, note	Rate of the step-wise change in the phaser effect
Mix #	0–127	Level of the phase-shifted sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

13: MULTI STAGE PHASER

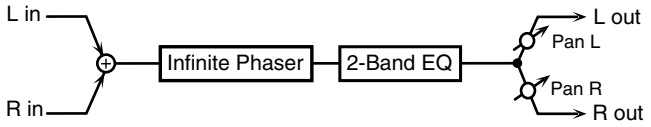
Extremely high settings of the phase difference produce a deep phaser effect.



Parameter	Value	Description
Mode	4-STAGE, 8-STAGE, 12-STAGE, 16-STAGE, 20-STAGE, 24-STAGE	Number of phaser stages
Manual #	0–127	Adjusts the basic frequency from which the sound will be modulated.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Resonance #	0–127	Amount of feedback
Mix #	0–127	Level of the phase-shifted sound
Pan #	L64–63R	Stereo location of the output sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

14: INFINITE PHASER

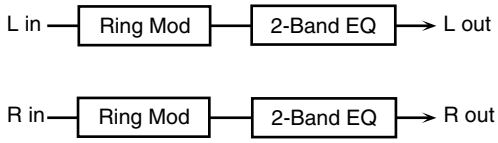
A phaser that continues raising/lowering the frequency at which the sound is modulated.



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

15: RING MODULATOR

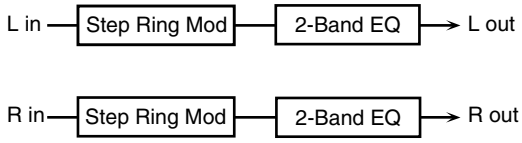
This is an effect that applies amplitude modulation (AM) to the input signal, producing bell-like sounds. You can also change the modulation frequency in response to changes in the volume of the sound sent into the effect.



Parameter	Value	Description
Frequency #	0–127	Adjusts the frequency at which modulation is applied.
Sens #	0–127	Adjusts the amount of frequency modulation applied.
Polarity	UP, DOWN	Determines whether the frequency modulation moves towards higher frequencies (**UP**) or lower frequencies (**DOWN**).
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

16: STEP RING MODULATOR

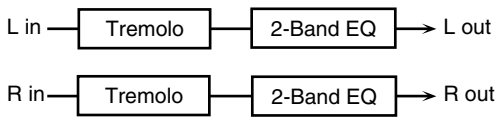
This is a ring modulator that uses a 16-step sequence to vary the frequency at which modulation is applied.



Parameter	Range	Explanation
Step 01–16	0–127	Frequency of ring modulation at each step
Rate #	0.05–10.00 Hz, note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the modulation frequency changes between steps
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and effect sound (W)
Level	0–127	Output volume

17: TREMOLO

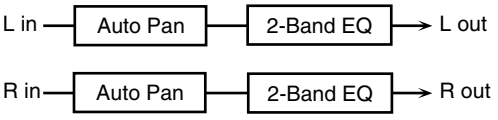
Cyclically modulates the volume to add tremolo effect to the sound.

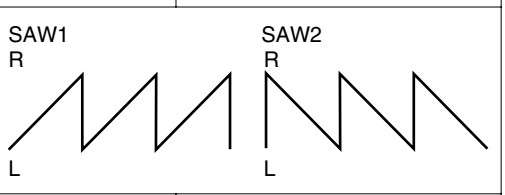


Parameter	Value	Description
Mod Wave	TRI, SQR, SIN, SAW1, SAW2	Modulation Wave **TRI:** triangle wave **SQR:** square wave **SIN:** sine wave **SAW1/2:** sawtooth wave
Rate #	0.05–10.00 Hz, note	Frequency of the change
Depth #	0–127	Depth to which the effect is applied
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

18: AUTO PAN

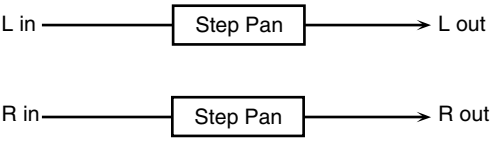
Cyclically modulates the stereo location of the sound.



Parameter	Value	Description
Mod Wave	TRI, SQR, SIN, SAW1, SAW2	Modulation Wave **TRI:** triangle wave **SQR:** square wave **SIN:** sine wave **SAW1/2:** sawtooth wave
		
Rate #	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 range
High Gain	-15– +15 dB	Gain of the high range
Level	0–127	Output Level

19: STEP PAN

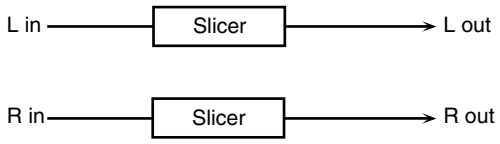
This uses a 16-step sequence to vary the panning of the sound.



Parameter	Range	Explanation
Step 01–16	L64–63R	Pan at each step
Rate #	0.05–10.00 Hz, note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the pan changes between steps
Input Sync Sw	OFF, ON	Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF)
Input Sync Threshold	0–127	Volume at which an input note will be detected
Level	0–127	Output volume

20: SLICER

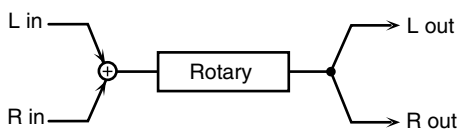
By applying successive cuts to the sound, this effect turns a conventional sound into a sound that appears to be played as a backing phrase. This is especially effective when applied to sustain-type sounds.



Parameter	Value	Description
Step 01–16	0–127	Level at each step
Rate #	0.05–10.00 Hz, note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the level changes between steps
Input Sync Sw	OFF, ON	Specifies whether an input note will cause the sequence to resume from the first step of the sequence (ON) or not (OFF)
Input Sync Threshold	0–127	Volume at which an input note will be detected
Mode	LEGATO, SLASH	Sets the manner in which the volume changes as one step progresses to the next. **LEGATO:** The change in volume from one step's level to the next remains unaltered. If the level of a following step is the same as the one preceding it, there is no change in volume. **SLASH:** The level is momentarily set to 0 before progressing to the level of the next step. This change in volume occurs even if the level of the following step is the same as the preceding step.
Shuffle #	0–127	Timing of volume changes in levels for even-numbered steps (step 2, step 4, step 6...). The higher the value, the later the beat progresses.
Level	0–127	Output level

21: ROTARY

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

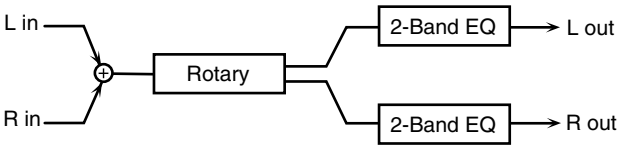


Parameter	Value	Description
Speed #	SLOW, FAST	Simultaneously switch the rotational speed of the low frequency rotor and high frequency rotor. **SLOW:** Slows down the rotation to the Slow Rate. **FAST:** Speeds up the rotation to the Fast Rate.
Woofer Slow Speed	0.05–10.00 Hz	Slow speed (SLOW) of the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

22: VK ROTARY

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

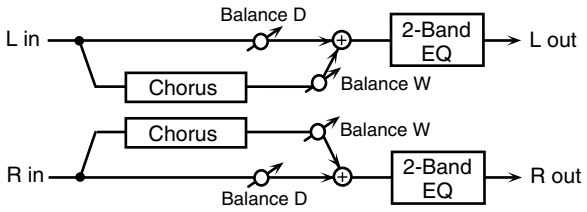
This effect features the same specifications as the VK-7's built-in rotary speaker.



Parameter	Value	Description
Speed #	SLOW, FAST	Rotational speed of the rotating speaker
Brake #	OFF, ON	Switches the rotation of the rotary speaker. When this is turned on, the rotation will gradually stop. When it is turned off, the rotation will gradually resume.
Woofer Slow Speed	0.05–10.00 Hz	Low-speed rotation speed of the woofer
Woofer Fast Speed	0.05–10.00 Hz	High-speed rotation speed of the woofer
Woofer Trans Up	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Slow to Fast.
Woofer Trans Down	0–127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Fast to Slow.
Woofer Level	0–127	Volume of the woofer
Tweeter Slow Speed	0.05–10.00 Hz	Settings of the tweeter The parameters are the same as for the woofer.
Tweeter Fast Speed	0.05–10.00 Hz	
Tweeter Trans Up	0–127	
Tweeter Trans Down	0–127	
Tweeter Level	0–127	
Spread	0–10	Sets the rotary speaker stereo image. The higher the value set, the wider the sound is spread out.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level #	0–127	Output Level

23: CHORUS

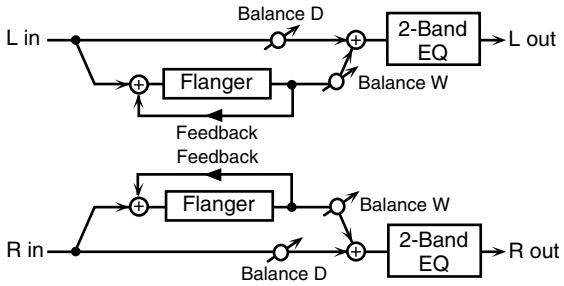
This is a stereo chorus. A filter is provided so that you can adjust the timbre of the chorus sound.



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 delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

24: FLANGER

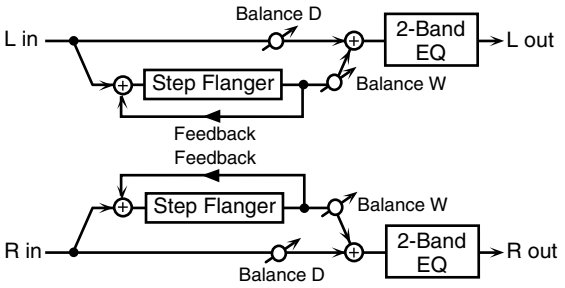
This is a stereo flanger. (The LFO has the same phase for left and right.) It produces a metallic resonance that rises and falls like a jet airplane taking off or landing. A filter is provided so that you can adjust the timbre of the flanged sound.



Parameter	Value	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 delay time from when the direct sound begins until the flanger sound is heard.
Rate #	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 #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

25: STEP FLANGER

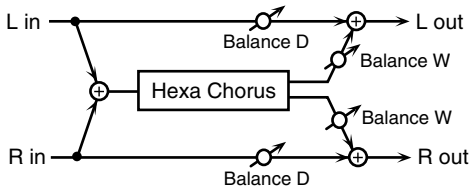
This is a flanger in which the flanger pitch changes in steps. The speed at which the pitch changes can also be specified in terms of a note-value of a specified tempo.



Parameter	Value	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 delay time from when the direct sound begins until the flanger sound is heard.
Rate #	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 #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate #	0.10–20.00 Hz, note	Rate (period) of pitch change
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

26: HEXA-CHORUS

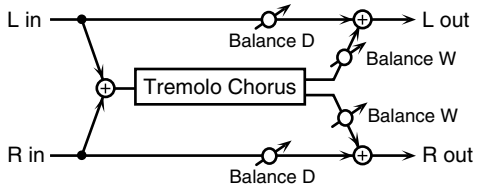
Uses a six-phase chorus (six layers of chorused sound) to give richness and spatial spread to the sound.



Parameter	Value	Description
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Pre Delay Deviation	0–20	Adjusts the differences in Pre Delay between each chorus sound.
Depth Deviation	-20– +20	Adjusts the difference in modulation depth between each chorus sound.
Pan Deviation	0–20	Adjusts the difference in stereo location between each chorus sound. **0:** All chorus sounds will be in the center. **20:** Each chorus sound will be spaced at 60 degree intervals relative to the center.
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

27: TREMOLO CHORUS

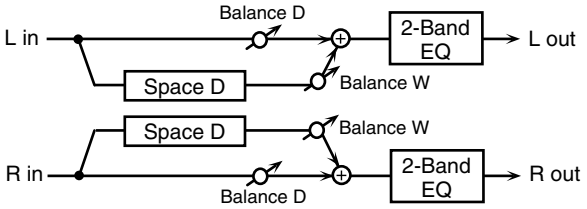
This is a chorus effect with added Tremolo (cyclic modulation of volume).



Parameter	Value	Description
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00 Hz, note	Modulation frequency of the chorus effect
Chorus Depth	0–127	Modulation depth of the chorus effect
Tremolo Rate #	0.05–10.00 Hz, note	Modulation frequency of the tremolo effect
Tremolo Separation	0–127	Spread of the tremolo effect
Tremolo Phase	0–180 deg	Spread of the tremolo effect
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the tremolo chorus sound (W)
Level	0–127	Output Level

28: SPACE-D

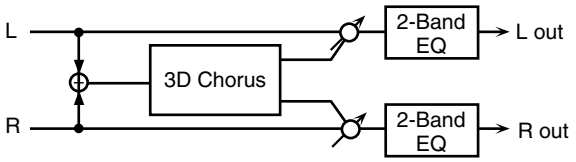
This is a multiple chorus that applies two-phase modulation in stereo. It gives no impression of modulation, but produces a transparent chorus effect.



Parameter	Value	Description
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Phase	0–180 deg	Spatial spread of the sound
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

29: 3D CHORUS

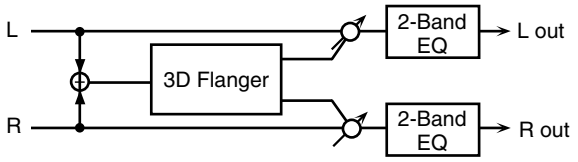
This applies a 3D effect to the chorus sound. The chorus sound will be positioned 90 degrees left and 90 degrees right.



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 delay time from the direct sound until the chorus sound is heard.
Rate #	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Modulation depth of the chorus effect
Phase	0–180 deg	Spatial spread of the sound
Output Mode	SPEAKER, PHONES	Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select **SPEAKER** when using speakers, or **PHONES** when using headphones.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0–127	Output Level

30: 3D FLANGER

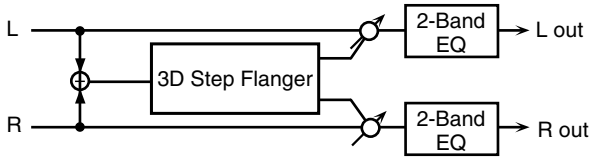
This applies a 3D effect to the flanger sound. The flanger sound will be positioned 90 degrees left and 90 degrees right.



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 delay time from when the direct sound begins until the flanger sound is heard.
Rate #	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 #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Output Mode	SPEAKER, PHONES	Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select **SPEAKER** when using speakers, or **PHONES** when using headphones.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

31: 3D STEP FLANGER

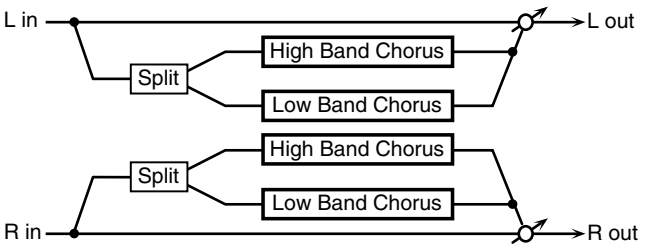
This applies a 3D effect to the step flanger sound. The flanger sound will be positioned 90 degrees left and 90 degrees right.



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 delay time from when the direct sound begins until the flanger sound is heard.
Rate #	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 #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Step Rate #	0.10–20.00 Hz, note	Rate (period) of pitch change
Output Mode	SPEAKER, PHONES	Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select **SPEAKER** when using speakers, or **PHONES** when using headphones.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0–127	Output Level

32: 2BAND CHORUS

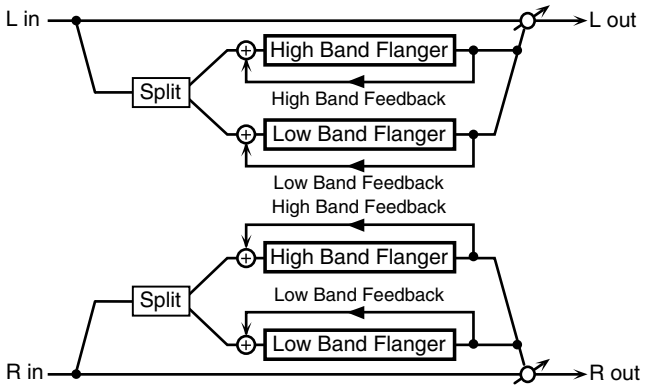
A chorus effect that lets you apply an effect independently to the low-frequency and high-frequency ranges.



Parameter	Range	Explanation
Split Freq	200–8000 Hz	Frequency at which the low and high ranges will be divided
Low Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the low-range chorus sound is heard
Low Rate #	0.05–10.00 Hz, note	Rate at which the low-range chorus sound is modulated
Low Depth	0–127	Modulation depth for the low-range chorus sound
Low Phase	0–180 deg	Spaciousness of the low-range chorus sound
High Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the high-range chorus sound is heard
High Rate #	0.05–10.00 Hz, note	Rate at which the low-range chorus sound is modulated
High Depth	0–127	Modulation depth for the high-range chorus sound
High Phase	0–180 deg	Spaciousness of the high-range chorus sound
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and chorus sound (W)
Level	0–127	Output volume

33: 2BAND FLANGER

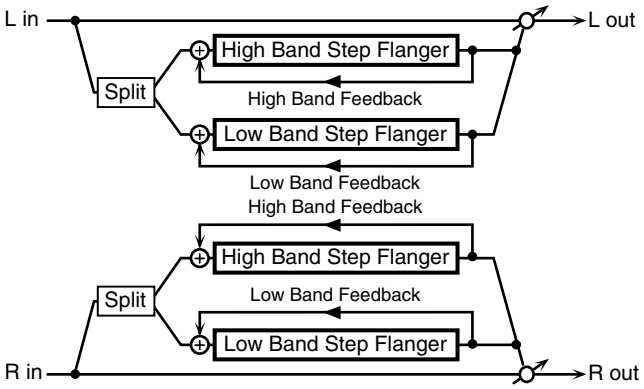
A flanger that lets you apply an effect independently to the low-frequency and high-frequency ranges.



Parameter	Range	Explanation
Split Freq	200–8000 Hz	Frequency at which the low and high ranges will be divided
Low Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the low-range flanger sound is heard
Low Rate #	0.05–10.00 Hz, note	Rate at which the low-range flanger sound is modulated
Low Depth	0–127	Modulation depth for the low-range flanger sound
Low Phase	0–180 deg	Spaciousness of the low-range flanger sound
Low Feedback #	-98– +98%	Proportion of the low-range flanger sound that is to be returned to the input (negative values invert the phase)
High Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the high-range flanger sound is heard
High Rate #	0.05–10.00 Hz, note	Rate at which the high-range flanger sound is modulated
High Depth	0–127	Modulation depth for the high-range flanger sound
High Phase	0–180 deg	Spaciousness of the high-range flanger sound
High Feedback #	-98– +98%	Proportion of the high-range flanger sound that is to be returned to the input (negative values invert the phase)
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and flanger sound (W)
Level	0–127	Output volume

34: 2BAND STEP FLANGER

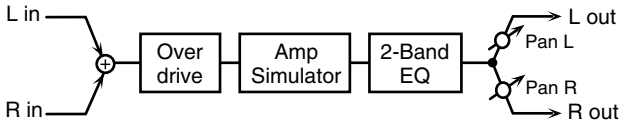
A step flanger that lets you apply an effect independently to the low-frequency and high-frequency ranges.



Parameter	Range	Explanation
Split Freq	200–8000 Hz	Frequency at which the low and high ranges will be divided
Low Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the low-range flanger sound is heard
Low Rate #	0.05–10.00 Hz, note	Rate at which the low-range flanger sound is modulated
Low Depth	0–127	Modulation depth for the low-range flanger sound
Low Phase	0–180 deg	Spaciousness of the low-range flanger sound
Low Feedback #	-98– +98%	Proportion of the low-range flanger sound that is to be returned to the input (negative values invert the phase)
Low Step Rate #	0.10–20.00 Hz, note	Rate at which the steps will cycle for the low-range flanger sound
High Pre Delay	0.0–100.0 ms	Delay time from when the original sound is heard to when the high-range flanger sound is heard
High Rate #	0.05–10.00 Hz, note	Rate at which the high-range flanger sound is modulated
High Depth	0–127	Modulation depth for the high-range flanger sound
High Phase	0–180 deg	Spaciousness of the high-range flanger sound
High Feedback #	-98– +98%	Proportion of the high-range flanger sound that is to be returned to the input (negative values invert the phase)
High Step Rate #	0.10–20.00 Hz, note	Rate at which the steps will cycle for the high-range flanger sound
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and flanger sound (W)
Level	0–127	Output volume

35: OVERDRIVE

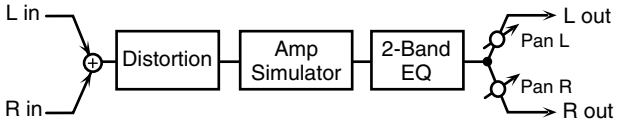
Creates a soft distortion similar to that produced by vacuum tube amplifiers.



Parameter	Value	Description
Drive #	0–127	Degree of distortion Also changes the volume.
Amp Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp **SMALL:** small amp **BUILT-IN:** single-unit type amp **2-STACK:** large double stack amp **3-STACK:** large triple stack amp
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Pan #	L64–63R	Stereo location of the output sound
Level	0–127	Output Level

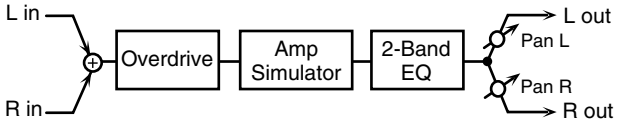
36: DISTORTION

Produces a more intense distortion than Overdrive. The parameters are the same as for "35: OVERDRIVE."



37: VS OVERDRIVE

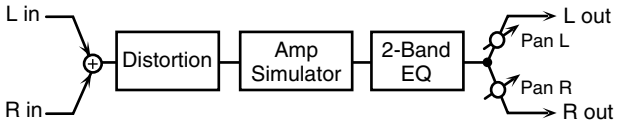
This is an overdrive that provides heavy distortion.



Parameter	Value	Description
Drive #	0–127	Degree of distortion Also changes the volume.
Tone #	0–127	Sound quality of the Overdrive effect
Amp Sw	OFF, ON	Turns the Amp Simulator on/off.
Amp Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp **SMALL:** small amp **BUILT-IN:** single-unit type amp **2-STACK:** large double stack amp **3-STACK:** large triple stack amp
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Pan #	L64–63R	Stereo location of the output sound
Level	0–127	Output Level

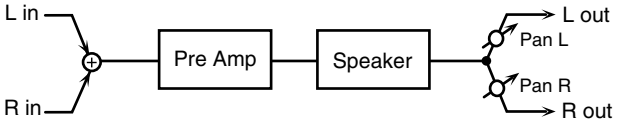
38: VS DISTORTION

This is a distortion effect that provides heavy distortion. The parameters are the same as for "37: VS OVERDRIVE."



39: 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, METAL5150, METAL LEAD, OD-1, OD-2 TURBO, DISTORTION, FUZZ	Type of guitar amp
Pre Amp Volume #	0–127	Volume and amount of distortion of the amp
Pre Amp Master #	0–127	Volume of the entire pre-amp
Pre Amp Gain	LOW, MIDDLE, HIGH	Amount of pre-amp distortion
Pre Amp Bass	0–127	Tone of the bass/mid/treble frequency range * 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

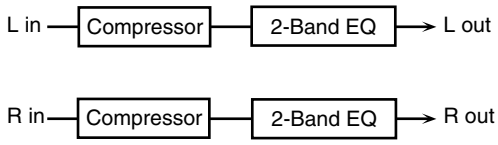
Specifications for each Speaker Type

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

Type	Cabinet	Speaker	Microphone
SMALL 1	small open-back enclosure	10	dynamic
SMALL 2	small open-back enclosure	10	dynamic
MIDDLE	open back enclosure	12 x 1	dynamic
JC-120	open back enclosure	12 x 2	dynamic
BUILT-IN 1	open back enclosure	12 x 2	dynamic
BUILT-IN 2	open back enclosure	12 x 2	condenser
BUILT-IN 3	open back enclosure	12 x 2	condenser
BUILT-IN 4	open back enclosure	12 x 2	condenser
BUILT-IN 5	open back enclosure	12 x 2	condenser
BG STACK 1	sealed enclosure	12 x 2	condenser
BG STACK 2	large sealed enclosure	12 x 2	condenser
MS STACK 1	large sealed enclosure	12 x 4	condenser
MS STACK 2	large sealed enclosure	12 x 4	condenser
METAL STACK	large double stack	12 x 4	condenser
2-STACK	large double stack	12 x 4	condenser
3-STACK	large triple stack	12 x 4	condenser

40: COMPRESSOR

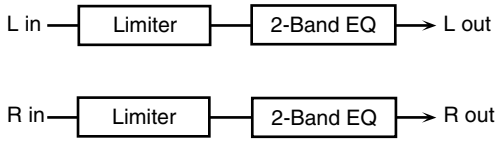
Flattens out high levels and boosts low levels, smoothing out fluctuations in volume.



Parameter	Value	Description
Attack #	0–127	Sets the speed at which compression starts
Threshold #	0–127	Adjusts the volume at which compression begins
Post Gain	0– +18 dB	Adjusts the output gain.
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Level #	0–127	Output level

41: LIMITER

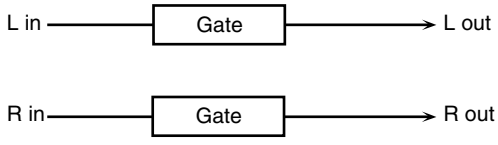
Compresses signals that exceed a specified volume level, preventing distortion from occurring.



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

42: 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.

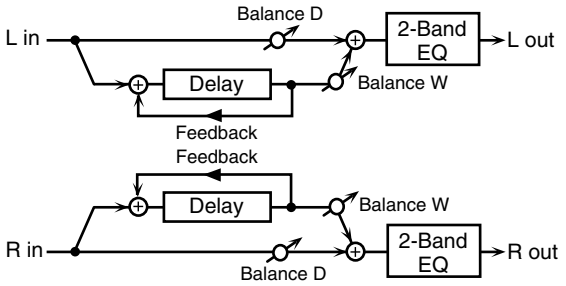


Parameter	Value	Description
Threshold #	0–127	Volume level at which the gate begins to close
Mode	GATE, DUCK	Type of gate **GATE:** The gate will close when the volume of the original sound decreases, cutting the original sound. **DUCK (Ducking):** The gate will close when the volume of the original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

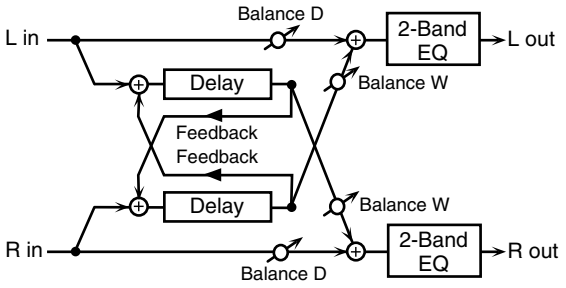
43: DELAY

This is a stereo delay.

When Feedback Mode is NORMAL:



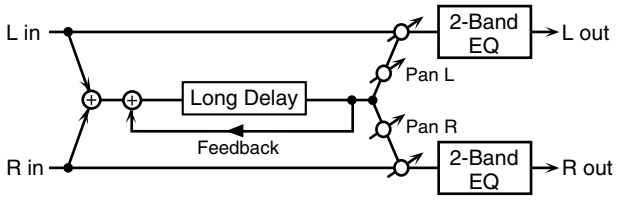
When Feedback Mode is CROSS:



Parameter	Value	Description
Delay Left	0–1300 ms, note	Adjusts the time until the delay sound is heard.
Delay Right		
Phase Left	NORMAL, INVERSE	Phase of the delay sound
Phase Right		
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect. (See the figures above.)
Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. 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 delay sound (W)
Level	0–127	Output level

44: LONG DELAY

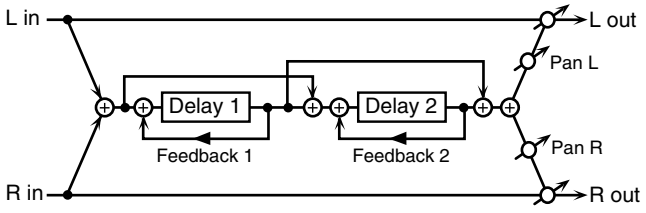
A delay that provides a long delay time.



Parameter	Range	Explanation
Delay Time	0–2600 ms, note	Delay time from when the original sound is heard to when the delay sound is heard
Phase	NORMAL, INVERSE	Phase of the delay (NORMAL: non-inverted, INVERT: inverted)
Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input (negative values invert the phase)
HF Damp	200–8000 Hz, BYPASS	Frequency at which the high-frequency content of the delayed sound will be cut (BYPASS: no cut)
Pan #	L64–63R	Panning of the delay sound
Low Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and delay sound (W)
Level	0–127	Output volume

45: SERIAL DELAY

This delay connects two delay units in series. Feedback can be applied independently to each delay unit, allowing you to produce complex delay sounds.

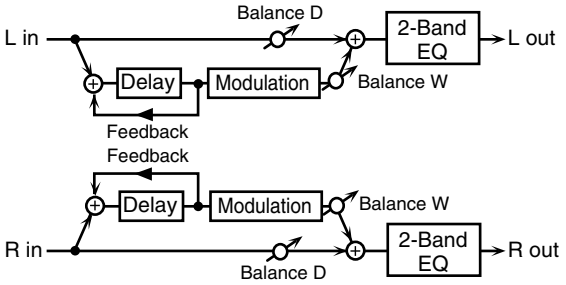


Parameter	Range	Explanation
Delay1 Time	0–1300 ms, note	Delay time from when sound is input to delay 1 until the delay sound is heard
Delay1 Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input of delay 1 (negative values invert the phase)
Delay1 HF Damp	200–8000 Hz, BYPASS	Frequency at which the high-frequency content of the delayed sound of delay 1 will be cut (BYPASS: no cut)
Delay2 Time	0–1300 ms, note	Delay time from when sound is input to delay 2 until the delay sound is heard
Delay2 Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input of delay 2 (negative values invert the phase)
Delay2 HF Damp	200–8000 Hz, BYPASS	Frequency at which the high-frequency content of the delayed sound of delay 2 will be cut (BYPASS: no cut)
Pan #	L64–63R	Panning of the delay sound
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and delay sound (W)
Level	0–127	Output volume

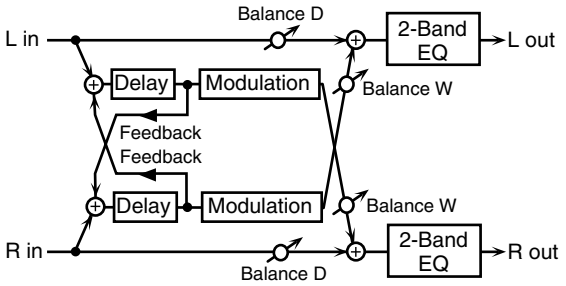
46: MODULATION DELAY

Adds modulation to the delayed sound.

When Feedback Mode is NORMAL:



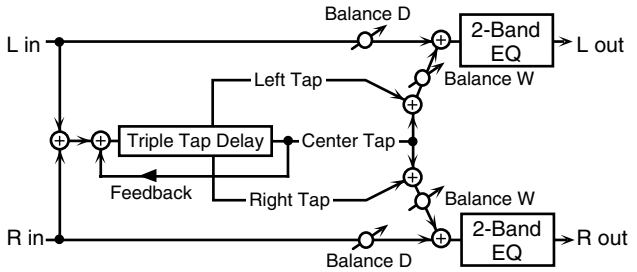
When Feedback Mode is CROSS:



Parameter	Value	Description
Delay Left	0–1300 ms, note	Adjusts the time until the delay sound is heard.
Delay Right		
Feedback Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect (See the figures above.)
Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Rate #	0.05–10.00 Hz, note	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

47: 3TAP PAN DELAY

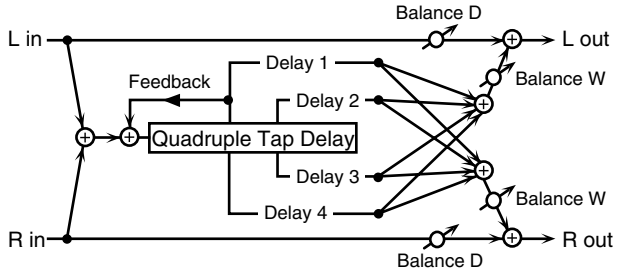
Produces three delay sounds; center, left and right.

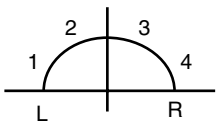


Parameter	Value	Description
Delay Left/ Right/Center	0–2600 ms, note	Adjusts the time until the delay sound is heard.
Center Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. 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 #	D100:0W– D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

48: 4TAP PAN DELAY

This effect has four delays.



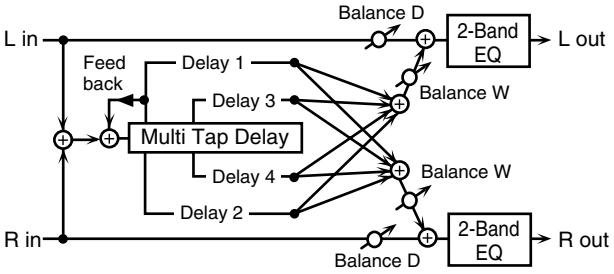


Stereo location of each delay

Parameter	Value	Description
Delay 1–4 Time	0–2600 ms, note	Adjusts the time until the delay sound is heard.
Delay 1 Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Delay 1–4 Level	0–127	Volume of each delay
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W– D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0–127	Output level

49: MULTI TAP DELAY

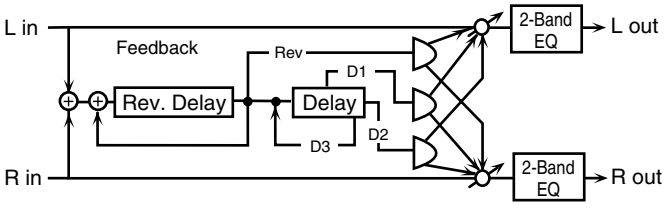
This effect provides four delays. Each of the Delay Time parameters can be set to a note length based on the selected tempo. You can also set the panning and level of each delay sound.



Parameter	Value	Description
Delay 1–4 Time	0–2600 ms, note	Adjusts the time until Delays 1–4 are heard.
Delay 1 Feedback #	-98– +98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any the high frequencies, set this parameter to BYPASS.
Delay 1–4 Pan	L64–63R	Stereo location of Delays 1–4
Delay 1–4 Level	0–127	Output level of Delays 1–4
Low Gain	-15– +15 dB	Gain of the low frequency range
High Gain	-15– +15 dB	Gain of the high frequency range
Balance #	D100:0W– D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

50: REVERSE DELAY

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

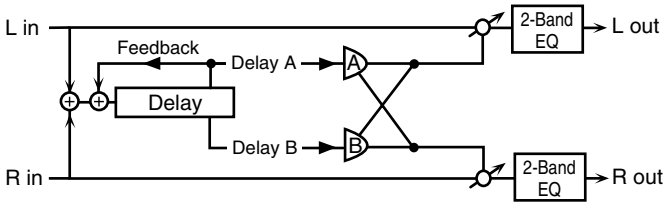


Parameter	Range	Explanation
Threshold	0–127	Volume at which the reverse delay will begin to be applied
Rev Delay Time	0–1300 ms, note	Delay time from when sound is input into the reverse delay until the delay sound is heard
Rev Delay Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input of the reverse delay (negative values invert the phase)
Rev Delay HF Damp	200–8000 Hz, BYPASS	Frequency at which the high-frequency content of the reverse-delayed sound will be cut (BYPASS: no cut)
Rev Delay Pan	L64–63R	Panning of the reverse delay sound
Rev Delay Level	0–127	Volume of the reverse delay sound
Delay 1 – 3 Time	0–1300 ms, note	Delay time from when sound is input into the tap delay until the delay sound is heard

Parameter	Range	Explanation
Delay 3 Feedback #	-98– +98%	Proportion of the delay sound that is to be returned to the input of the tap delay (negative values invert the phase)
Delay HF Damp	200–8000 Hz, BYPASS	Frequency at which the low-frequency content of the tap delay sound will be cut (BYPASS: no cut)
Delay 1 Pan', 'Delay 2 Pan	L64–63R	Panning of the tap delay sounds
Delay 1 Level', 'Delay 2 Level	0–127	Volume of the tap delay sounds
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and delay sound (W)
Level	0–127	Output volume

51: SHUFFLE DELAY

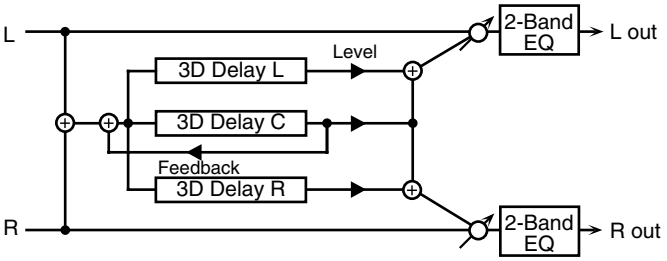
Adds a shuffle to the delay sound, giving the sound a bouncy delay effect with a swing feel.



Parameter	Value	Description
Delay Time #	0–2600 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.
Acceleration	0–15	Adjusts the time over which the Delay Time changes from the current setting to its specified new setting.
Feedback #	-98– +98 %	Adjusts the amount of the delay 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.
Pan A/B	0–127	Stereo location of Delay A/B
Level A/B	0–127	Volume of delay A/B
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

52: 3D DELAY

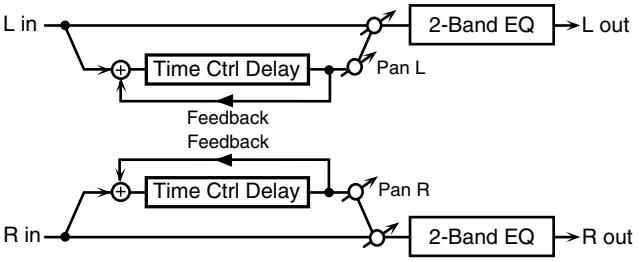
This applies a 3D effect to the delay sound. The delay sound will be positioned 90 degrees left and 90 degrees right.



Parameter	Value	Description
Delay Left Delay Right Delay Center	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Center Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Left Level Right Level Center Level	0–127	Output level of the delay sound
Output Mode	SPEAKER, PHONES	Adjusts the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select **SPEAKER** when using speakers, or **PHONES** when using headphones.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output Level

53: TIME CTRL DELAY

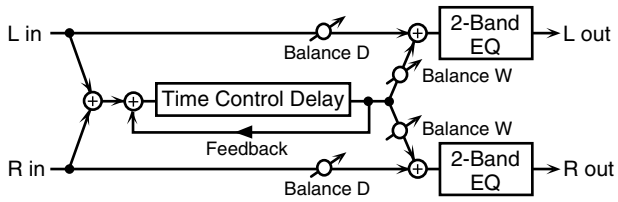
A stereo delay in which the delay time can be varied smoothly.



Parameter	Value	Description
Delay Time #	0–1300 ms, note	Adjusts the time until the delay is heard.
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.
Feedback #	-98– +98 %	Adjusts the amount of the delay 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 do not 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 delay sound (W)
Level	0–127	Output level

54: LONG TIME CTRL DELAY

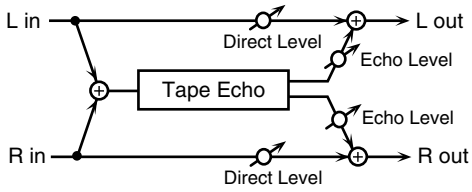
A delay in which the delay time can be varied smoothly, and allowing an extended delay to be produced.



Parameter	Value	Description
Delay Time #	0–2600 ms, note	Adjusts the time until the delay is heard.
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.
Feedback #	-98– +98 %	Adjusts the amount of the delay 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 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

55: TAPE ECHO

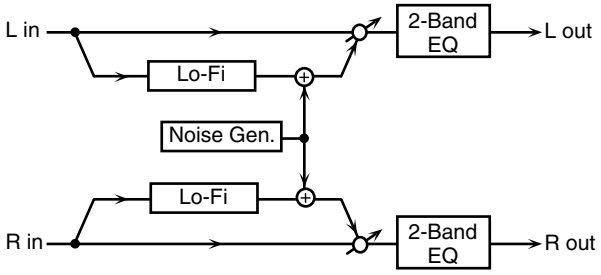
A virtual tape echo that produces a realistic tape delay sound. This simulates the tape echo section of a Roland RE-201 Space Echo.



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 #	0–127	Tape speed Increasing this value will shorten the spacing of the delayed sounds.
Intensity #	0–127	Amount of delay repeats
Bass	-15– +15 dB	Boost/cut for the lower range of the echo sound
Treble	-15– +15 dB	Boost/cut for the upper range of the echo sound
Head S Pan	L64–63R	Independent panning for the short, middle, and long playback heads
Head M Pan		
Head L Pan		
Tape Distortion	0–5	Amount of tape-dependent distortion to be added This simulates the slight tonal changes that can be detected by signal-analysis equipment. Increasing this value will increase the distortion.
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
Level	0–127	Output level

56: LOFI NOISE

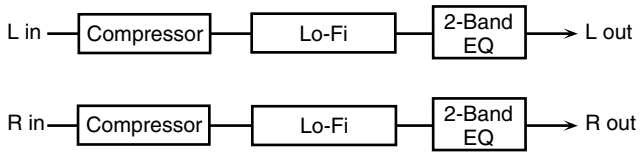
In addition to a lo-fi effect, this adds various types of noise such as white noise and disc noise.



Parameter	Value	Description
LoFi Type	1–9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post 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	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	50 Hz, 60 Hz	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
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

57: LOFI COMPRESS

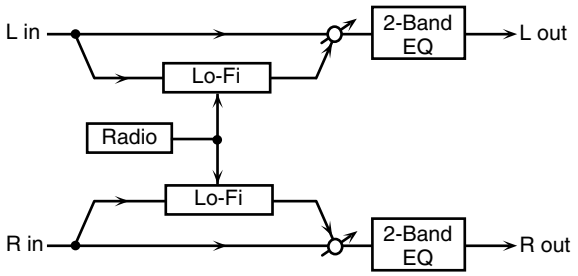
This is an effect that intentionally degrades the sound quality for creative purposes.



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
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level #	0–127	Output level

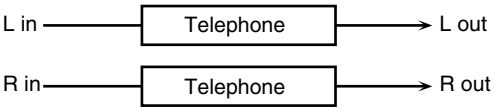
58: LOFI RADIO

In addition to a Lo-Fi effect, this effect also generates radio noise.



Parameter	Value	Description
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
Radio Detune #	0–127	Simulates the tuning noise of a radio. As this value is raised, the tuning drifts further.
Radio Noise Level #	0–127	Volume of the radio noise
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

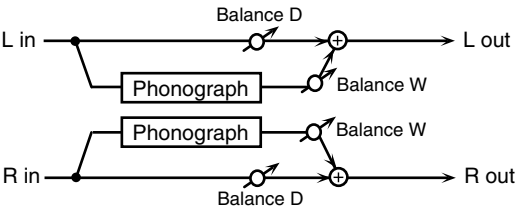
59: TELEPHONE



Parameter	Value	Description
Voice Quality #	0–15	Audio quality of the telephone voice
Treble	-15– +15 dB	Bandwidth of the telephone voice
Balance #	D100:0–D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0–127	Output level

60: PHONOGRAPH

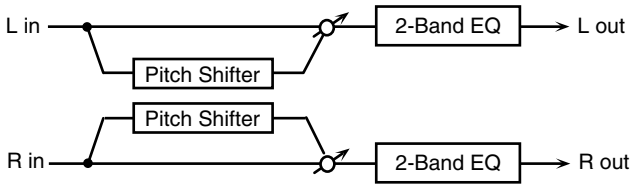
Simulates a sound recorded on an analog record and played back on a record player. This effect also simulates the various types of noise that are typical of a record, and even the rotational irregularities of an old turntable.



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 #	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 #	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

61: PITCH SHIFTER (Feedback Pitch Shifter)

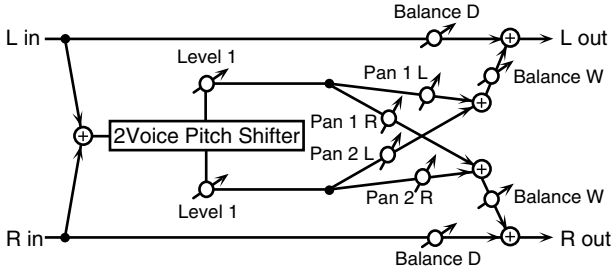
A stereo pitch shifter.



Parameter	Value	Description
Coarse #1	-24– +12 semi	Adjusts the pitch of the pitch shifted sound in semitone steps.
Fine #1	-100– +100 cent	Adjusts the pitch of the pitch shifted sound in 2-cent steps.
Delay Time	0–1300 ms, note	Adjusts the delay time from the direct sound until the pitch shifted sound is heard.
Feedback #	-98– +98 %	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0–127	Output Level

62: 2VOICE PITCH SHIFTER

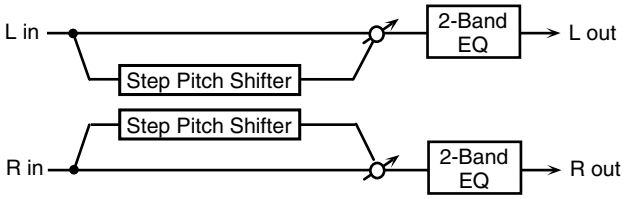
Shifts the pitch of the original sound. This 2-voice pitch shifter has two pitch shifters, and can add two pitch shifted sounds to the original sound.



Parameter	Value	Description
Pitch 1: Coarse #1	-24-+12 semi	Adjusts the pitch of Pitch Shift 1 in semitone steps.
Pitch 1:Fine #1	-100-+100 cent	Adjusts the pitch of Pitch Shift Pitch 1 in 2-cent steps.
Pitch 1:Delay	0–1300 ms, note	Adjusts the delay time from the direct sound until the Pitch Shift 1 sound is heard.
Pitch 1:Feedback #	-98– +98 %	Adjusts the proportion of the pitch shifted sound that is fed back into the effect. Negative (-) settings will invert the phase.
Pitch 1:Pan #	L64-63R	Stereo location of the Pitch Shift 1 sound
Pitch 1:Level	0–127	Volume of the Pitch Shift1 sound
Pitch 2: Coarse #2	-24-+12 semi	Settings of the Pitch Shift 2 sound. The parameters are the same as for the Pitch Shift 1 sound.
Pitch 2:Fine #2	-100-+100 cent	
Pitch 2:Delay	0–1300 ms, note	
Pitch 2:Feedback #	-98– +98 %	
Pitch 2:Pan #	L64-63R	
Pitch 2:Level	0–127	
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Level Balance	A100:0B-A0:100B	Volume balance between the Pitch Shift 1 and Pitch Shift 2 sounds
Balance	D100:0W-D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0-127	Output Level

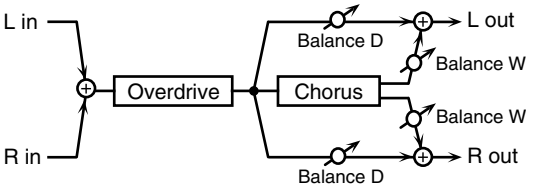
63: STEP PITCH SHIFTER

A pitch shifter in which the amount of pitch shift is varied by a 16-step sequence.



Parameter	Range	Explanation
Step 01–16	-24– +12 semi	Amount of pitch shift at each step (semitone units)
Rate #	0.05–10.00 Hz, note	Rate at which the 16-step sequence will cycle
Attack #	0–127	Speed at which the amount of pitch shift changes between steps
Gate Time #	0–127	Duration of the pitch shifted sound at each step
Fine	-100– +100 cent	Pitch shift adjustment for all steps (2-cent units)
Delay Time	0–1300 ms, note	Delay time from the original sound until the pitch-shifted sound is heard
Feedback #	-98– +98%	Proportion of the pitch-shifted sound that is to be returned to the input (negative values invert the phase)
Low Gain	-15– +15 dB	Amount of boost/cut for the low-frequency range
High Gain	-15– +15 dB	Amount of boost/cut for the high-frequency range
Balance #	D100:0W–D0:100W	Volume balance of the original sound (D) and pitch-shifted sound (W)
Level	0–127	Output volume

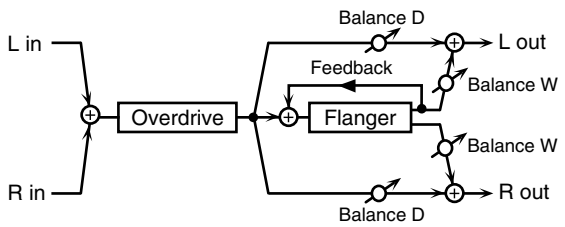
64: OVERDRIVE → CHORUS



Parameter	Value	Description
Overdrive Drive #	0–127	Degree of distortion Also changes the volume.
Overdrive Pan #	L64–63R	Stereo location of the overdrive sound
Chorus Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00 Hz, note	Frequency of modulation
Chorus Depth	0–127	Depth of modulation

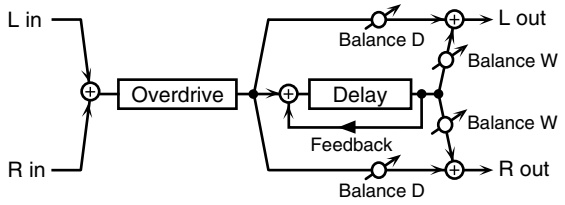
Parameter	Value	Description
Chorus Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0–127	Output Level

65: OVERDRIVE → FLANGER



Parameter	Value	Description
Overdrive Drive #	0–127	Degree of distortion Also changes the volume.
Overdrive Pan #	L64–63R	Stereo location of the overdrive sound
Flanger Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05–10.00 Hz, note	Frequency of modulation
Flanger Depth	0–127	Depth of modulation
Flanger Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

66: OVERDRIVE → DELAY



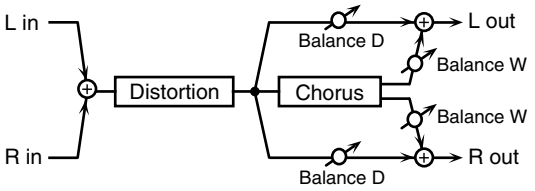
Parameter	Value	Description
Overdrive Drive #	0–127	Degree of distortion Also changes the volume.
Overdrive Pan #	L64–63R	Stereo location of the overdrive sound
Delay Time	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).

Parameter	Value	Description
Level	0–127	Output Level

67: DISTORTION → CHORUS

The parameters are essentially the same as in "64: OVERDRIVE → CHORUS," with the exception of the following two.

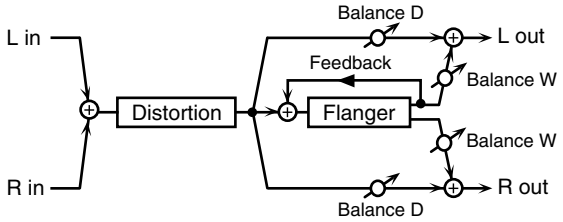
Overdrive Drive → Distortion Drive, Overdrive Pan → Distortion Pan



68: DISTORTION → FLANGER

The parameters are essentially the same as in "65: OVERDRIVE → FLANGER," with the exception of the following two.

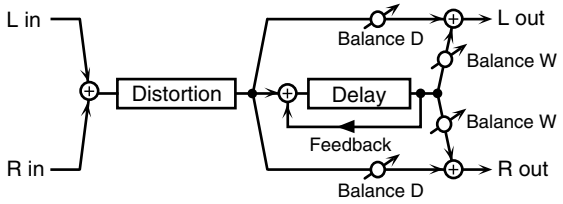
Overdrive Drive → Distortion Drive, Overdrive Pan → Distortion Pan



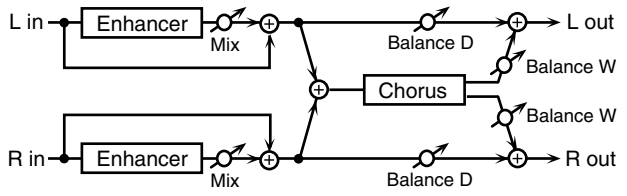
69: DISTORTION → DELAY

The parameters are essentially the same as in "66: OVERDRIVE → DELAY," with the exception of the following two.

Overdrive Drive → Distortion Drive, Overdrive Pan → Distortion Pan

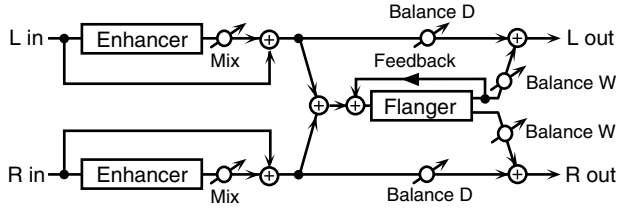


70: ENHANCER → CHORUS



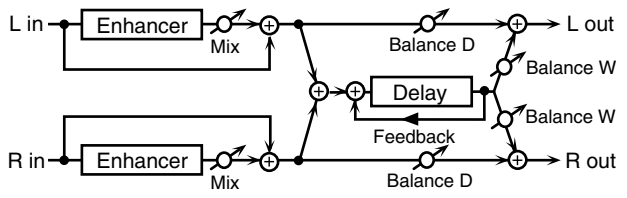
Parameter	Value	Description
Enhancer Sens #	0–127	Sensitivity of the enhancer
Enhancer Mix #	0–127	Level of the overtones generated by the enhancer
Chorus Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00 Hz, note	Frequency of modulation
Chorus Depth	0–127	Depth of modulation
Chorus Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the chorus (W) and the sound that is not sent through the chorus (D).
Level	0–127	Output Level

71: ENHANCER → FLANGER



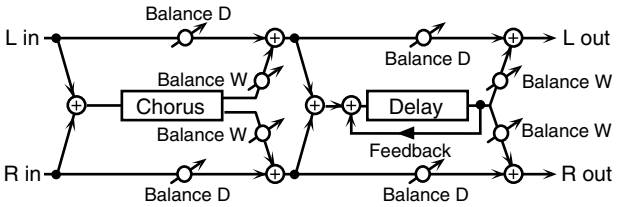
Parameter	Value	Description
Enhancer Sens #	0–127	Sensitivity of the enhancer
Enhancer Mix #	0–127	Level of the overtones generated by the enhancer
Flanger Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05–10.00 Hz, note	Frequency of modulation
Flanger Depth	0–127	Depth of modulation
Flanger Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

72: ENHANCER → DELAY



Parameter	Value	Description
Enhancer Sens #	0–127	Sensitivity of the enhancer
Enhancer Mix #	0–127	Level of the overtones generated by the enhancer
Delay Time	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

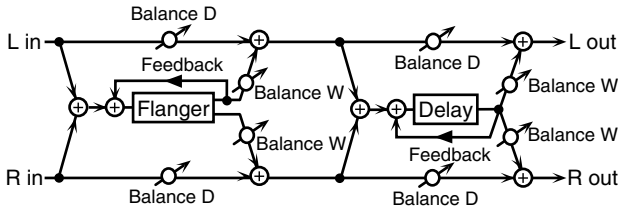
73: CHORUS → DELAY



Parameter	Value	Description
Chorus Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00 Hz, note	Frequency of modulation
Chorus Depth	0–127	Depth of modulation
Chorus Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Delay Time	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

74: FLANGER → DELAY

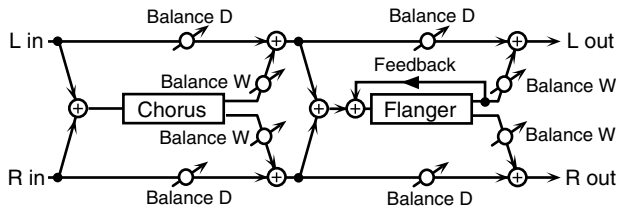
* *MFX only*



Parameter	Value	Description
Flanger Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05–10.00 Hz, note	Frequency of modulation
Flanger Depth	0–127	Depth of modulation
Flanger Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Delay Time	0–2600 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Delay Feedback #	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
Delay HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the delay (W) and the sound that is not sent through the delay (D).
Level	0–127	Output Level

75: CHORUS → FLANGER

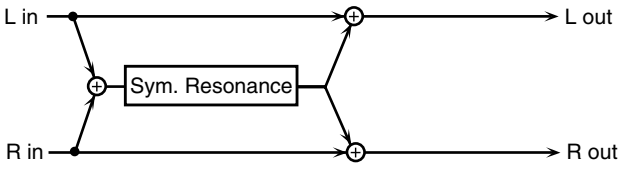
* *MFX only*



Parameter	Value	Description
Chorus Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Chorus Rate #	0.05–10.00 Hz, note	Modulation frequency of the chorus effect
Chorus Depth	0–127	Modulation depth of the chorus effect
Chorus Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Flanger Pre Delay	0.0–100.0 ms	Adjusts the delay time from when the direct sound begins until the flanger sound is heard.
Flanger Rate #	0.05–10.00 Hz, note	Modulation frequency of the flanger effect
Flanger Depth	0–127	Modulation depth of the flanger effect
Flanger Feedback #	-98– +98 %	Adjusts the proportion of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.
Flanger Balance #	D100:0W–D0:100W	Adjusts the volume balance between the sound that is sent through the flanger (W) and the sound that is not sent through the flanger (D).
Level	0–127	Output Level

76: SYMPATHETIC RESONANCE

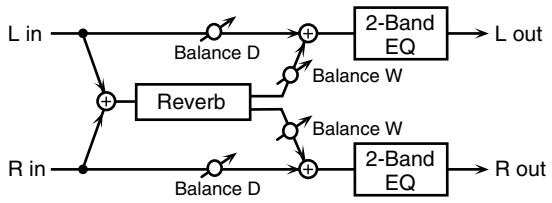
On an acoustic piano, holding down the damper pedal allows other strings to resonate in sympathy with the notes you play, creating rich and spacious resonances. This effect simulates these sympathetic resonances.



Parameter	Range	Explanation
Damper #	0–127	Depth to which damper pedal is pressed (controls the sympathetic resonance)
Depth #	0–127	Depth of the effect
Octave	-3– +3 oct	Octave shift amount for the sympathetic resonance
Detune	-50– +50 cent	Pitch shift amount for the sympathetic resonance
Phase	NORMAL, INVERSE	Phase at which the sympathetic resonance is generated
Low Damp Freq	20–1000 Hz	Frequency at which the low range of the sympathetic resonance is cut
Low Damp	1–100 %	Amount of attenuation by which the low range of the sympathetic resonance is cut (100%: no effect)
High Damp Freq	1000–10000 Hz	Frequency at which the high range of the sympathetic resonance is cut
High Damp	1–100 %	Amount of attenuation by which the high range of the sympathetic resonance is cut (100%: no effect)
Time	10–5000 ms	Time over which the sympathetic resonance will decay (lowering the Octave setting will make this more noticeable)
Level	0–127	Output Level

77: REVERB

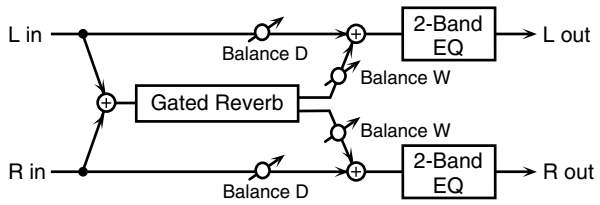
Adds reverberation to the sound, simulating an acoustic space.



Parameter	Value	Description
Type	ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2	Type of reverb **ROOM1:** dense reverb with short decay **ROOM2:** sparse reverb with short decay **STAGE1:** reverb with greater late reverberation **STAGE2:** reverb with strong early reflections **HALL1:** reverb with clear reverberance **HALL2:** reverb with rich reverberance
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time #	0–127	Time length of reverberation
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which the reverberant sound will be cut. As the frequency is set lower, more of the high frequencies will be cut, resulting in a softer and more muted reverberance. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the reverb sound (W)
Level	0–127	Output Level

78: GATED REVERB

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



Parameter	Value	Description
Type	NORMAL, REVERSE, SWEEP1, SWEEP2	Type of reverb **NORMAL:** conventional gated reverb **REVERSE:** backwards reverb **SWEEP1:** the reverberant sound moves from right to left **SWEEP2:** the reverberant sound moves from left to right
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the reverb sound is heard.
Gate Time	5–500 ms	Adjusts the time from when the reverb is heard until it disappears.
Low Gain	-15– +15 dB	Gain of the low range
High Gain	-15– +15 dB	Gain of the high range
Balance #	D100:0W–D0:100W	Volume balance between the direct sound (D) and the reverb sound (W)
Level #	0–127	Output Level

When Using 3D Effects

The following 3D effects utilize RSS (Roland Sound Space) technology to create a spaciousness that cannot be produced by delay, reverb, chorus, etc.

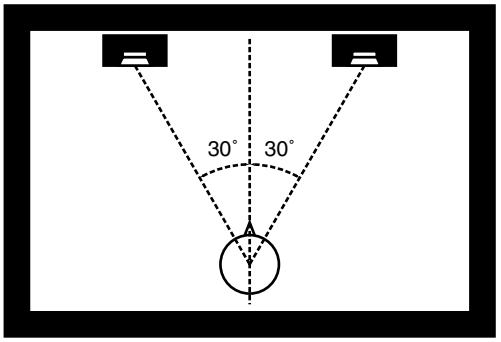
52: 3D DELAY

29: 3D CHORUS

30: 3D FLANGER

31: 3D STEP FLANGER

When using these effects, we recommend that you place your speakers as follows. Also, make sure that the speakers are at a sufficient distance from the walls on either side.



If the left and right speakers are too far apart, or if there is too much reverberation, the full 3D effect may not appear.

Each of these effects has an "Output Mode" parameter. If the sound from the OUTPUT jacks is to be heard through speakers, set this parameter to "SPEAKER." If the sound is to be heard through headphones, set it to "PHONES." This will ensure that the optimal 3D effect will be heard. If this parameter is not set correctly, the full 3D effect may not appear.

About the STEP RESET function

06: STEP FILTER
16: STEP RING MODULATOR
19: STEP PAN
20: SLICER
63: STEP PITCH SHIFTER

The above five types contain a sixteen-step sequencer.
For these types, you can use a multi-effect control to reset the sequence to play from the first step.
To do this, set the multi-effect control Destination to "Step Reset."

For example if you are using the modulation lever to control the effect, you would make the following settings.
Source: CC01: MODULATION
Destination: Step Reset
Sens: +63

With these settings, the sequence will play back from the first step whenever you operate the modulation lever.

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)

Chorus Parameters

The Fantom-G's Chorus effect unit can also be used as a stereo delay unit.
These settings allow you to select chorus or delay, and the characteristics of the selected effect type.

Parameter	Value	Description
Chorus Type	00 (OFF), 01 (CHORUS), 02 (DELAY), 03 (GM2 CHORUS)	Selects either Chorus or Delay. 0 (OFF): Neither Chorus or Delay is used. 1 (CHORUS): Chorus is used. 2 (DELAY): Delay is used. 3 (GM2 CHORUS): GM2 Chorus is used.
Type: 01 (CHORUS)		
Rate	0.05–10.00 Hz, note	Frequency of modulation
Depth	0–127	Depth of modulation
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the chorus sound is heard.
Feedback	0–127	Adjusts the amount of the chorus sound that is fed back into the effect.
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
Phase	0–180°	Spatial spread of the sound
Type: 02 (DELAY)		
Delay Left Delay Right Delay Center	0–1000 ms, note	Adjusts the delay time from the direct sound until the delay sound is heard.
Center Feedback	-98– +98 %	Adjusts the proportion of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies, set this parameter to BYPASS.
Left Level Right Level Center Level	0–127	Volume of each delay sound
Type: 03 (GM2 CHORUS)		
Pre-LPF	0–7	Cuts the high frequency range of the sound coming into the chorus. Higher values will cut more of the high frequencies.
Level	0–127	Volume of the chorus sound
Feedback	0–127	Adjusts the amount of the chorus sound that is fed back into the effect.
Delay	0–127	Adjusts the delay time from the direct sound until the chorus sound is heard.
Rate	0–127	Frequency of modulation
Depth	0–127	Depth of modulation
Send Level To Reverb	0–127	Adjusts the amount of chorus sound that will be sent to the reverb.

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)

Reverb Parameters

These settings allow you to select the desired type of reverb, and its characteristics.

Parameter	Value	Description
Reverb Type	00 (OFF), 01 (REVERB), 02 (SRV ROOM), 03 (SRV HALL), 04 (SRV PLATE), 05 (GM2 REVERB), 06 (ROOM), 07 (HALL), 08 (PLATE), 09 (STUDIO), 10 (CHURCH)	Type of reverb
Type: 01 (REVERB)		
Type	ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DELAY	Type of reverb/delay ROOM1: short reverb with high density ROOM2: short reverb with low density STAGE1: reverb with greater late reverberation STAGE2: reverb with strong early reflections HALL1: very clear-sounding reverb HALL2: rich reverb DELAY: conventional delay effect PAN-DELAY: delay effect with echoes that pan left and right
Time	0–127	Time length of reverberation (Type: ROOM1–HALL2) Delay time (Type: DELAY, PAN-DELAY)
HF Damp	200–8000 Hz, BYPASS	Adjusts the frequency above which the high-frequency content of the reverb sound will be cut, or "damped." If you do not want to cut the high frequencies, set this parameter to BYPASS.
Delay Feedback	0–127	Adjusts the amount of delay feedback when the Type setting is DELAY or PAN-DELAY.
Type: 02 (SRV ROOM)/03 (SRV HALL)/04 (SRV PLATE)		
Pre Delay	0.0–100.0 ms	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time	0–127	Time length of reverberation
Size	1–8	Size of the simulated room or hall
High Cut	160 Hz–12.5 kHz, BYPASS	Adjusts the frequency above which the high-frequency content of the reverb will be reduced. If you do not want to reduce the high frequencies, set this parameter to BYPASS.
Density	0–127	Density of reverb
Diffusion	0–127	Adjusts the change in the density of the reverb over time. The higher the value, the more the density increases with time. (The effect of this setting is most pronounced with long reverb times.)
LF Damp Freq	50–4000 Hz	Adjusts the frequency below which the low-frequency content of the reverb sound will be reduced, or "damped."
LF Damp Gain	-36–0 dB	Adjusts the amount of damping applied to the frequency range selected with LF Damp. With a setting of "0," there will be no reduction of the reverb's low-frequency content.
HF Damp Freq	4000 Hz–12.5 kHz	Adjusts the frequency above which the high-frequency content of the reverb sound will be reduced, or "damped."
HF Damp Gain	-36–0 dB	Adjusts the amount of damping applied to the frequency range selected with HF Damp. With a setting of "0," there will be no reduction of the reverb's high-frequency content.
Type: 05 (GM2 REVERB)		
Character	0–7	Type of reverb 0–5: reverb 6, 7: delay
Pre-LPF	0–7	Cuts the high frequency range of the sound coming into the reverb. Higher values will cut more of the high frequencies.
Level	0–127	Output level of reverbration
Time	0–127	Time length of reverberation
Delay Feedback	0–127	Adjusts the amount of the delay sound that is fed back into the effect when the Reverb Character setting is 6 or 7.

Parameter	Value	Description
Type: 06 (ROOM)/09 (STUDIO)		
Pre Delay	0–127	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time	0.1–3.0 sec	Time length of reverberation
Low Damp Freq	20–1000 Hz	Adjusts the frequency below which the low-frequency content of the reverb sound will be reduced, or "damped."
Low Damp	1–100 %	Adjusts the amount of damping applied to the frequency range selected with LF Damp. With a setting of "100%," there will be no reduction of the reverb's low-frequency content.
Hi Damp Freq	1000–10000 Hz	Adjusts the frequency above which the high-frequency content of the reverb sound will be reduced, or "damped."
High Damp	1–100 %	Adjusts the amount of damping applied to the frequency range selected with HF Damp. With a setting of "100%," there will be no reduction of the reverb's high-frequency content.
High Cut	1000–10000 Hz	Adjusts the frequency above which the high-frequency content of the reverb will be reduced.
Type: 07 (HALL)/08 (PLATE)/10 (CHURCH)		
Pre Delay	0–127	Adjusts the delay time from the direct sound until the reverb sound is heard.
Time	0.1–6.0 sec	Time length of reverberation
Low Damp Freq	20–1000 Hz	Adjusts the frequency below which the low-frequency content of the reverb sound will be reduced, or "damped."
Low Damp	1–100 %	Adjusts the amount of damping applied to the frequency range selected with LF Damp. With a setting of "100%," there will be no reduction of the reverb's low-frequency content.
Hi Damp Freq	1000–10000 Hz	Adjusts the frequency above which the high-frequency content of the reverb sound will be reduced, or "damped."
High Damp	1–100 %	Adjusts the amount of damping applied to the frequency range selected with HF Damp. With a setting of "100%," there will be no reduction of the reverb's high-frequency content.
High Cut	1000–10000 Hz	Adjusts the frequency above which the high-frequency content of the reverb will be reduced.

Input Effect Parameters

Selects the type of effect that will be applied to the external input source.

01: EQUALIZER

Adjusts the tone of the low-frequency and high-frequency ranges.

Parameter	Range	Explanation
Low Freq	200, 400 Hz	Center frequency of the low-frequency range
Low Gain	-15– +15 dB	Amount of low-frequency boost/cut
High Freq	2000, 4000, 8000 Hz	Center frequency of the high-frequency range
High Gain	-15– +15 dB	Amount of high-frequency boost/cut

02: ENHANCER

Modifies the harmonic content of the high-frequency range to add sparkle to the sound.

Parameter	Range	Explanation
Sens	0–127	Depth of the enhancer effect
Mix	0–127	Volume of the harmonics that are generated

03: COMPRESSOR

Restrains high levels and boosts low levels to make the overall volume more consistent.

Parameter	Range	Explanation
Attack	0–127	Time from when the input exceeds the Threshold until the volume begins to be compressed
Threshold	0–127	Volume level at which compression will begin
Post Gain	0– +18 dB	Level of the output sound

04: LIMITER

Compresses the sound when it exceeds a specified volume, to keep distortion from occurring.

Parameter	Range	Explanation
Release	0–127	Time from when the input falls below the Threshold until compression ceases
Threshold	0–127	Volume level at which compression will begin
Post Gain	0– +18 dB	Level of the output sound

05: NOISE SUPPRESSOR

Suppresses noise during periods of silence.

Parameter	Range	Explanation
Threshold	0–127	Volume at which noise suppression will begin
Release	0–127	Time from when noise suppression begins until the volume reaches zero.

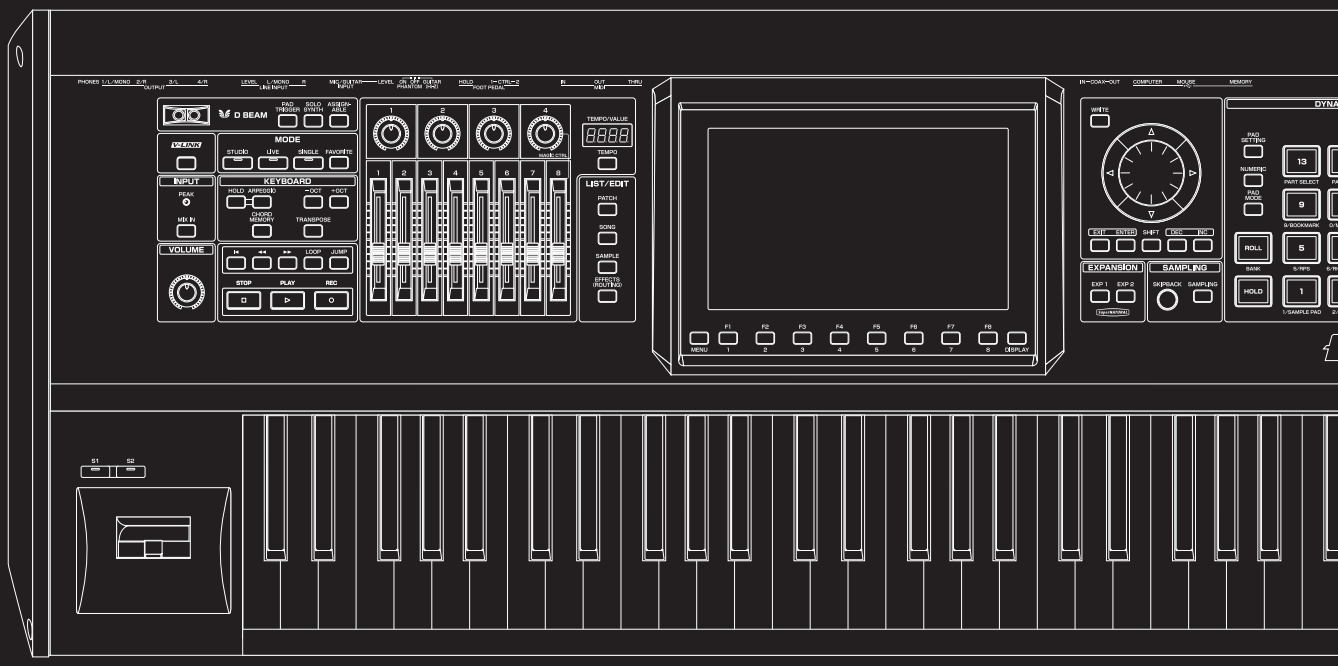
06: CENTER CANCELER

Removes the sounds that are localized at the center of the stereo input. This is a convenient way to eliminate a vocal.

Parameter	Range	Explanation
Ch Balance	-50– +50	Volume balance of the L (left) and R (right) channels for removing the sound
Range Low	16–15000 Hz	Lower frequency limit of the band to be removed
Range High	16–15000 Hz1	Upper frequency limit of the band to be removed

05: Pads (Using the Pads)

This chapter explains how to use the pads.



Using the Pads

Common Operations for Pads

Switching the Pad Mode (PAD MODE)

You can strike the Fantom-G's pads to play samples, rhythms, or phrases, or you can use the pads as sixteen switches to turn various parameters on/off. The pads can operate in one of sixteen modes. Press [PAD MODE] to switch the pad mode.

1. Press [PAD MODE].

The pad mode window will appear in the screen.

[PAD MODE] will blink, and the currently selected pad mode (pad [1]–[16]) will blink.

MEMO

If you decide not to switch the pad mode, press [PAD MODE] once again. [PAD MODE] will go dark, and you'll return to the previous state.

2. Press a pad [1]–[16].

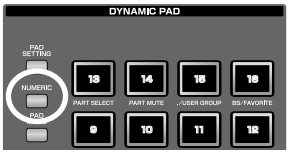
The pad mode will be switched. For details about operation in each pad mode, refer to the table below and the corresponding reference pages.

Pad number	Pad mode	Explanation	Page
1	SAMPLE PAD	The pads play a sample set	p. 191
2	RHYTHM	The pads play a rhythm set	p. 192
3	CHORD MEMORY	The pads switch chord form for the Chord Memory function (p. 81)	p. 193
4	ARPEGGIO	The pads switch styles for the Arpeggio function (p. 78)	p. 193
5	RPS	The pads play phrases	p. 194
6	RHYTHM PTN	The pads play rhythm patterns	p. 196
7	TONE SEL/SW	The pads act as tone select and on/off switches	p. 197
8	TRACK MUTE	The pads switch muting on/off for sequencer tracks	p. 197
9	BOOKMARK	The pads recall frequency-used screens that you've registered	p. 198
10	MIDI TX SW	The pads act as on/off switches for external MIDI transmit channels (1–16)	p. 198
11	EFFECT SW	The pads switch the effects (other than the patch multi-effects)	p. 199
12	PATCH MFX SW	The pads switch the patch multi-effect for each part	p. 199
13	PART SELECT	The pads select parts (1–16) and banks (INT/EXP1/EXP2/EXT)	p. 200
14	PART MUTE	The pads switch muting on/off for parts (1–16) and banks (INT/EXP1/EXP2)	p. 200
15	USER GROUP	The pads register/recall patches, live sets, or studio sets from the user group	p. 201
16	FAVORITE	The pads register/recall Favorite settings	p. 202

Using the Pads as Numeric Keys (NUMERIC)

If you press the pad [NUMERIC] button to make it light, the pads will act as numeric keys.

→ **"Using the pad for numeric input"** (p. 41)



Using the Hold Function to Sustain the Sounds (HOLD)

By using the Hold function, you can make the sound continue even after you take your finger off the pad. This is convenient when you want a sound to continue, such as a phrase that you want to loop (play repeatedly).

MEMO

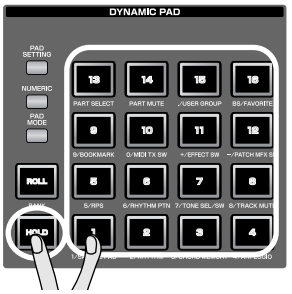
The Hold function is available only if the pad mode is 1 SAMPLE PAD or 2 RHYTHM.

Sustaining a sound while you play other sounds

1. While holding down a pad, press [HOLD].

[HOLD] and the pad will blink.

That pad will be held, and will continue sounding even after you release your finger from it. If you press another pad in this state, it will sound only as long as you continue holding it.



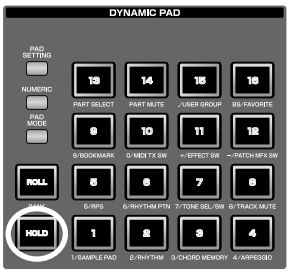
2. The pad that was being held will stop sounding when you press the blinking pad or [HOLD] once again.

Sustaining multiple sounds

1. Press [HOLD] to make the pad light.

2. Press a pad.

The pad will blink, and will continue sounding. If you press other pads in this state, they will also continue sounding.



3. The sound will stop when you once again press a blinking pad. If you press [HOLD], all pads will stop sounding.

NOTE

The Hold function won't work in the following situations.

- For a rhythm set in which **"Tone Env Mode"** (p. 108) is set to "NO-SUS"
- For a sample set in which **"One Shot Mode"** (p. 118) is turned on
- For a sample set in which **"Trigger Mode"** (p. 129) is set to "DRUM"

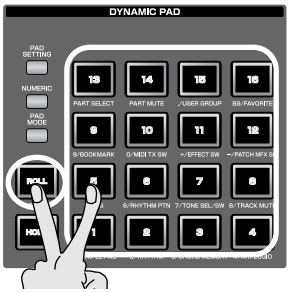
Using the Roll Function (ROLL)

The Roll function lets you play the sound repeatedly (as if you are playing a drum roll) as long as you continue holding down the pad.

MEMO

The Roll function is available only if the pad mode is 1 SAMPLE PAD or 2 RHYTHM.

1. Hold down [ROLL] and press a pad (1–16).



* *If you press only [ROLL], the Roll function will be enabled for all sixteen pads.*
In this state, the sound will continue repeating as long as you hold down a pad.

2. When you release the pad, it will stop sounding.

* *You can't use this to switch images with the V-Link function (p. 305).*

Settings for the Roll function

Press [PAD SETTING]– [F1 (System)] to access the System Setup screen, and use the Pad Roll Resolution field to specify the speed at which repeated strikes occur when using the Roll function.

cf.

- **"Editing settings common to all pads (System settings)"** (p. 190)
- **"Pad Roll Resolution"** (p. 292)

Switching Banks (BANK)

You can use the pad [ROLL] (BANK) button to switch banks in the following pad modes.

Pad number	Pad mode	Number of banks
9	BOOKMARK	8
13	PART SELECT	4 (INT/EXP1/EXP2/EXT)
14	PART MUTE	3 (INT/EXP1/EXP2)
15	USER GROUP	4
16	FAVORITE	16

1. Press [ROLL] (BANK).
[ROLL] (BANK) will blink, and pads that correspond to selectable banks will blink. The pad corresponding to the currently selected bank will be lit.

2. Press the bank (a blinking number pad) for the desired bank.
The selected pad will light.

3. Press [ROLL] (BANK) once again.
[ROLL] (BANK) will go dark, and the pads will return to their normal indication.

Editing the Pad Settings (PAD SETTING)

Press [PAD SETTING] to access the pad settings/information screen.

1. **Press [PAD SETTING].**
   The Pad Setting screen will appear. The content shown in the screen will depend on the pad mode.

2. **Use [CURSOR] to move the cursor to a parameter.**

3. **Turn the VALUE dial or use [INC] [DEC] to edit the pad settings.**

4. **To save the settings, press [F7 Write].**

   MEMO

   The location in which the settings are saved will depend on the sound generator mode, the pad mode, and the settings of **"Pad Assign Source"** (p. 292).

5. **Press [F8 Exit] to return to the previous screen.**

F-key operations in the Pad Setting screen

F-key	Explanation	Display mode
F1 System	Pad settings for System (p. 190)	All modes * *Except for 15 USER GROUP and 16 FAVORITE*
F2 Pad Exchg	Pad Exchange function (p. 190)	2 RHYTHM, 3 CHORD MEMORY, 4 ARPEGGIO, 5 RPS, 6 RHYTHM PTN, 9 BOOKMARK only
F3 Quick Setup	Quick Setup function (p. 192, p. 195, p. 197)	2 RHYTHM, 5 RPS, 6 RHYTHM PTN only
F4 PlayMode All	Applies the Play Mode to all (p. 195)	5 RPS only
F6 Rhythm Ptn / RPS	Switches you between the RHYTHM PTN and RPS modes.	5 RPS, 6 RHYTHM PTN only
F7 Write	Saves the settings of the Pad Setting screen	1 SAMPLE PAD, 2 RHYTHM, 3 CHORD MEMORY, 4 ARPEGGIO, 5 RPS, 6 RHYTHM PTN only
F8 Exit	Exits the Pad Setting screen	All modes * *Except for 15 USER GROUP and 16 FAVORITE*

Editing settings common to all pads (System settings)

In the Pad Setting screen, press [F1 System] to access the system setting screen where you can edit settings that are common to all pads. Here you can edit the following parameters.

- **"Pad Assign Source"** (p. 292)
- **"Pad Velocity"** (p. 292)
- **"Pad Sens (Pad Sensitivity)"** (p. 292)
- **"Pad Aftertouch Sens (Pad Aftertouch Sensitivity)"** (p. 292)
- **"Pad Roll Resolution"** (p. 292)
- **"Pad Mode"** (p. 292)

1. **Press [PAD SETTING].**
   The Pad Setting screen will appear.

2. **Press [F1 System].**
   The pad-related items of the System Setup screen will appear.

   cf.

   For details on each parameter, refer to **"Dynamic Pad"** (p. 292).

3. **To save the settings, press [F7 Sys Write].**

4. **Press [F8 Exit] to return to the Pad Setting screen.**

Exchanging Pads (Pad Exchange)

Here's how to exchange two selected pads.

MEMO

This function is available only if the pad mode is 2 RHYTHM, 3 CHORD MEMORY, 4 ARPEGGIO, 5 RPS, 6 RHYTHM PTN, or 9 BOOKMARK.

1. **Press [PAD SETTING].**

2. **Press [F2 (Pad Exchg)].**

3. **Select the two pads you want to exchange.**
   Use the VALUE dial or [INC] [DEC], or press the pads directly.

4. **Press [F8 (Execute)] to execute the exchange.**

1 SAMPLE PAD (Using the Pads to Play Samples)

This pad mode allows you to play samples by striking the pads. You can assign a sample to each of the sixteen pads. (The sixteen samples assigned to the pads are collectively called a "sample set.")

1. **Press [PAD MODE], and then press pad [1] (SAMPLE PAD).**

2. **Press the pads [1]–[16] to play the assigned samples.**
   - Pads that can play samples will be lit. Currently-playing pads will blink.

   cf.
   You can press [HOLD] to sustain the sound → p. 188

   cf.
   You can press [ROLL] to play a roll → p. 189

About Samples

You can add samples in either of the following ways.

Sampling (p. 258)

You can use the Sampling function to record audio. The recorded samples will be added to the sample list.

Import from your computer (p. 287)

You can import WAV or AIFF files from your computer. The imported WAV or AIFF files will be added to the sample list as samples.

Editing the Pad Settings

You can press [PAD SETTING] to edit the following settings.

cf.
For details on editing and saving, refer to **"Editing the Pad Settings (PAD SETTING)"** (p. 190).

Number/Name (Sample set number)

Selects the sample set played by the pads.
Value: 001–128

cf.
If you want to create a new sample set or perform more detailed editing, refer to **"Creating a Sample Set"** (p. 126).

Sample Number

Selects the sample. The screen will show the sample name together with the sample number.
Value: OFF, 0001–2000

Level (Sample tone level)

Sets the volume of the sample. You'll use this mainly to adjust the volume balance between samples.
Value: 0–127

Pan (Sample tone pan)

Sets the panning of the sample tone. "L64" is far left, "0" is center, and "63R" is far right.
Value: L64–0–63R

Direction

Specifies the playback direction of the sample.

Value	
FWD:	Play forward.
REV:	Play in reverse.

Trigger Mode

Specifies how the sample will play when you press a pad (or a key).

Value	
GATE:	The sample will stop playing when you release the pad (or key).
DRUM:	The sample will continue playing even if you release the pad (or key).

NOTE
The sample will begin playing when you press the pad, and will stop automatically when the end of the sample is reached. If you select the DRUM setting, the Loop setting is ignored; the sample will play only once. Note that if you select DRUM, you will not be able to interrupt the sound, so use this setting with caution if the sample is extremely long.

Mute Group

In an acoustic drum set, it is impossible for the open hi-hat and closed hi-hat sounds to occur simultaneously. You can use the Mute Group setting to simulate such restrictions.
Mute Group is a function that prevents sample tones belonging to the same mute group from sounding simultaneously. There are sixteen mute groups. Choose the "OFF" setting for sample tones that you don't want to associate with any mute group.
Value: OFF, 1–16

Pad Velocity

Specifies the strength of the sound produced when you strike the pad. If this is set to "SYSTEM," the System setting of **"Pad Velocity"** (p. 292) will be used. If you set this to a value of "1–127," that velocity value will be used to play the sound generator.
Value: SYSTEM, 1–127

MEMO
You can save the pad settings by pressing [F7 (Write)].

2 RHYTHM (Using the Pads to Play a Rhythm Set)

This pad mode allows you to play a rhythm set by striking the pads. You can use the sixteen pads to play rhythm tones. (A set of rhythm tones is called a "rhythm set.")

1. Press [PAD MODE], and then press pad [2] (RHYTHM).

2. Press the pads [1]–[16] to play rhythm tones.

- Pads that can play rhythm tones will light.

cf.

You can press [HOLD] to sustain the sound → p. 188

cf.

You can press [ROLL] to play a roll → p. 189

Editing the Pad Settings

You can press [PAD SETTING] to edit the following settings.

cf.

For details on editing and saving, refer to **"Editing the Pad Settings (PAD SETTING)"** (p. 190).

cf.

In the Pad Setting screen, you can press [F2 (Pad Exchg)] to exchange two pads (Pad Exchange, p. 190).

Bank (Rhythm set bank)

Selects the bank of the rhythm set that will be played by the pads.

Value: USER, PRST, GM

Number / Name

Selects the rhythm set that will be played by the pads.

Value:
- Bank USER: 001–064
- Bank PRST: 001–064
- Bank GM: 001–009

cf.

If you want to create a new sample set or perform more detailed editing, refer to **"Creating a Rhythm Set"** (p. 112).

Pad Note Number

Specifies the note number transmitted by each pad (1–16). The rhythm tone name will be displayed together with the note number.

Value: 0 (C-1)–127 (G9)

Pad Velocity

Specifies the strength of the sound produced when you strike the pad. If this is set to "SYSTEM," the System setting of **"Pad Velocity"** (p. 292) will be used. If you set this to a value of "1–127," that velocity value will be used to play the sound generator.

Value: SYSTEM, 1–127

Quick Setup

When the pad mode is "2 RHYTHM," you can use this function to make basic settings. For efficient work-flow, choose the quick setup that is closest to your needs, and then make detailed settings for each pad as desired.

1. In the Pad Setting screen, press [F3 (Quick Setup)].

The Quick Setup window will appear.

* *This operation is not possible unless the pad mode is "2 RHYTHM."*

2. Move the cursor and make the desired settings.

- **Template Set**

  Value

  Note: The sixteen consecutive notes starting with the note number you specify as the base note will be automatically assigned to the pads.

  Rhythm: The note numbers will be arranged optimally for playing a rhythm set.

  Multi Velo: Multi Velocity is a special setting that assigns all sixteen pads to the same number, with only the velocities differing between the pads. This is a good choice when you need precise control of the velocity for your performance.

- **Base Note**

  Set this parameter if you've selected Note or Multi Velo as the Template Set.

  If you've selected Note, the Base Note specifies the starting (lowest) note number.

  If you've selected Multi Vel, the Base Note specifies the note number used by all of the pads.

  Value: 0 (C-1)–127 (G9)

3. Press [F8 (Execute)].

MEMO

You can save the pad settings by pressing [F7 (Write)].

3 CHORD MEMORY (Using the Pads to Switch Chord Forms)

This pad mode allows you to use the pads to switch chord forms for the Chord Memory function (p. 81).

1. **Press [PAD MODE], and then press pad [3] (CHORD MEMORY).**
2. **Press pads [1]–[16] to switch between different chord forms for the Chord Memory function (p. 81).**
   - Pads that can be selected will light.

Editing the Pad Settings

You can press [PAD SETTING] to edit the following settings.

cf.
For details on editing and saving, refer to **"Editing the Pad Settings (PAD SETTING)"** (p. 190).

cf.
In the Pad Setting screen, you can press [F2 (Pad Exchg)] to exchange two pads (Pad Exchange, p. 190).

Number / Name (Chord memory set number)

Selects the chord memory set that will be played by the pads.

Value: 001–128

cf.
For details on Chord Memory, refer to **"Using the Chord Memory Function (Chord Memory)"** (p. 81).

Chord Form

Selects the chord form number that will be played by each pad (1–16).

Value: 001–128

MEMO
You can save the pad settings by pressing [F7 (Write)].

4 ARPEGGIO (Using the Pads to Switch Arpeggio Styles)

This pad mode allows you to use the pads to switch styles for the Arpeggio function (p. 78).

1. **Press [PAD MODE], and then press pad [4] (ARPEGGIO).**
2. **Use the Arpeggio function as described in "Playing Arpeggios" (p. 78).**
3. **Press pads [1]–[16] to switch between different styles for the Arpeggio function.**
   - Pads that can be selected will light.

Editing the Pad Settings

You can press [PAD SETTING] to edit the following settings.

cf.
For details on editing and saving, refer to **"Editing the Pad Settings (PAD SETTING)"** (p. 190).

cf.
In the Pad Setting screen, you can press [F2 (Pad Exchg)] to exchange two pads (Pad Exchange, p. 190).

Number / Name (Arpeggio set number)

Selects the arpeggio set.

Value: 001–128

cf.
For details on arpeggios, refer to **"Playing Arpeggios"** (p. 78).

Arpeggio Number

Specifies the arpeggio number selected by each pad (1–16).

Value: 001–128

MEMO
You can save the pad settings by pressing [F7 (Write)].

5 RPS (Using the Pads to Play Phrases)

This pad mode allows you to use the pads to trigger phrases generated by the RPS (Realtime Phrase Sequence) function.
For example, complex phrases that would be difficult to play manually in a live performance can be assigned to the pads, and then triggered by a single finger at the appropriate moment.
You can also create phrases for individual instruments such as drums, bass, or keyboard, and combine these to create a new song. In addition, you can record this performance, allowing you to use this function in a way similar to phrase sampling.

1. **Press [PAD MODE], and then press pad [5] (RPS).**
2. **Press the pads [1]–[16] to trigger the phrase assigned to each pad.**
   - Pads that can play phrases will light. Currently-playing pads will blink.

   TIP

   You must play back the song if you want to play phrases in synchronization with the song, or if you want to play multiple phrases in synchronization.
   - If the song is not playing, the phrase will begin playing as soon as you press the pad, regardless of how the Trigger Quantize parameter is set.
   - Phrases will play in synchronization with the song's time signature (beat track). This means that if no performance data has been recorded, the song will not play, and therefore the phrases cannot play back in synchronization. In this case, you'll have to insert several empty measures into the phrase track, and then play it as a loop.

Recording a phrase

Before you use the RPS function, you'll need to record some phrases.
For details on the recording procedure, refer to **"Recording into a Phrase"** (p. 220).

NOTE

If large amounts of MIDI messages were recorded, playing back a phrase via RPS may cause notes to be delayed.

Specifying the Tempo for Phrase Playback

The phrase playback tempo will be the same as the song playback tempo.

1. **Press [TEMPO].**
2. **The Tempo window will appear, indicating the current tempo.**
3. **Turn the VALUE dial or use [INC] [DEC] to specify the tempo value (5.00–300.00). If you hold down [SHIFT] and turn the VALUE dial you'll be able to adjust the value below the decimal point. You can also specify the tempo by repeatedly pressing [F6 (Tap Tempo)] at the desired tempo (Tap Tempo function).**

   MEMO

   If you press [F7 (Click)] to turn it on, the click will sound.
4. **When you've finished making settings, press [F8 (Close)].**

Editing the Pad Settings

You can press [PAD SETTING] to edit the following settings.

cf.

For details on editing and saving, refer to **"Editing the Pad Settings (PAD SETTING)"** (p. 190).

cf.

In the Pad Setting screen, you can press [F2 (Pad Exchg)] to exchange two pads (Pad Exchange, p. 190).

MEMO

Pressing [F6 (Rhythm Ptn)] switches you to the RHYTHM PTN mode.

RPS Set Number

Selects the RPS set.
Value: 01–64

MEMO

RPS Set Numbers are stored on an individual Live/Studio Set basis. Using **"RPS Set Assign Source"** (p. 292), you can choose to have the RPS Set Number follow the setting of each Live/Studio Set (TEMP), or follow the Fantom-G's global settings (SYS).

Phrase Number

Selects the phrase that is assigned to each pad 1–16. The name of the selected phrase is shown along with the phrase number.
Choose "OFF" for keys or pads to which you don't want to assign a phrase. If you assign "STOP" to a pad, that pad will act as the "stop trigger" that stops the currently-playing phrases.
Value: STOP, OFF, 0001–2000

Play Mode

Specifies how the phrase will be played.

Value

LOOP1: The phrase will play repeatedly while you hold down the pad.

LOOP2: The phrase will play repeatedly. To stop playback, press the stop trigger pad, or press the same pad once again.

ONCE: The phrase will play only once.

Mute Group

This function prevents phrases of the same mute group from playing simultaneously. For example in an actual performance, a fill-in will not be played at the same time as a bridge. To simulate this type of situation, assign the fill-in and bridge to the same mute group number. You can specify 31 different mute groups. If you don't want to assign a mute group, choose the "OFF" setting.

Value: OFF, 1–31

Note Number

If the **"Keyboard Mode"** (p. 143) is set to RPS you'll be able to specify the keys that will play RPS Sets.

Value: OFF, 21 (A0)–108 (C8)

MEMO

Move the cursor to the "Note Number" field and press one of the Fantom-G's keys to specify the key that will play the RPS.

Trigger Quantize

Specifies how the phrase will begin playing when you press a pad to trigger it while the song is playing or being recorded.

Value

REAL: The phrase will play immediately when you press the trigger pad.

BEAT: If you press the trigger pad while the song is playing or recording, the phrase will begin playing at the beginning of the next beat.

MEASURE: If you press the trigger pad while the song is playing or recording, the phrase will begin playing at the beginning of the next measure.

MEMO

The Trigger Quantize parameter is a setting maintained within each song.

Velocity Sens (Velocity sensitivity)

Turn this "OFF" if you want the phrase to play with the velocities at which it was recorded.

If you want the velocity of the phrase to vary according to how strongly you pressed the pad, choose "LOW," "MID," or "HIGH."

Value: OFF, LOW, MID, HIGH

MEMO

You can save the pad settings by pressing [F7 (Write)].

Quick Setup

In the Pad Setting screen you can press [F3 (Quick Setup)] to specify the note numbers for sixteen RPS together. For the procedure, refer to **"Quick Setup"** (p. 192). The parameters will be as follows.

- **Template Set**

  Starting at the base note, the sixteen notes will be assigned to the following keys.

  Value

  All: White and black keys

  White Keys: White keys

  Black Keys: Black keys

- **Base Note**

  Specify the lowest note. When the cursor is located at Base Note, you can specify this by pressing a key.

Applying the Play Mode to all (Play Mode All)

In the Pad Setting screen, when the cursor is at the Play Mode field, pressing [F4 (PlayMode All)] will change all sixteen RPS to the Play Mode value of the current cursor location.

6 RHYTHM PTN (Using the Pads to Play Rhythm Patterns)

This pad mode allows you to use the pads to play phrases (Phrase0001–Phrase2000) generated by the Rhythm Pattern function. With the factory settings, sixteen phrases (rhythm patterns) are assigned to the pads. You can create your own rhythm patterns and assign them to the pads, and use the pads as a rhythm machine.
A set of these sixteen phrases is called a "rhythm pattern set."

1. **Press [PAD MODE], and then press pad [6] (RHYTHM PTN).**
2. **Press the pads [1]–[16] to start the rhythm patterns assigned to each pad.**
   - Pads that can play rhythm patterns will light. The currently-playing pad will blink.
   - To stop playback, press the blinking pad.

Specifying the Tempo for Rhythm Pattern Playback

The rhythm pattern playback tempo will be the same as the song playback tempo.

1. **Press [TEMPO].**
2. **The Tempo window will appear, indicating the current tempo.**
3. **Turn the VALUE dial or use [INC] [DEC] to specify the tempo value (5.00–300.00). If you hold down [SHIFT] and turn the VALUE dial you'll be able to adjust the value below the decimal point. You can also specify the tempo by repeatedly pressing [F6 (Tap Tempo)] at the desired tempo (Tap Tempo function).**

   MEMO

   If you press [F7 (Click)] to turn it on, the click will sound.
4. **When you've finished making settings, press [F8 (Close)].**

Editing the Pad Settings

You can press [PAD SETTING] to edit the following settings.

cf.

For details on editing and saving, refer to **"Editing the Pad Settings (PAD SETTING)"** (p. 190).

cf.

In the Pad Setting screen, you can press [F2 (Pad Exchg)] to exchange two pads (Pad Exchange, p. 190).

MEMO

Pressing [F6 (RPS)] switches you to the RPS mode.

Rhythm Pattern Set Number

Selects the rhythm pattern set that the pads will play.

Value: 01–64

MEMO

Rhythm Pattern Set Numbers are stored on an individual Live/Studio Set basis. Using **"Rhythm Pattern Set Assign Source"** (p. 292), you can choose to have the Rhythm Pattern Set Number follow the setting of each Live/Studio Set (TEMP), or follow the Fantom-G's global settings (SYS).

Rhythm Pattern

Specifies the phrase that is assigned to each pad 1–16.

Value: OFF, 0001–2000

Note Number

If the **"Keyboard Mode"** (p. 143) is set to RHYTHM-PTN, you'll be able to specify the keys that will play Rhythm Pattern Sets.

Value: OFF, 21 (A0)–108 (C8)

MEMO

Move the cursor to the "Note Number" field and press one of the Fantom-G's keys to specify the key that will play the Rhythm Pattern.

Trigger Quantize

Specifies how the phrase will begin playing when you press a pad to trigger it while the song is playing or being recorded.

Value

REAL: The phrase will play immediately when you press the trigger pad.

BEAT: If you press the trigger pad while the song is playing or recording, the phrase will begin playing at the beginning of the next beat.

MEASURE: If you press the trigger pad while the song is playing or recording, the phrase will begin playing at the beginning of the next measure.

MEMO

The Trigger Quantize parameter is a setting maintained within each song.

Velocity Sens (Velocity sensitivity)

Turn this "OFF" if you want the phrase to play with the velocities at which it was recorded.

If you want the velocity of the phrase to vary according to how strongly you pressed the pad, choose "LOW," "MID," or "HIGH."

Value: OFF, LOW, MID, HIGH

MEMO

You can save the pad settings by pressing [F7 (Write)].

Quick Setup

In the Pad Setting screen you can press [F3 (Quick Setup)] to specify the note numbers for sixteen Rhythm Patterns together. For the procedure, refer to **"Quick Setup"** (p. 192). The parameters will be as follows.

- **Template Set**
  Starting at the base note, the sixteen notes will be assigned to the following keys.
  Value
  All: White and black keys
  White Keys: White keys
  Black Keys: Black keys
- **Base Note**
  Specify the lowest note. When the cursor is located at Base Note, you can specify this by pressing a key.

7 TONE SEL/SW (Using the Pads to Select Tones or Switch Them On/Off)

This pad mode allows you to use the pads to switch the four tones on/off, or to select the current tone.

1. **Press [PAD MODE], and then press pad [7] (TONE SEL/SW).**
2. **Press pads [1]–[4] to turn tones 1–4 on/off.**
3. **Press pads [5]–[8] to select tones 1–4.**

MEMO

Pad [5] corresponds to tone 1, pad [6] to tone 2, pad [7] to tone 3, and pad [8] to tone 4.

TIP

This function is convenient when you're creating a patch (p. 84). A patch consists of up to four tones. You can use this function to turn off unused tones, or to turn off the other tones when you want to hear only the sound of a specific tone.

Checking the Pad Status

By pressing [PAD SETTING] you can check the current pad status.

8 TRACK MUTE (Using the Pads to Mute Tracks)

This pad mode allows you to use the pads to directly mute (silence) up to sixteen tracks in the song screen.

1. **Press [PAD MODE], and then press pad [8] (TRACK MUTE).**
   - Pads [1]–[16] correspond to the first sixteen tracks at the top of the song screen.
   - Pressing a pad [1]–[16] will switch the corresponding track between muted/play status.
   - Each pad will be lit to indicate play status, or blinking to indicate muted.
   - You can't use the pads to mute the seventeenth and subsequent tracks. Use [CURSOR] or a USB mouse to switch the mute status of these tracks.

Checking the Pad Status

By pressing [PAD SETTING] you can check the current pad status.

9 BOOKMARK (Using the Pads to Recall Frequently Used Screens)

This pad mode lets you use the pads to register and recall frequently used screens. For example if you frequently move between the patch edit screen and effect screen, you can use this function to make the switch easier.

1. Press [PAD MODE], and then press pad [9] (BOOKMARK).

Registering a Screen

1. Access the screen that you want to register.

2. Hold down [PAD SETTING], and press the pad to which you want to register the current screen.
For example if you want to register the current screen to pad [3], the screen will indicate "Bookmarked to #3."

3. Press [EXIT].
The setting will be stored.

* *If you fail to press [EXIT], the setting will be lost when you turn off the power.*

Recalling a Screen

1. Press [PAD SETTING].
The Bookmark screen will appear.
Pads to which screens have been registered will lit.

2. Press a lit pad, and the screen registered to that pad will be recalled.

* *If you want to delete a registered screen, hold down [PAD SETTING] in the screen of step 1, and press the pad whose registration you want to clear.*

cf.

You can press [ROLL] (BANK) to switch banks (1–8). → p. 189

cf.

In the Pad Setting screen, you can press [F2 (Pad Exchg)] to exchange two pads (Pad Exchange, p. 190).

10 MIDI TX SW (Using the Pads to Turn External MIDI Transmit Channels (1–16) On/Off)

This pad mode allows you to use the pads to turn external MIDI transmit channels (1–16) on/off.

1. Press [PAD MODE], and then press pad [10] (MIDI TX SW).

- Pressing pads [1]–[16] will switch external MIDI transmit channels 1–16 on/off.
- Each pad will be lit when transmission is on, or dark when it is off.

Checking the Pad Status

By pressing [PAD SETTING] you can check the current pad status.

NOTE

If numerous MIDI channels are turned on, a large amount of MIDI messages will be transmitted, possibly causing notes to be delayed.

11 EFFECT SW (Using the Pads to Switch the Effects)

This pad mode allows you to use the pads to switch the effects (other than the patch multi-effect) on/off.

1. Press [PAD MODE], and then press pad [11] (EFFECT SW).

- Pressing pads [1]–[6] will switch the following effects on/off.

Pad	Effect
1	Input Effect
2	Chorus
3	Reverb
4	Mastering
5	MFX 1
6	MFX 2 (Studio mode only)

* *If you want to turn PFX on/off, use pad mode "12 PATCH MFX SW."*

- A pad will be lit when the corresponding effect is on, or blinking when it is off. Pads not used in this pad mode will be dark.

Checking the Pad Status

By pressing [PAD SETTING] you can check the current pad status.

12 PATCH MFX SW (Using the Pads to Switch Patch Multi-effects)

This pad mode allows you to use the pads to individually switch the patch multi-effect of each part (1–16) on/off.

1. Press [PAD MODE], and then press pad [12] (PATCH MFX SW).

- When you press a pad, the patch multi-effect of the corresponding part will be switched on/off. The number of parts will depend on the sound generator mode.

Mode	Number of parts
Single	1
Live	8
Studio	16

- A pad will be lit when the corresponding effect is on, or blinking when it is off. Pads not used in this pad mode will be dark.

Checking the Pad Status

By pressing [PAD SETTING] you can check the current pad status.

13 PART SELECT (Using the Pads to Select Parts)

This pad mode allows you to use the pads to select parts (1–16) and banks (INT/EXP1/EXP2/EXT).

1. Press [PAD MODE], and then press pad [13] (PART SELECT).

- Press a pad to select the current part. The number of parts will depend on the sound generator mode.

Mode	Number of parts
Single	1
Live	8
Studio	16

- The pad corresponding to the current part will be blinking. The pads for other parts will light. Pads not used will be dark.
- You can press [ROLL] (BANK) to switch banks (1–4). → p. 189

Pad	Bank name
1	INT (internal sound generator)
2	EXP1 (expansion board 1)
3	EXP2 (expansion board 2)
4	EXT (external MIDI output)

* *The number of parts on an expansion board will depend on the expansion board.*

Checking the Pad Status

By pressing [PAD SETTING] you can check the current pad status.

14 PART MUTE (Using the Pads to Mute Parts)

This pad mode lets you use the pads to mute (silence) parts (1–16) and banks (INT/EXP1/EXP2).

1. Press [PAD MODE], and then press pad [14] (PART MUTE).

- You can press [ROLL] (BANK) to switch banks (1–3). → p. 189

Pad	Bank name
1	INT (internal sound generator)
2	EXP1 (expansion board 1)
3	EXP2 (expansion board 2)

- Press a pad to switch the corresponding part between muted/play.

* *The number of internal sound generator parts will depend on the sound generator mode.*

Mode	Number of parts
Single	3
Live	8
Studio	16

* *The number of parts on an expansion board will depend on the expansion board.*

- Pads whose corresponding part is muted will blink. The pads of other parts will be lit. Unused pads will be dark.

Checking the Pad Status

By pressing [PAD SETTING] you can check the current pad status.

15 USER GROUP (Using the Pads to Register/Recall User Groups)

You can register frequently-used sounds as a user group. This pad mode lets you instantly select these sounds by pressing a pad. You can register sixteen sounds (corresponding to the sixteen pads) in each of four banks, giving you a total of 64 sounds for quick recall. You can register and recall the following user groups, depending on the sound generator mode.

Mode	User group
Single	Patch
Live	Live set
Studio	Studio set

MEMO

How User Group differs from Favorite (p. 202)

User Group let you register sounds within the mode (single, live, or studio), while Favorite lets you register settings across modes (single, live, or studio).

Recalling a User Group Sound

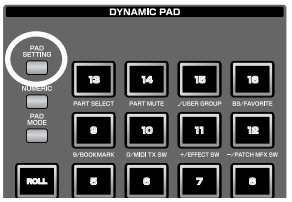
1. **Press [PAD MODE], and then press pad [15] (USER GROUP).**
   - You can press a pad [1]–[16] to select the sound that's registered in that pad.
   - By pressing [ROLL] (BANK) you can switch banks (1–4). → p. 189

NOTE

If you want to use the pads to successively select live sets (or studio sets), set the system setting on **"Pad Assign Source"** (p. 292) to "SYS." If this is set to "TEMP," the pad mode will switch to the setting of the newly selected live set (or studio set) when you switch live sets (or studio sets).

Registering a Sound in a User Group

1. **Press [PAD SETTING].**
2. **The User Group screen will appear. Proceed to step 4 of "Registering a sound in the User Group screen," below.**



Registering a sound in the User Group screen

MEMO

Here's how to register a patch in the patch list screen. Using the same procedure (steps 3 and following), you can use the live set list screen (p. 60) to register a live set in the user group, or the studio set list screen (p. 68) to register a studio set.

1. **Press [SINGLE] to access the Single Play screen, and select the patch that you want to register (p. 46).**
2. **Press [F1 (Patch List)].**
3. **Press [F6 (User Group)].**
   The User Group screen will appear.

4. **Use [F1 (Up)] and [F2 (Down)] to select the destination bank.**
5. **Use [CURSOR] to select the number.**
6. **Press [F5 (Regist)] to register the patch.**
7. **When you've finished registering patches, press [F6 (Exit)] to close the User Group List screen.**

TIP

You can press [F8 (Select)] to select a patch and close the User Group screen.

Removing a registered patch

Press [F4 (Remove)] to remove the patch that's selected in the User Group List screen.

16 FAVORITE (Using the Pads to Register/Recall Favorite Settings)

You can create a list of sounds (settings) that you frequently use in live performance, and recall them instantly. You can register patches, rhythm sets, sample sets, live sets, or studio sets, and recall the settings you need for your performance without regard to the mode you might be in.

Sixteen settings can be registered in one list (one bank), and you can create sixteen such banks.

For example you could use bank 1 for the sounds you use in the first song of your live performance, and register up to sixteen sounds in the order in which they are used in your song.

MEMO

How Favorite differs from User Group (p. 201)

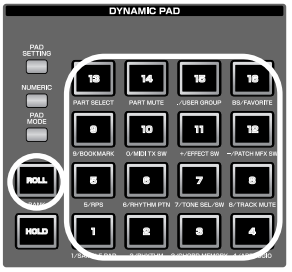
User Group let you register sounds within the mode (single, live, or studio), while Favorite lets you register settings across modes (single, live, or studio).

cf.

For details on the Favorite function, refer to **"Creating a List of Frequently Used Sounds (Favorite)"** (p. 54).

Recalling a Favorite Sound (Setting)

1. Press [PAD MODE], and then press pad [16] (FAVORITE).



- You can press a pad [1]–[16] to select the sound (setting) that's registered in that pad.
- By pressing [ROLL] (BANK) you can switch banks (1–16). → p. 189

NOTE

If you want to use the pads to successively select live sets (or studio sets), set the system setting on **"Pad Assign Source"** (p. 292) to "SYS." If this is set to "TEMP," the pad mode will switch to the setting of the newly selected live set (or studio set) when you switch live sets (or studio sets).

Registering a Favorite Sound (Setting)

1. Press [PAD SETTING].

The Favorite screen (p. 54) will appear.

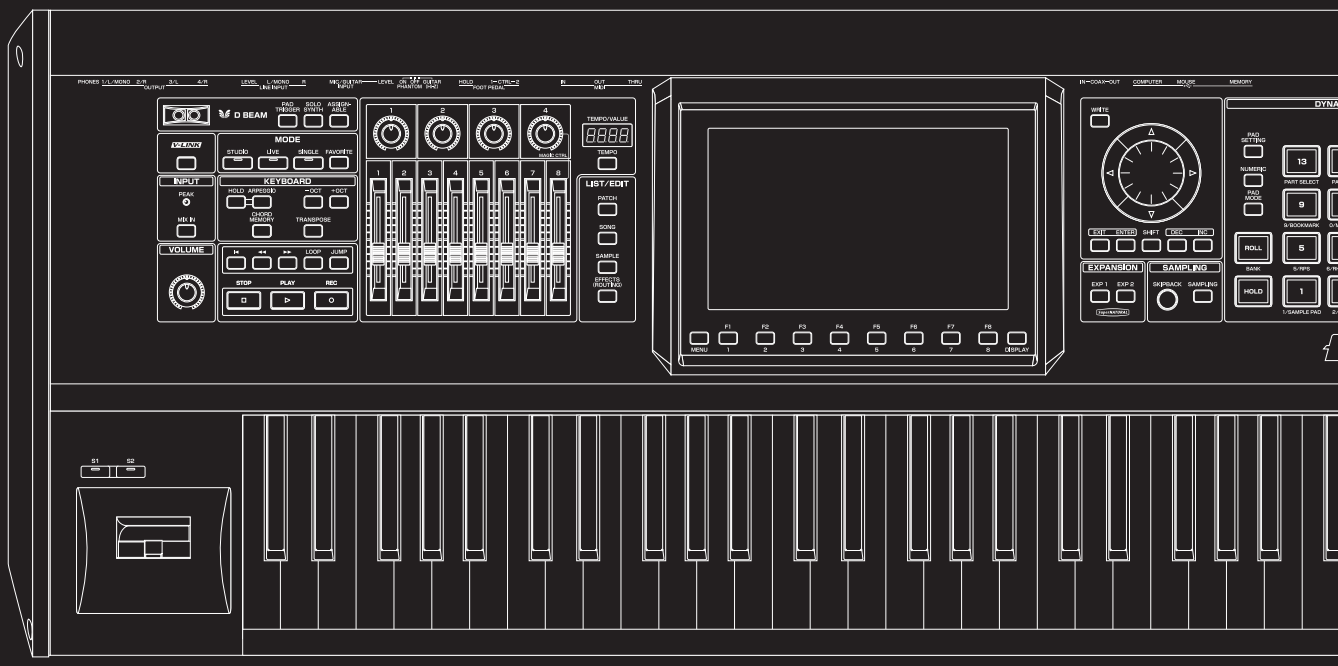
cf.

For details on operations in the Favorite screen, refer to **"Creating a List of Frequently Used Sounds (Favorite)"** (p. 54).

06: Sequencer (Creating a Song)

This chapter explains how to use the sequencer to play, record, and edit songs.

- Playing Back a Song .....p. 204
- Recording MIDI.....p. 217
- Recording Audio.....p. 228
- Editing Songs .....p. 232
- Saving a Song.....p. 254

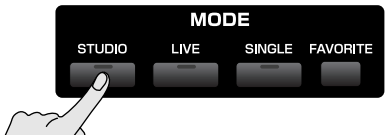


Playing Back a Song

This section explains how to use the Fantom-G's sequencer to play back a song.

TIP

We recommend that you put the sound generator in **Studio mode** when creating or playing a song.



In Studio mode you can use up to sixteen sounds to play a different instrument for each part, so this is the ideal mode for playing a song that uses an ensemble of multiple instruments such as drums, bass, and piano.

Three Ways to Play Back

There are three ways to play back: you can play Fantom-G songs, Standard MIDI Files (SMF), or phrases (MIDI Phrases).

Playing a song (p. 204)

You can play Fantom-G songs.

Playing Standard MIDI Files (SMF) (p. 212)

You can copy Standard MIDI Files (SMF) from your computer to the Fantom-G, and play them or import them into a song or phrase.

Playing phrases (MIDI Phrase) (p. 214)

You can audition phrases from within a Fantom-G project.

Playing a Song (Song Play)

Here's how to play a Fantom-G song.

Loading a Song (Song List)

Here's how to access the Song List and load a song from the project.

NOTE

When you load a song, the temporary area (p. 35) of the sound generator will be in the state it was when you created the song. Before loading a song, you should save the patch or live set or studio set that you were editing.

1. Press [SONG].

The Song Play screen will appear.

2. Press [F1 (Song List)].

The Song List screen will appear.

F-key operations in the Song List screen

F-key	Explanation	Page
F4 Delete Song	Deletes a song file from the project.	p. 210
F7 Exit	Returns to the previous screen.	–
F8 Load	Loads the song file.	p. 204

3. Turn the VALUE dial, or use [INC] [DEC], or use ▲ / ▼ to select a song.

4. Press [F8 (Load)].

A confirmation message will appear.

5. Press [F7 (OK)].

If you decide to cancel, press [F8 (Exit)].

Playing a Song (Song Play)

Here's how to play the song you loaded in the Song Play screen (p. 204).

1. Press [SONG].

The Song Play screen will appear.

F-key operations in the Song Play screen

F-key	Explanation		Page
F1 Song List	Displays the Song List, where you can load a song.		p. 204
F2 SMF List	Displays the SMF List, where you can play or import SMF data.		p. 212
F3 Phrase List	Displays the MIDI Phrase List, where you can audition or edit phrases.		p. 214
F4 Studio Play/ Live Play/ Single Play	Displays the Studio Play/Live Play/Single Play screen.		–
F5 Loop	Opens the Loop window, where you can specify the loop region.		p. 208
F6 Marker	Opens the Marker window, where you can set markers.		p. 208
F7 Song Util	Zoom/ Track Order	Zooms in/out on the track, and changes the order in which the tracks are displayed.	p. 209
	Song Clear	Erases the song.	p. 211
	Track Clear	Erases the track.	p. 235
	Track Name	Assigns a name to the track.	p. 235
	Track Edit Insert	Inserting a Blank Measure	p. 237
	Track Edit Delete	Deleting Unwanted Measures	p. 237
	Track Edit Copy	Copying Measures	p. 237
	Tempo Track	Changes the tempo.	p. 235
	Beat Track	Changes the time signature.	p. 236
	Save As SMF	Save As an SMF File	p. 256
F8 Song Edit	Opens the Song Edit screen, where you can edit a song.		p. 232

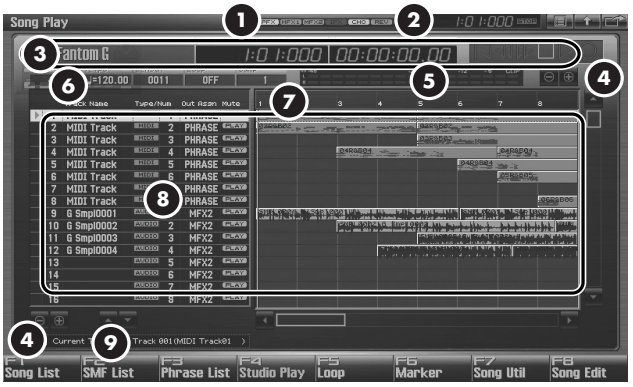
SHIFT + F-keys operations in the Song Play screen

F-key	Explanation	Page
SHIFT + F1 Trk Edit Ins	Inserting a Blank Measure	p. 237
SHIFT + F2 Trk Edit Del	Deleting Unwanted Measures	p. 237
SHIFT +F3 Trk Edit Copy	Copying Measures	p. 237
SHIFT +F8 Zoom	Zooms the track display, or changes the displayed order of the tracks.	p. 209

2. Press [PLAY] to start playback.

Playback will stop automatically when the song ends. If you want to stop before the end of the song, press [STOP].

Operations in the Song Play Screen



Number	Explanation
❶	Indicates the on/off status of each effect. PFX Patch multi-effect MFX1 Multi-effect 1 MFX2 Multi-effect 2 IFX Input effect CHO Chorus REV Reverb MAS Mastering effect
❷	Indicates the current location of the song, and the status of the sequencer.
❸	Indicates the number and name of the currently selected song, the current location, and the status of the sequencer.
❹	Track zoom button (for a USB mouse).
❺	Level meter for the Output jacks.
❻	Indicates the song's time signature, tempo, and loop play on/off status.
❼	Indicates markers and measures.
❽	Indicates the track name and track information.
❾	Track order change button (for USB mouse).

Selecting a Sound (Part or Patch) in the Song Screen

In the Song Play/Song Edit screen, you can select a part or patch by pressing [PATCH].

1. In the Song Play/Song Edit screen, press [PATCH].
The Part Select window will appear.

Use ◀ / ▶ to move the cursor, and use the VALUE dial or [INC] [DEC] to change the value.

Value	Explanation
Group	Part Group
Part	Part
Type	Patch Type
Bank	Patch Bank
Patch Number/Name	Patch Number/Name

F-Key	Explanation
F5 Patch Edit	Edit a patch.
F6 Patch List	Open the Patch List screen.
F7 Rehearsal (displayed only during recording)	Audition Sounds (Rehearsal Function)
F8 Close	Close the Part Select window.

NOTE

If you change the part during recording, the recording track will not change even if the Auto Track function (p. 222) is on.

Fast-forwarding or Rewinding during Playback

You can fast-forward, rewind, or jump within a song not only while the song is stopped, but also during playback. Perform the following actions.

Fast-forward: Press [▶▶]

Continue fast-forwarding: Hold down [▶▶]

Fast-forward rapidly: Press [▶▶] and then press [◀◀]

Rewind: Press [◀◀]

Continue rewinding: Hold down [◀◀]

Rewind rapidly: Press [◀◀] and then press [▶▶]

Jump to the preceding marker: Hold down [SHIFT] and press [◀◀]

Jump to the next marker: Hold down [SHIFT] and press [▶▶]

Jump to the beginning of the song: Press [|◀]

Jump to the JUMP marker: Press [JUMP]

NOTE

Song playback will pause if you jump to the beginning or end of the song while playing-back.

Muting the Playback of a Track (MUTE)

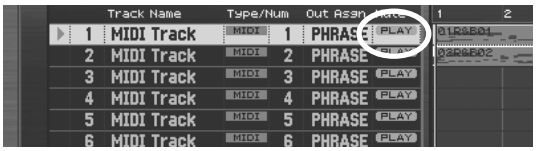
You can mute a track so that it will not produce sound during playback.

1. Press [SONG].

The Song Play screen will appear.

2. Turn the VALUE dial or use ▲ / ▼ to select the track that you want to mute.

3. Use ◀ / ▶ to move the cursor to "PLAY."



4. Press [DEC] to select the "MUTE" setting.

cf.

You can also use the pads to switch the track muting.
→ **"8 TRACK MUTE (Using the Pads to Mute Tracks)"** (p. 197)

Accessing the Mixer Screen

For a song you've created in Studio mode, you can use the Studio mode Studio Play screen to adjust the volume of each internal sound generator part and audio track.

cf.
For details on operation, refer to **"Displaying Studio Play Screen"** (p. 66).

Changing the Playback Tempo of the Song

When a song plays back, its tempo is determined by the data in the tempo track, but you can also adjust the tempo of the overall song during playback. This adjustment is called the "**playback tempo**."

NOTE

The playback tempo is a temporary setting. It will be lost when you switch to a different song or turn off the power. If you want the song to always play at this tempo, you must re-save the song (p. 254).

MEMO

The tempo is stored on an individual Live/Studio Set basis. Using **"Tempo Assign Source"** (p. 296), you can choose to have the tempo follow the setting of each Live/Studio Set (TEMP), or follow the Fantom-G's global settings (SYS).

1. **Press [TEMPO].**
   The Tempo window will appear.

2. **Turn the VALUE dial or use [INC] [DEC] to specify the playback tempo. By holding down [SHIFT] and turning the VALUE dial you can make fine adjustments below the decimal point.**
   - If you press [F7 (Click)] to turn it on, a click will sound at the specified tempo. The click will turn on/off each time you press the button.
   - You can specify the tempo by pressing [F6 (Tap Tempo)] at the desired interval (Tap Tempo). Press the button at least three times at quarter-note intervals of the desired playback tempo.
3. **When you've finished making settings, press [F8 (Close)].**

Playing a Song Repeatedly (Loop)

You can make the song play repeatedly according to the loop points you specify.

NOTE

You can't specify loop points for a phrase.

1. Press [SONG].

The Song Play screen will appear.

2. Press [F5 (Loop)].

The Loop window will appear.

3. Move the cursor to the desired parameter, and turn the VALUE dial or use [INC] [DEC] to set the value.

* *Stop the sequencer before you make these settings. You can make these settings if the sequencer is running.*

- **Repeat Times**
  Specifies the number of times (1–99) that the specified region will repeat. If you want it to repeat until you press [STOP], choose "INF."
- **Start Point**
  Specifies the starting point of the loop region.
  If you press [F5 (Set Start)], the current location in the song will be specified as the loop start point.
- **End Point**
  Specifies the ending point of the loop region. The location you specify is not included in the loop region.
  If you press [F6 (Set End)], the current location in the song will be specified as the loop end point.

4. To enable the loop settings, press [F7 (Loop)] to turn it on.

MEMO

You can use the [LOOP] button on the panel to turn looping on/off.

MEMO

You can open this screen by holding down [SHIFT] and pressing [LOOP].

5. Press [F8 (Close)] to close the window.

Placing Markers in a Song (Marker)

You can place up to sixteen markers in a song at units of one measure. This will make song editing easier, since it will be easier for you to see the structure of your song, or to move quickly to the location of a marker.

Here's how to view and edit a list of the markers in a song.

1. Press [SONG].

The Song Play screen will appear.

2. Press [F6 (Marker)].

The Marker window will appear.

The buttons perform the following operations.

- VALUE dial, [INC] [DEC], ▲ ▼
  Select a marker within the list. The current location also will be jumped.
- [F4 (Name)]
  Assigns a name to the currently selected marker. Choose a name from the displayed list, and press [F8 (Select)] to finalize your choice.
- [F5 (Set)]
  Adds a marker at the beginning of the current measure.
- [F6 (Clear)]
  Deletes the selected marker.
- [F7 (Jump)]
  Specifies the marker to which you will move when you press the front panel [JUMP] button.

3. Press [F8 (Close)] to close the window.

MEMO

When the Marker window is open, you can press a pad 1–16 to jump to the marker of the corresponding number.

MEMO

You can open this screen by holding down [SHIFT] and pressing [JUMP].

Jumping to a marker

Here's how to jump to markers within a song.

Jumping to the previous marker:
Hold down [SHIFT] and press [◀◀].

Jumping to the next marker:
Hold down [SHIFT] and press [▶▶].

Jumping to the beginning of the song:
Press [|◀].

Jumping to the JUMP marker:
Press [JUMP].

Changing the Track Display Zoom and Display Order (Zoom/Track Order)

Here's how to change the zoom ratio of the track display, and change the order in which tracks are displayed.

1. Press [SONG].

The Song Play screen will appear.

2. Press [F7 (Song Util)].

The Song Utility Menu window will appear.

MEMO

In the Song Play/Song Edit screen, you can also access the Song View window by holding down [SHIFT] and pressing [F8].

3. Use ▲ / ▼ to choose "Zoom/Track Order," and press [F8 (Select)].

To cancel, press [F7 (Cancel)].

The Zoom/Track Order window will appear.

Changing the track display zoom

4. Use [CURSOR] to change the zoom ratio.

- Horizontal axis (time axis of the tracks)

  Press ◀ to shrink the display.

  Press ▶ to magnify the display.
- Vertical axis (vertical axis of the tracks)

  Press ▲ to magnify the display.

  Press ▼ to shrink the display.

Even without accessing the zoom window, you can hold down [SHIFT] in the Song Play screen and zoom the horizontal axis in/out by pressing ◀ or ▶ or zoom the vertical axis in/out by pressing [INC] or [DEC].

MEMO

If you're using a USB mouse, you can change the zoom in the Song Play screen by clicking the buttons shown in the illustration.

Changing the track display order

5. By turning the VALUE dial or using [INC] [DEC] to change the value in the "Track Order" field, you can change the order in which the currently selected track is displayed.

MEMO

If you're using a USB mouse, you can also change the track display order from the Song Play screen by clicking the button shown in the illustration.

6. Press [F8 (Close)] to close the Zoom/Track Order window.

Naming a Track (Track Name)

Here's how to assign a name of a track.

MEMO

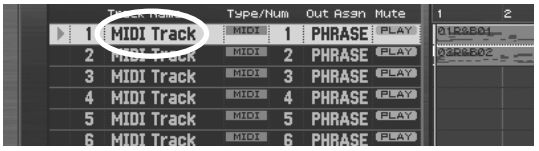
In the Song Play/Song Edit screen when the track name is blank, the first-recorded patch name (or for an audio track, the sample name) will automatically be the track name.

1. Press [SONG].

The Song Play screen will appear.

2. Turn the VALUE dial or use ▲ / ▼ to select the track you want to name.

3. Use ◀ / ▶ to move the cursor to the track name field.



4. Press [ENTER].

5. Assign the desired name.

cf.

For details on entering a name, refer to **"Assigning a Name"** (p. 42).

6. Press [F8 (Write)] to finalize the name.

Specifying a Track's Output Destination (Output Assign)

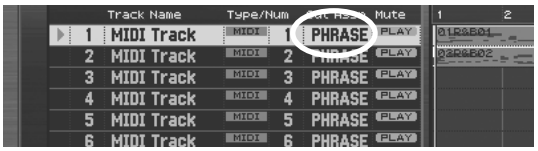
Here's how to specify the output destination of each track.

1. **Press [SONG].**

The Song Play screen will appear.

2. **Turn the VALUE dial or use ▲ / ▼ to select the track whose output destination you want to assign.**

3. **Use ◀ / ▶ to move the cursor to the location shown in the illustration.**



4. **Use [INC] [DEC] to specify the output destination.**

For a MIDI track

PHRASE: Output according to the setting recorded in the phrase. Normally you will choose this.

INT: Play the Fantom-G's internal sound generator.

EXT: Play an external sound module connected to the MIDI OUT connector.

BOTH: Play the Fantom-G's internal sound generator and an external sound module connected to the MIDI OUT connector.

EXP1: Play expansion board ARX1.

EXP2: Play expansion board ARX2.

OFF: Nothing will be played.

For an audio track

OUT A, OUT B:
Output the sound in stereo from the OUTPUT A (MIX) jacks or OUTPUT B jacks without sending it through the multi-effect.

MFX1–2: Send the sound through the multi-effect, and output it in stereo. This also allows you to apply chorus or reverb to the sound that has passed through the multi-effect.

Deleting a Song File (Song Delete)

Here's how to delete a song file from the project.

1. **Press [SONG].**

The Song Play screen will appear.

2. **Press [F1 (Song List)].**
The Song List screen will appear.

3. **Turn the VALUE dial or use [INC] [DEC] or ▲ / ▼ to select the song that you want to delete.**

4. **Press [F4 (Delete Song)].**
A confirmation message will appear.

5. **Press [F7 (OK)] to execute the operation.**
If you decide to cancel, press [F8 (EXIT)].

Song Automatically Loaded at Power-on (When Loading a Project)

When the Fantom-G is powered-on (when loading a project), song 001 (the top song in the Song List) will be loaded automatically.

TIP

If you don't want a song to be loaded automatically at power-on (when loading a project), delete song 001 as described in **"Deleting a Song File (Song Delete)"** (p. 210).

TIP

When you execute a Factory Reset (p. 284), the demo song will be written to song 001.

Erasing the Currently-open Song (Song Clear)

Here's how to erase the song that's currently opened in the Song Play screen. Use this function when you want to record a new song. This will not delete the actual song file that's saved in the project.

NOTE

If a song you're editing is open, save the song before you continue (p. 254).

1. **Press [SONG].**

The Song Play screen will appear.

2. **Press [F7 (Song Util)].**
The Song Utility Menu window will appear.

3. **Use ▲ / ▼ to choose "Song Clear," and press [F8 (Select)].**
To cancel, press [F7 (Cancel)].
A confirmation message will appear.

4. **Press [F7 (OK)] to execute.**
If you decide not to execute, press [F8 (EXIT)].

Playing a Standard MIDI File (SMF)

Standard MIDI File (SMF) data from your computer can be copied to the Fantom-G for listening, or imported into a song or phrase.

Copying a Standard MIDI File (SMF) from Your Computer to the Fantom-G

Here's how to copy a standard MIDI file from your computer to the Fantom-G.

1. **Prepare a standard MIDI file (.MID) on your computer.**

2. **Use the USB Storage function (p. 285) to copy the standard MIDI file (.MID) to the following folder of the Fantom-G's internal memory or of your USB memory.**

   "FantomG.Prj/SEQ/SMF" folder

MEMO

"**FantomG.Prj**" will be the project folder name in the Fantom-G's internal memory. You can save more than one project in USB memory. By default, the project folders will be named consecutively as "**FantomG001.Prj**," "**FantomG002.Prj**," etc., and the portion of the name preceding the file name extension will be the project name you assigned when saving the file.

Playing a Standard MIDI File (SMF) (SMF List)

You can access the SMF List and listen to a standard MIDI file (SMF) that you copied as described in **"Copying a Standard MIDI File (SMF) from Your Computer to the Fantom-G"** (p. 212).

TIP

When playing SMF data, we recommend that you put the sound generator in **Studio mode**. The Fantom-G is GM/GM2 compatible, so if the music data is compatible with GM/GM2, it will automatically play back with the appropriate sounds.

1. **Press [SONG].**

The Song Play screen will appear.

2. **Press [F2 (SMF List)].**

The SMF List screen will appear.

F-key operations in the SMF List screen

F-key	Explanation	Page
F5 -> Phrase	Imports an SMF file into a phrase.	p. 213
F6 -> Song	Imports an SMF file into a song.	p. 213
F7 Play	Plays the SMF file selected in the list.	p. 212
F8 EXIT	Returns to the previous screen.	–

3. **Turn the VALUE dial or use [INC] [DEC] or ▲ / ▼ to select an SMF file.**

4. **Press [PLAY] or [F7 (Play)].**

You will hear the selected SMF file.

Importing an SMF into a Phrase (Import Phrase)

You can access the SMF List and import a standard MIDI file (SMF) from the project into a phrase. You can then use the imported SMF as a phrase.

1. Press [SONG].

The Song Play screen will appear.

2. Press [F2 (SMF List)].
The SMF List screen will appear.

3. Turn the VALUE dial or use [INC] [DEC] or ▲ / ▼ to select an SMF file.

4. Press [F5 (->Phrase)].
A confirmation message will appear.

5. Press [F7 (OK)] to execute.
If you decide to cancel, press [F8 (EXIT)].

When you execute, the selected SMF file will automatically be imported into a vacant number of the phrase list, and the Phrase Edit screen (p. 238) will appear.

MEMO

The imported phrase is temporary, and will be lost if you turn off the power. If you want to keep the phrase, press [WRITE] to save it (p. 216).

Importing an SMF into a Song (Import Song)

You can access the SMF List and import a standard MIDI file (SMF) from the project into a song. You can then use the imported SMF as a Fantom-G song.

1. Press [SONG].

The Song Play screen will appear.

2. Press [F2 (SMF List)].
The SMF List screen will appear.

3. Turn the VALUE dial or use [INC] [DEC] or ▲ / ▼ to select an SMF file.

4. Press [F6 (->Song)].
A confirmation message will appear.

5. Press [F7 (OK)] to execute.
If you decide to cancel, press [F8 (EXIT)].

When you execute, the selected SMF file will automatically be imported into a vacant number of the song list, and the Song Play screen (p. 205) will appear.

MEMO

The imported song is temporary, and will be lost if you turn off the power. If you want to keep the song, press [WRITE] to save it (p. 254).

Playing Phrases (MIDI Phrase)

Phrases from within the Fantom-G project can be auditioned from a list.

Auditioning a Phrase (MIDI Phrase List)

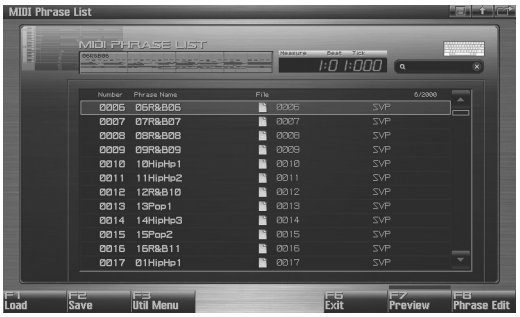
Here's how to access the Phrase List and audition a phrase from the project.

1. Press [SONG].

The Song Play screen will appear.

2. Press [F3 (Phrase List)].

The MIDI Phrase List screen will appear.



F-key operations in the MIDI Phrase List screen

F-key	Explanation		Page
F1 Load	Loads a phrase from the project into memory.		p. 214
F2 Save	Saves the selected phrase to the project.		p. 216
F3 Util Menu	Save All	Save all phrases	p. 216
	Delete Phrase	Deletes the phrase file from the project	p. 215
	Duplicate	Duplicates the phrase	p. 215
F6 Edit	Returns to the previous screen.		–
F7 Preview	Auditions the selected phrase.		p. 214
F8 Phrase Edit	Displays the edit screen for the selected phrase.		p. 238

3. Turn the VALUE dial or use [INC] [DEC] or ▲ / ▼ to select a phrase.

4. Press and hold [F7 (Preview)].

You'll hear the selected phrase.

Loading a Phrase (Load)

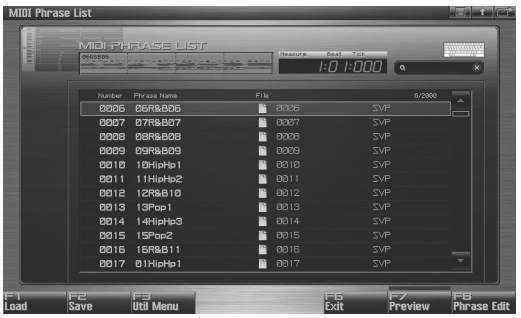
Here's how to load a phrase from the project into memory.

1. Press [SONG].

The Song Play screen will appear.

2. Press [F3 (Phrase List)].

The MIDI Phrase List screen will appear.



3. Turn the VALUE dial or use [INC] [DEC] or ▲ / ▼ to select a phrase.

4. Press [F1 (Load)].

A confirmation message will appear.

5. Press [F7 (OK)] to execute.

If you decide to cancel, press [F8 (EXIT)].

The phrase list shows the current phrase status

Phrase name	This shows the phrase name. If this field indicates "**EMPTY**," the phrase has not been loaded into memory. Load the phrase as needed.
	This indicates whether the file exists in the project. Phrases without the symbol have not been saved, and therefore will be lost when you turn off the power. Save the phrase if necessary.
	This indicates a phrase that has been edited. The changes you made will be lost when you turn off the power. Save the phrase if necessary.

Deleting a Phrase from the Project (Delete Phrase)

This operation will completely delete a phrase from the project along with its file.

NOTE

If that phrase is used by a song within the project, the portion of the song occupied by that phrase will no longer sound.

1. Press [SONG].

The Song Play screen will appear.

2. Press [F3 (Phrase List)].

The MIDI Phrase List screen will appear.

3. Turn the VALUE dial or use [INC] [DEC] or ▲ / ▼ to select a phrase.

4. Press [F3 (Util Menu)].

The Phrase Utility Menu window will appear.

5. Use ▲ / ▼ to choose "Delete Phrase," and press [F8 (Select)].

To cancel, press [F7 (Cancel)].

A confirmation message will appear.

6. Press [F7 (OK)].

If you decide to cancel, press [F8 (EXIT)].

Duplicating a Phrase (Duplicate)

This operation will duplicate a phrase to a vacant number in the list. You can use this to create variations by modifying an existing phrase.

1. Press [SONG].

The Song Play screen will appear.

2. Press [F3 (Phrase List)].

The MIDI Phrase List screen will appear.

3. Turn the VALUE dial or use [INC] [DEC] or ▲ / ▼ to select a phrase.

4. Press [F3 (Util Menu)].

The Phrase Utility Menu window will appear.

5. Use ▲ / ▼ to choose "Duplicate," and press [F8 (Select)].

To cancel, press [F7 (Cancel)].

A confirmation message will appear.

6. Press [F7 (OK)] to execute.

If you decide to cancel, press [F8 (EXIT)].

When you execute, the selected **phrase** will automatically be duplicated to a vacant number in the **phrase** list.

Saving a Phrase (Save)

This operation will save the selected phrase to the project.

A phrase you recorded or edited is temporary, and will be lost when you turn off the power. If you want to keep the phrase, you must save it.

1. **Press [SONG].**

2. **Press [F3 (Phrase List)].**
   The MIDI Phrase List screen will appear.

   Phrases without the symbol and phrases with the symbol have not been saved.

3. **Turn the VALUE dial or use [INC] [DEC] or ▲ / ▼ to select the phrase that you want to save.**

4. **Press [F2 (Save)].**

5. **Assign a name to the phrase.**

   cf.

   For details on assigning a name, refer to **"Assigning a Name"** (p. 42).

6. **When you've finished assigning a name, press [F8 (OK)].**
   A message will ask you to confirm the Write operation.
   Never turn off the power while writing is in progress.

7. **Press [F7 (OK)] to execute.**
   If you decide to cancel, press [F8 (EXIT)].

* *You can't save a phrase by overwriting an existing phrase.*

Saving all Phrases (Save All)

This operation will save all phrases of the phrase list into the project.

1. **Press [SONG].**

2. **Press [F3 (Phrase List)].**
   The MIDI Phrase List screen will appear.

   Phrases without the symbol and phrases with the symbol have not been saved.

3. **Press [F3 (Util Menu)].**
   The Phrase Utility Menu window will appear.

4. **Press ▲ / ▼ to choose "Save All," and then press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
   A confirmation message will appear.

5. **Press [F7 (OK)] to execute.**
   If you decide to cancel, press [F8 (EXIT)].

   MEMO

   When you execute Save All, the phrases will be written into the same numbers of the phrase list. Phrase names will be assigned automatically.

Recording MIDI

This section explains how to use the Fantom-G's sequencer to record MIDI.

Phrases and Songs

A "phrase" is a chunk of recorded MIDI data. You can create a song simply by placing phrases in the MIDI tracks of a song.
You can record MIDI either by recording it directly into a MIDI track of a song, or by recording into a phrase.

Recording into a song (p. 218)

In the Song Play screen, select a track and a recording start location, and then begin recording. After recording, the phrase will be attached to the recording start location.

Recording into a phrase (p. 220)

In the MIDI Phrase List screen, select a phrase number and then begin recording. After recording, the phrase will be added to the list.

Two Methods of Recording

There are two ways to record MIDI: **realtime recording** and **step recording**. Use the method that's suitable for your needs.

Realtime recording (p. 222)

With this method, your performance on the keyboard and pads, and the controller movements you make, are recorded exactly as you perform them.

Step recording (p. 226)

Step recording allows you to enter notes and rests one by one. This method is suitable when you need to enter notes at a precise timing, such as when recording drums or bass.

NOTE

You can't step-record directly into a song. You can use step recording to record a phrase.

Undo function

This cancels the result of the following edit/recording operations, reverting to the original state.

- Phrase modify (p. 239)
- Microscope (p. 250)
- Phrase recording (realtime/step) (p. 220)
- Track Edit (p. 237)

1. **Perform the above editing or recording operation.**
2. **Press [MENU].**
3. **Press [F5 (Undo)].**

   MEMO

   Undo cancels the editing or recording operation that was performed immediately before you executed Undo. If Undo is not possible, the button will be shown in gray and will be disabled.

4. **A window will ask you to confirm the Undo operation. To execute the Undo, press [F7 (OK)]. If you decide to cancel, press [F8 (CANCEL)].**

   The result of editing or recording will be cancelled, reverting to the original state.

   MEMO

   Phrase edit (phrase modify/microscope), phrase recording (realtime/step) and track edit allow you to Undo and Redo.

   NOTE

   Song recording (realtime recording/audio recording) does not allow for a Redo. Once you carry out an Undo, the recorded result is discarded, and cannot be redone.

   MEMO

   You can also Undo by holding down [SHIFT] and pressing [EXIT].

Recording into a Song

Recording work-flow

When recording a new song, the work-flow is as follows.

1. **Select the sound you want to use for recording.**
2. **Erase the song that's in the temporary area.**
3. **Specify the time signature of the song (p. 219).**
4. **Specify the tempo (p. 219).**
5. **Select a MIDI track and the recording-start measure (p. 219).**
6. **Perform realtime recording (p. 222).**
7. **Use song editing to edit the song (p. 232).**
8. **Use phrase editing (p. 238) or microscope editing (p. 250) to edit the phrase.**
9. **Save the song (p. 254).**

Selecting a Sound for Recording

Before you record a song, select Studio mode and choose the sound you'll use for recording.

TIP

The Fantom-G's sequencer can record your performance regardless of the sound generator mode (Single, Live, or Studio), but we recommend that you choose Studio mode when you want to record a song.
In Studio mode, when you use the Fantom-G's keyboard and pads to record, you'll hear only the sound of the specified MIDI channel, and you can use a different sound for each part (up to sixteen sounds) to play back the recorded song. This means that Studio mode is the appropriate choice when recording or playing back an ensemble performance using multiple instruments such as drums, bass, and piano.

TIP

We recommend that you turn the Keyboard Switch (p. 69) off for all parts. If this is on, multiple parts of your performance will be recorded to a single phrase, which is not what you want when creating a song.

cf.

Selecting Studio mode → p. 66
Selecting a Studio Set → p. 67
Selecting a sound for each part → p. 68

Erasing the Song/Phrases from the Temporary Area (Song Clear)

When you record a song, the performance data is recorded into the temporary area. If you want to record a new song, you'll need to erase the existing performance data from the temporary area before you begin.

NOTE

If you've been editing the currently-opened song, save the song before you continue (p. 254).

1. **Press [SONG].**

The Song Play screen will appear.

2. **Press [F7 (Song Util)].**
The Song Utility Menu window will appear.

3. **Use ▲ / ▼ to choose "Song Clear," and then press [F8 (Select)].**
To cancel, press [F7 (Cancel)].
A confirmation message will appear.

4. **Press [F7 (OK)] to execute.**
If you decide to cancel, press [F8 (EXIT)].

Specifying the Time Signature (Beat Track)

When you record a new song, start by specifying the time signature. However, if you've just executed the Song Clear operation or turned on the power, the time signature will always be set to 4/4, so you'll need to change this only if the song you're recording uses a different time signature.

1. **Press [SONG].**
2. **Press [F8 (Song Edit)].**
   The Song Edit screen will appear.
3. **Press [F7 (Song Util)].**
   The Song Edit Utility Menu window will appear.
4. **Press ▲ / ▼ to choose "Beat Track," and press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
   The Microscope screen for the beat track will appear.
5. **Move the cursor to "Beat Change," and specify the time signature.**

   cf.

   If you want the beat to change in the middle of the song, refer to **"Changing the Time Signature during the Song (Beat Track)"** (p. 236).
6. **Press [EXIT] to return to the Song Edit screen.**

Specifying the Tempo

Here's how to specify the tempo at which you'll record the song.

1. **Press [TEMPO].**
   The Tempo window will appear.

2. **Turn the VALUE dial or use [INC] [DEC] to specify the tempo. By holding down [SHIFT] while you turn the VALUE dial, you can adjust the value below the decimal point.**
   - If you press [F7 (Click)] to turn it on, the click will sound at the specified tempo. It will turn on/off each time you press the button.
   - You can specify the tempo by pressing [F6 (Tap Tempo)] at the desired interval (Tap Tempo). Press the button at least three times in quarter-note intervals of the desired tempo.
3. **When you've finished making settings, press [F8 (Close)].**

Selecting a MIDI Track and the Recording-start Measure

Here's how to select the MIDI track on which you'll record, and specify the recording-start measure.
You can record on any of the tracks 1–128 that indicates "MIDI."

TIP

You are free to simultaneously record MIDI data for multiple sound generator parts on the same MIDI track, and you are also free to use multiple MIDI tracks to record MIDI data for a single sound generator part. Initially, you'll probably want to keep things simple by using the MIDI track of the same number as the sound generator part it's playing.

1. **Press [SONG].**

   The Song Play screen will appear.
2. **Turn the VALUE dial or use ▲ / ▼ to select the MIDI track on which you want to record.**
   Select a track that has the "MIDI" indication.

   cf.

   You can change the order in which the tracks are displayed.
   → **"Changing the Track Display Zoom and Display Order (Zoom/Track Order)"** (p. 209)
3. **Use [◀◀] [▶▶] to specify the measure at which you want to start recording.**
   The recording-start measure is indicated in the "Measure" field at the top of each PLAY screen.

If a phrase already exists at the recording-start location

The existing phrase will be overwritten by your new recording.

If a phrase already exists following the recording-start location

A new phrase will be recorded. You'll be able to record up to the location of the subsequent phrase.

Proceed to Realtime Recording → p. 222

Recording into a Phrase

Recording work-flow

When recording a new phrase, the work-flow is as follows.

1. **Select the sound you want to use for recording.**
2. **Specify the tempo.**
3. **In the MIDI Phrase List, select the phrase that you want to record (p. 221).**
4. **Perform realtime recording (p. 222) or step recording (p. 226).**
5. **Use phrase editing (p. 238) or microscope editing (p. 250) to edit the phrase.**
6. **Save the phrase (p. 216).**

Selecting a Sound for Recording

Before you record a phrase, select Studio mode and choose the sound you'll use for recording.

TIP

The Fantom-G's sequencer can record your performance regardless of the sound generator mode (Single, Live, or Studio), but we recommend that you choose Studio mode when recording.
In Studio mode, when you use the Fantom-G's keyboard and pads to record, you'll hear only the sound of the specified MIDI channel, and you can use a different sound for each part (up to sixteen sounds) to play back the recorded song. This means that Studio mode is the appropriate choice when recording or playing back an ensemble performance using multiple instruments such as drums, bass, and piano.

TIP

We recommend that you turn the Keyboard Switch (p. 69) off for all parts. If this is on, multiple parts of your performance will be recorded to a single phrase, which is not what you want when creating a song.

cf.

Selecting Studio mode → p. 66
Selecting a Studio Set → p. 67
Selecting a sound for each part → p. 68

Specifying the Tempo

Here's how to specify the tempo at which you'll record the phrase.

NOTE

Tempo or time signature settings cannot be stored in a phrase. Phrases always play back at the tempo of the song.
The tempo you're specifying here is a temporary tempo setting for recording.

1. **Press [TEMPO].**
   The Tempo window will appear.

2. **Turn the VALUE dial or use [INC] [DEC] to specify the tempo. By holding down [SHIFT] while you turn the VALUE dial, you can adjust the value below the decimal point.**
   - If you press [F7 (Click)] to turn it on, the click will sound at the specified tempo. It will turn on/off each time you press the button.
   - You can specify the tempo by pressing [F6 (Tap Tempo)] at the desired interval (Tap Tempo). Press the button at least three times in quarter-note intervals of the desired tempo.
3. **When you've finished making settings, press [F8 (Close)].**

Selecting the Phrase to Record

Access the MIDI Phrase List, and select the phrase that you want to record.

MEMO

Recording operations can also be performed in the Phrase Edit screen (p. 238).

1. Press [SONG].

The Song Play screen will appear.

2. Press [F3 (Phrase List)].

The MIDI Phrase List screen will appear.

3. Turn the [VALUE] dial or use [INC] [DEC] or ▲ / ▼ to select the phrase that you want to record.

If a phrase already exists in the selected number

The existing phrase will be overwritten by your new recording.

If there is no phrase in the selected number

A new phrase will be recorded.

Proceed to Realtime Recording
→ p. 222

Proceed to Step Recording
→ p. 226

Recording Your Performance Just as You Play It (Realtime Recording)

Realtime recording is the recording method in which your keyboard performance and controller operations are recorded exactly as you perform them. Choose this recording method when you want to capture the nuances of your performance.

Auto Track Function

In the Realtime Rec Standby window, when recording a song, this function will automatically select the same track number as the part you're recording. For example, if the current part of the sound generator is part 3, MIDI track 3 of the song will be selected. If the current part of the sound generator is part 10, MIDI track 10 of the song will be selected. This provides a more intuitive relationship between the parts of the sound generator and the tracks of the song.

The Auto Track function will automatically select the following tracks.

Current Part	Track
Internal 1–16	MIDI Track 1–16
EXP1 1–16	MIDI Track 17–32
EXP2 1–16	MIDI Track 33–48
External 1–16	MIDI Track 49–64
Audio Track 1–24 (MIXER Screen)	Audio Track 1–24

NOTE

If you change the part during recording, the recording track will not change even if the Auto Track function is on.

Turning the Auto Track Function On/Off

By default, the Auto Track function will be on. If you turn the Auto Track function off, the track selected in the Realtime Rec Standby window when recording a song will be the current track of the song.

1. **Press the [MENU], and then press [F2 (System)].**
2. **Press [F2 (Group/Down)] a number of times to access the Startup group.**
3. **In the "Sequencer Auto Track" field, specify the desired on/off setting.**

   VALUE

   OFF: Auto Track function is off

   ON: (default) Auto Track function is on

Basic Procedure for Realtime Recording

1. **Make sure that you've made the appropriate preparations for recording as described in "Recording into a Song" (p. 218) or "Recording into a Phrase" (p. 220).**
2. **Press [REC].**

   The [REC] indicator will blink, and the Realtime Rec Standby window will appear.

   In this window you can set various parameters related to realtime recording.
3. **Use [CURSOR] to move the cursor to the various parameters, and turn the VALUE dial or use [INC] [DEC] to set them.**

   cf.

   For details on the parameters, refer to **"Realtime Rec Standby Parameters"** (p. 223).

   MEMO

   In the Realtime Rec Standby windows, you can press [F6] to switch between recording MIDI and audio.

   MEMO

   In the Realtime Rec Standby windows, you can select the recording track in the "Recording Track Number" field. If you want to change the recording track, make the desired change in the "Recording Track Number" field.
4. **When you've finished making settings in the Realtime Rec Standby window, press [PLAY] or [F8 (Start)].**

   The Realtime Rec Standby window will close, the [REC] indicator will change from blinking to lit, and recording will start.

   When recording starts, the Realtime Recording window will appear.

   To close this window, press [F8 (Close)] or [PLAY]. To open it again, press [PLAY].

   In this window you can perform the following operations.

   - Realtime erase (Erase p. 225)
   - Rehearsal function (Rehearsal p. 225)

   For details on these operations, refer to the corresponding page.
5. **When you've finished recording, press [STOP].**
6. **A window will ask you to confirm the recording. If you want to keep the recorded result, press [F7 (OK)]. If you decide to cancel, press [F8 (CANCEL)].**

   MEMO

   If you cancel, the recorded phrase will not be pasted into the song, nor will it be added to the phrase list; it will be discarded.

MEMO

You can Undo the result of recording (p. 217).

MEMO

You can change the Input Quantize setting during recording. In the Realtime Rec window that is shown during recording, you can change the following parameters.

- Input Quantize
- Grid Resolution
- Grid Quantize Strength
- Shuffle Resolution
- Shuffle Rate

Realtime Rec Standby Parameters

This section explains the Realtime Rec Standby parameters.

Rec Mode

Selects how recording is to take place.

Value

MIX: Mix-recording will be carried out. Normally, you will record using this method. If a performance has already been recorded on the recording-destination phrase, your newly recorded performance will be added to the existing performance without erasing it. By using this in conjunction with Loop-recording, you can record repeatedly over a specified area without erasing the previously recorded performance. For example, this is a convenient way to record a drum performance one instrument at a time; bass drum → snare drum → hi-hat, etc.

REPLACE: Replace-recording will be carried out. If a performance has already been recorded on the recording-destination phrase, it will be erased as you record your new performance. Use this when you want to re-record.

Count In

Selects how recording is to begin.

Value

OFF: Recording will begin immediately when you press [PLAY].

1 MEAS: When you press [PLAY], a count (playback) will begin one measure before the recording-start location, and recording will begin when you reach the recording-start location.

2 MEAS: When you press [PLAY], a count (playback) will begin two measures before the recording-start location, and recording will begin when you reach the recording-start location.

WAIT NOTE: As an alternative to pressing [PLAY], you can play the keyboard, strike a pad, or press the Hold pedal to start recording.

Tempo Rec Switch

Specifies whether tempo changes will be recorded (ON) or not recorded (OFF).

If you want the tempo to change during the song, you can record those tempo changes in the tempo track. If tempo changes have already been recorded, they will be overwritten by your new tempo changes.

Value: OFF, ON

Loop Switch

Specifies whether loop recording will be on (ON) or off (OFF). The loop region is from the Rec Start Point to the Rec End Point.

Value: OFF, ON

Rec Start Point

Indicates the measure, beat, and tick at which recording will start.

Rec End Switch

Specifies whether a recording end point will be assigned (ON) or not assigned (OFF).

Rec End Point

Specifies the measure, beat, and tick at which recording will end.

This setting is ignored if Rec End Switch is "OFF."

Rec Length

Specifies the length of the recording region in measures, beats, and ticks. The Rec Length setting and Rec End Point setting are linked.

Input Quantize

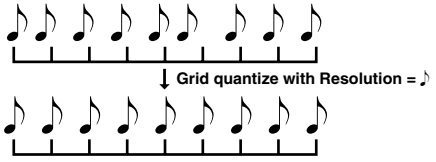
The **Quantize** function automatically corrects inaccuracies in the timing of your keyboard or pad performance, aligning the notes to accurate timing intervals. During realtime recording, you can quantize while you record.

Specify whether to quantize while recording.

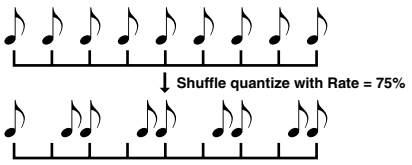
Value

OFF: Quantize will not be applied while recording.

GRID: Grid Quantize will be applied while recording. Use this when you want the timing to be accurate, such as when recording drums or bass.



SHUFFLE: Shuffle Quantize will be applied while recording. Use this when you want to give the rhythm a "shuffle" or "swing" character.



Grid Resolution

Make this setting when you are using Grid Quantize. Specify the quantization interval in terms of a note value. Select the shortest note value that will occur in the range to which Grid Quantize will be applied.

Value: 𝅘𝅥𝅯 , 𝅘𝅥𝅯₃ , 𝅘𝅥𝅮 , 𝅘𝅥𝅮₃ , ♪ , ♩₃ , ♩

Grid Quantize Strength

Make this setting when you are using Grid Quantize. It specifies the degree to which notes will be adjusted toward the timing intervals specified by the Grid Resolution parameter. With a setting of "100%," the notes will be corrected precisely to the timing of the Grid Resolution parameter. As you lower this setting, the note timing will be corrected to a lesser extent, and with a setting of "0%" the timing will not be adjusted at all.

Value: 0–100%

Shuffle Resolution

When you are using Shuffle Quantize, make this setting to specify the note value used for quantization.

Value: 𝅘𝅥𝅯 , ♪

Shuffle Rate

Make this setting when using Shuffle Quantize. It specifies the degree to which the backbeat will be separated from the downbeat specified by the Shuffle Resolution parameter. With a setting of "50%," the backbeat will be exactly between adjacent downbeats. With a setting of "0%," the backbeat will be moved to the same timing as the preceding downbeat. With a setting of "100%," the backbeat will be moved to the same timing as the following downbeat.

Value: 0–100%

Selecting the Sequencer Data that will Be Recorded (Recording Select)

When you use realtime recording, all of your sequencer data will normally be recorded. If you want to avoid recording a specific type of data, you can turn its Recording Select setting "OFF."

1. **Press [REC].**

2. **Press [F7 (Rec Select)].**
   The Recording Select window appears.

3. **Use ▲ or ▼ to select the sequencer data (MIDI messages) that will be recorded.**

   Note: Note messages. These MIDI messages represent notes.

   Poly Aftertouch: Polyphonic aftertouch. These MIDI messages apply aftertouch to individual keys.

   Control Change: Control change messages. These MIDI messages apply various effects such as modulation or expression.

   Program Change: Program change messages. These MIDI messages select sounds.

   Channel Aftertouch: Channel aftertouch messages. These MIDI messages apply aftertouch to an entire MIDI channel.

   Pitch Bend: Pitch bend messages. These MIDI messages change the pitch.

   System Exclusive: System exclusive messages. These MIDI messages are used to make settings unique to the Fantom-G, such as sound parameters.

4. **Turn the VALUE dial or press [INC] [DEC] to add a check mark.**
   The message will be recorded if you assign a check mark (✔), and will not be recorded if you remove the check mark.
   If you press [F6 (All Off)], no sequencer data will be recorded.
   If you press [F7 (All On)], all of the sequencer data will be recorded.

5. **Press [F8 (Close)] to close the Recording Select window.**

Erasing Unwanted Data While You Record (Realtime Erase)

Realtime Erase is a function that erases unwanted data during realtime recording. This is particularly convenient during loop recording, since it lets you erase data without stopping recording.

NOTE

Realtime Erase can be executed only if the Recording Mode is set to "MIX."

1. **Begin realtime recording (p. 222).**
   The Realtime Recording window appears.

2. **Press [F6 (Erase)].**
   The Realtime Erase window appears.

3. **Erase unwanted data.**
   To erase all data, press [F7 (Erase All)]. Data will be erased for as long as you hold down the button.
   To erase notes of a specific key, hold down that key. Data for that note will be erased for as long as you hold down that key.
   To erase notes of a specific key range, hold down the top and bottom keys of that range. Data for that range will be erased for as long as you hold down those keys.

4. **Press [F8 (Close)] to close the Realtime Erase window.**
   You will return to the normal recording state.

Auditioning Sounds or Phrases While Recording (Rehearsal Function)

The Rehearsal function lets you temporarily suspend recording during realtime recording. This is convenient when you want to practice the phrase that you will record next.

1. **Begin realtime recording (p. 222).**
   The Realtime Recording window appears.

2. **Press [F7 (Rehearsal)] or [REC].**
   The [REC] indicator will blink, indicating that you are in rehearsal mode. In this state, nothing will be recorded when you play the keyboard.

3. **To return to record mode, press [F7 (Rehearsal)] or [REC] once again.**

Inputting Data One Step at a Time (Step Recording)

Step recording lets you record notes and rests one at a time, just as though you were writing them onto a musical staff.

NOTE

You can't step-record directly into a song. You can use step recording to record a phrase.

Entering Notes and Rests

1. Make sure that you've made the appropriate preparations for recording as described in "Recording into a Phrase" (p. 220).

2. Press [F8 (Phrase Edit)] in the MIDI Phrase List.
The Phrase Edit screen will appear.

3. Press [F5 (Step Rec)]
The [REC] indicator will blink, and the Step Recording Standby window will appear.

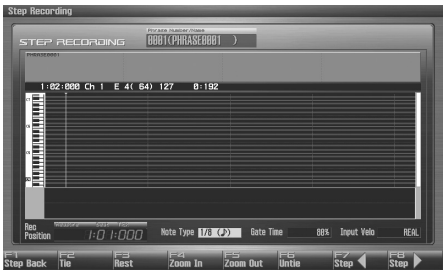
MEMO

You can also access the Step Recording Standby window by holding down [SHIFT] and pressing [REC] in the MIDI Phrase List.

4. Make settings for step recording. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or use [INC] [DEC] to set the parameter.

- **Rec Mode (Recording Mode)**
  Selects how recording is to take place.
  Value
  MIX: Mix-recording will be carried out. Normally, you will record using this method. If a performance has already been recorded on the recording-destination phrase, your newly recorded performance will be added to the existing performance without erasing it.
  REPLACE: Replace-recording will be carried out. If a performance has already been recorded on the recording-destination phrase, it will be erased as you record your new performance. Use this when you want to re-record.
- **Start Point**
  Specifies the location (measure-beat-tick) at which recording will begin.

5. Press [F8 (Start)] or [PLAY].
The [REC] indicator will light, and the Step Rec (Note) screen appears.

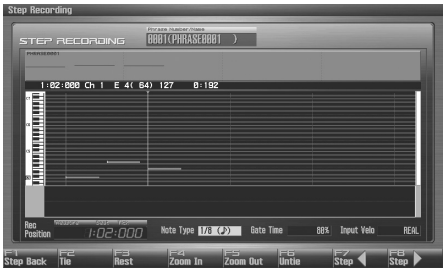


6. Specify the note that you want to input. Use ◀ or ▶ to select the desired parameter.

- **Note Type**
  Specifies the length of the notes that you want to input, in terms of a note value. The length of the note value indicates the length from one note-on to the next note-on.
  Value: 𝅘𝅥𝅯 , 𝅘𝅥𝅯₃ , 𝅘𝅥𝅯. , 𝅘𝅥𝅮 , 𝅘𝅥𝅮₃ , 𝅘𝅥𝅮𝅘𝅥𝅯 , 𝅘𝅥𝅮𝅘𝅥𝅯₃ , 𝅘𝅥𝅮. , 𝅘𝅥 , 𝅗𝅥₃ , 𝅘𝅥. , 𝅗𝅥 , 𝅗𝅥₃ , 𝅗𝅥. , 𝅗𝅥 , 𝅝 , 𝄻
- **Gate Time**
  Specifies the proportion of the gate time relative to the Note Type. The gate time is the length between note-on and note-off. Specifies a lower value if you want the notes to be played staccato, or a higher value if you want the notes to be played tenuto, or as a slur. Normally, you will set this to about "80%."
  Value: 1–100%
- **Input Velo**
  Specifies the strength with which the note will be played. If you want this to be the strength with which you actually pressed a key or a pad, select "REAL." Otherwise, use settings of p (piano)=60, mf (mezzo forte)=90, or f (forte)=120 as general guidelines.
  Value: REAL, 1–127

7. Turn the VALUE dial or press [INC] [DEC] to make the setting.

8. Press [F7 (←)] or [F8 (→)] to move to the desired input location, and press a note on the keyboard or a pad.
When you press a key or a pad, the note messages are displayed as a bar. The velocities are displayed as a bar graph.



You can use the function buttons ([F1] [F2] [F3] [F4] [F5] [F6]) to perform the following operations.

- **Step Back**
  Cancel the previously input note.
- **Tie**
  Extend the length of the previously input note by the current setting.
- **Rest**
  Inputs a rest. First set the Note Type parameter to a length that is the same as the rest you want to input.
- **Zoom In**
  Narrow the range of keys shown in the display. Use this when you want to view certain notes at greater magnification.
- **Zoom Out**
  Expand the range of notes shown in the display. Use this when you want to see which notes have been input.
- **Untie**
  Removes the most recently input tie.

9. Repeat the above steps to continue inputting.

TIP

The previous value of each parameter is remembered. This means that if you want to use the same settings as the previously input note, there is no need to change the settings. Once you have set the Gate Time parameter and Input Velocity parameter, it is not normally necessary to change them, so all you have to do is set the Note Type parameter and specify the pitch (keyboard, pad) of each note.

10. When you are finished step recording, press [STOP].
The [REC] indicator will go dark.

MEMO

You can Undo the result of recording (p. 217).

Inputting a Chord

Press the chord. The cursor will move to the next step when you release all keys or pads.

Moving the input location

- Pressing [F8 (➜)] will move the input location forward by the current Note Type value.
- Pressing [F7 (←)] will move the input location backward by the current Note Type value.
- Hold down [SHIFT] and press [F8 (➜)] will advance the input location by one measure.
- Hold down [SHIFT] and press [F7 (←)] will return the input location by one measure.

Moving the display region

Pressing ▲ or ▼ will move the displayed region of notes upward or downward.

The Relation between Note Value Length and Gate Time

The relation between the length of the note value and the gate time is shown below. Since the Fantom-G's sequencer uses a TPQN (Ticks Per Quarter Note; i.e., resolution) of 480, a quarter note gate time is 480 ticks.

Note	Gate time
𝅘𝅥𝅯	30
𝅘𝅥𝅯3	40
𝅘𝅥𝅯.	45
𝅘𝅥𝅯𝅥	60
𝅘𝅥𝅯𝅥3	80
𝅘𝅥𝅯𝅥.	90
𝅘𝅥𝅯𝅥𝅥	120
𝅘𝅥𝅯𝅥𝅥3	160
𝅘𝅥𝅯𝅥𝅥.	180
𝅘𝅥𝅯𝅥𝅥𝅥	240
𝅘𝅥𝅯𝅥𝅥𝅥3	320
𝅘𝅥𝅯𝅥𝅥𝅥.	360
𝅘𝅥𝅯𝅥𝅥𝅥𝅥	480
𝅘𝅥𝅯𝅥𝅥𝅥𝅥3	640
𝅘𝅥𝅯𝅥𝅥𝅥𝅥.	720
𝅘𝅥𝅯𝅥𝅥𝅥𝅥𝅥	960
𝅝	1920
𝅜	3840

TIP

The gate time that is recorded in step recording will be the original gate time value multiplied by the value of the Gate Time parameter. For example, if the Gate Time parameter is set to "80%," inputting a quarter note will mean that the gate time is 480 x 0.8=384.

Recording Audio

This section explains how to use the Fantom-G's sequencer to record audio.

TIP

About the audio recording time

The Fantom-G has 32 MB of built-in memory, which allows you to record approximately six minutes of mono audio or approximately 3 minutes of stereo audio. If you want to record for longer than this, you'll need to install commercially available memory (DIMM) (p. 312, p. 314).

Samples and Songs

A piece of recorded audio data is called a "sample." You can create a song simply by placing samples in an audio track of a song.
You can record audio either by recording directly into an audio track of a song, or by recording only samples (sampling), or by importing WAV or AIFF files from your computer.

Recording into a song (p. 228)

From the Song Play screen, select a track and a record-start location, and then record.
After recording, the sample will be assigned to the record-start location of the track.

Sampling (p. 258)

You can use the Sampling function to record audio. The samples you record will be added to the sample list. You can create a song by freely placing these samples in an audio track of the song.

Importing from your computer (p. 287)

You can import WAV or AIFF files from your computer. The imported WAV or AIFF files will be added to the sample list as samples. You can create a song by freely placing these samples in an audio track of the song.

Recording into a Song

When recording audio into a song, the work-flow is as follows.

1. **Select an audio track and the recording-start location (p. 229).**
2. **Perform audio recording (p. 230).**
3. **Use song editing (p. 232) to edit the song.**
4. **Edit the samples (p. 263).**
5. **Save the song (p. 254).**

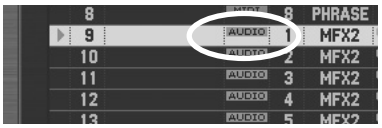
Selecting an Audio Track and the Recording-start Measure

Here's how to select an audio track for recording, and specify the recording-start measure.
You can record on any of the tracks 1–24 that are marked "AUDIO."

1. Press [SONG].

The Song Play screen will appear.

2. Turn the VALUE dial or use ▲ / ▼ to select the audio track on which you want to record.
Select a track that's marked "AUDIO."



cf.

You can change the order in which the tracks are displayed.
→ **"Changing the Track Display Zoom and Display Order (Zoom/Track Order)"** (p. 209)

3. Use [◀◀] [▶▶] to specify the measure at which you'll start recording.
The recording-start measure is shown in the "Measure" field located at the top of each PLAY screen.

If the track already contains a sample

Each audio track always plays only one sample per track. If samples overlap in a track, the latter sample will be heard.

4. Press the [REC] button to enter record-standby mode.

Proceed to Audio Recording
→ p. 230

Audio Recording

Here's how to record audio input from an audio device, mic, or CD onto an audio track.

Basic Procedure for Audio Recording

1. Make sure that you've completed the preparations for recording as described in "Selecting an Audio Track and the Recording-start Measure" (p. 229).

2. Press [REC].

* *This step is the same as step 4 on* ***"Selecting an Audio Track and the Recording-start Measure"*** *(p. 229).*

The [REC] indicator will blink, and the Audio Rec Standby window will appear.

In this window you can set various parameters related to audio recording.

MEMO

Pressing [F7 (Inp Setting)] will access the Input Setting screen (p. 258), where you can make settings for the external input.

MEMO

You can apply effects such as equalizer or compressor to the audio input. Press [F7 (Inp Setting)] to access the INPUT EFFECT screen, where you can make effect settings. For details on the parameters that you can set, refer to **"Input Effect Parameters"** (p. 186).

MEMO

In the Realtime Rec Standby/Audio Rec Standby windows, you can press [F6] to switch between recording MIDI and audio.

MEMO

In the Realtime Rec Standby/Audio Rec Standby windows, you can select the recording track in the "Recording Track Number" field. If you want to change the recording track, make the desired change in the "Recording Track Number" field.

3. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or use [INC] [DEC] to set the value.

cf.

For details on each parameter, refer to **"Audio Rec Standby Parameters"** (p. 231).

4. If you're recording from the AUDIO INPUT, turn the rear panel LEVEL knob (p. 24) to adjust the input level from your external source.

* *This adjustment is not needed if you're using DIGITAL IN.*

* *If the volume of the external input is too high, the PEAK indicator will light. In this case, turn down the LEVEL knob until the PEAK indicator no longer lights.*

* *If the recording level is too high, the level meter in the screen will indicate "CLIP."*

* *If an external device is connected to the DIGITAL AUDIO IN connector, and you disconnect the cable or power-off your external device, noise may subsequently be heard in the input from DIGITAL AUDIO IN. If this occurs, re-connect the external device correctly, or turn off the Fantom-G's [MIX IN] switch.*

5. Press [PLAY] or [F8 (Start)].

The Audio Rec Standby window will close, the [REC] indicator will change from blinking to lit, and recording will start.

When recording starts, the Realtime Recording window will appear.

6. When you're finished recording, press [STOP].

7. A window will ask you to confirm the recording. If you want to keep the recorded result, press [F7 (OK)]. If you decide to cancel, press [F8 (CANCEL)].

MEMO

If you cancel, the recorded sample will not be pasted into the song, nor will it be added to the sample list; it will be discarded.

The [REC] indicator will go dark.

The sample you recorded will be placed in the audio track.

MEMO

You can Undo the result of recording (p. 217).

MEMO

The recorded sample will be lost when you turn off the power.

If you want to keep the sample, you must save it (p. 274).

Audio Rec Standby Parameters

This section explains the Realtime Rec Standby parameters.

Audio Rec Mode (Audio recording mode)

Specifies how recording will occur.

Value

SOLO: While playing the internal sound generator as usual, record only the sound from the external input.

* *Effects other than the Input Effect cannot be applied to the external input sound.*

SOLO WITH FX: While playing the internal sound generator, record only the sound from the external input. While doing so, you can apply an effect to the external input sound.

* *If the recording mode is "SOLO WITH FX," you cannot apply MFX (multi-effect) to the sound of the internal sound generator.*

RE-SAMPLING: Record the sound of the internal sound generator (including the audio tracks). The external input will not be heard.

* *The volume of resampled phrases may be less than the original volume of the phrase. As needed, use Normalize (p. 270) to raise the volume.*

Input Select

Selects the input source.

Value

DIGITAL IN: DIGITAL AUDIO IN jack
LINE IN L/R: INPUT jacks L/R (stereo)
LINE IN L: INPUT jack L (mono)
MIC/GUITAR: MIC/GUITAR jack
USB AUDIO: USB connector

Audio Rec Channel (Audio recording channel)

When recording an audio track, selects whether the recorded track will be stereo or mono.

Value

MONO: Recording in mono.
STEREO: Recording in stereo.

Count In

Selects how recording will begin.

Value

OFF: Recording will begin as soon as you press [PLAY].

1 MEAS: When you press [PLAY], there will be a count starting one measure before the recording-start location, and recording will begin at the recording-start location.

2 MEAS: When you press [PLAY], there will be a count starting two measures before the recording-start location, and recording will begin at the recording-start location.

Rec Start Point (Recording start point)

Indicates the measure, beat, and tick at which recording will start.

Rec End Switch (Recording end switch)

Selects whether a recording-end point will be specified (ON) or not (OFF).

Rec End Point (Recording end point)

Specifies the measure, beat, and tick at which recording will end.

This setting will have no effect if the **Rec End Switch** is "OFF."

Rec Length (Recording length)

Specifies the length of the recorded region in measures, beats, and ticks. This setting is linked with the Rec End Point settings.

Editing Songs

This section explains how to edit songs.

Three Ways to Edit

Editing a song (p. 232)

In the Song Play screen and Song Edit screen you can edit the entire song. Here you can make settings for each track, and rearrange the phrases and samples. The tracks of a song do not contain the samples or phrases themselves, but merely hold information telling "at this point, play sample (or phrase) number so-and-so."

Editing a phrase (p. 238)

You can edit the individual phrases that are assigned to the tracks. Use the Phrase Edit screen to edit phrases.

Editing a sample (p. 263)

You can edit the individual samples that are assigned to the tracks. Use the Sample Edit screen to edit samples.

Editing a Song (Song Edit)

Opening the Song Edit Screen

To edit a song, access the Song Edit screen.

1. Press [SONG].

The Song Play screen will appear.

2. Press [F8 (Song Edit)].

The Song Edit screen will appear.

MEMO

You can also access the Song Edit screen by pressing [SONG] twice in succession.

F-keys operations in the Song Edit screen

F-key	Explanation		Page
F1 Insert	Inserts a sample/phrase at the specified location.		p. 233
F2 Delete	Deletes the selected sample/phrase from the track.		p. 234
F3 Copy	Copies the selected sample/phrase.		p. 234
F4 Edit	If a sample is selected: Opens the Sample Edit screen.		p. 266
	If a phrase is selected: Opens the Phrase Edit screen.		p. 238
F5 Loop	Opens the Loop window, where you can specify the loop region.		p. 208
F6 Marker	Opens the Marker window, where you can assign markers.		p. 208
F7 Song Util	Zoom/ Track Order	Zooms the track display, or changes the displayed order of the tracks.	p. 209
	Song Clear	Erases the song.	p. 235
	Track Clear	Erases the track.	p. 235
	Track Name	Assigns a name to the track.	p. 235
	Track Edit Insert	Inserting a Blank Measure	p. 237
	Track Edit Delete	Deleting Unwanted Measures	p. 237
	Track Edit Copy	Copying Measures	p. 237
	Tempo Track	Changes the tempo.	p. 235
	Beat Track	Changes the time signature.	p. 236
	Save As SMF	Save As an SMF File	p. 256
F8 Song Edit	Opens the Song Play screen.		p. 205

SHIFT + F-keys operations in the Song Edit screen

F-key	Explanation	Page
SHIFT + F1 Trk Edit Ins	Inserting a Blank Measure	p. 237
SHIFT + F2 Trk Edit Del	Deleting Unwanted Measures	p. 237
SHIFT +F3 Trk Edit Copy	Copying Measures	p. 237
SHIFT +F8 Zoom	Zooms the track display, or changes the displayed order of the tracks.	p. 209

Moving a Sample/Phrase (Move)

Here's how to move the currently selected sample/phrase to another track or location.

1. **Access the Song Edit screen (p. 232).**
2. **Use [CURSOR] to select the sample/phrase that you want to move.**
3. **Press [SHIFT].**
   The cursor will change to the following shape.

4. **Continuing to hold down [SHIFT], press ▲ or ▼.**
   The sample/phrase will move to a different track.

   MEMO

   Samples can be moved to audio tracks, and phrases can be moved to MIDI tracks.

5. **Continuing to hold down [SHIFT], use the following buttons to move the sample/phrase.**

[INC] [DEC]	Move the sample/phrase in steps of one tick.
◀ / ▶	Move the sample/phrase in steps of one measure.
VALUE dial	Move the sample/phrase in steps of a 16th note (120 ticks).

MEMO

If you're using a USB mouse, you can move a phrase by using the mouse to drag it (hold down the left mouse button and move it).

Inserting a Sample/Phrase at a Specified Location (Insert)

Here's how to insert a sample/phrase at the location you specify. Samples will automatically be selected for an audio track, and phrases will automatically be selected for a MIDI track.

1. **Access the Song Edit screen (p. 232).**
2. **Use ▲ / ▼ to select the track into which you want to insert a sample/phrase.**
3. **Specify the location at which you want to insert a sample/phrase.**
   The buttons will operate as follows.

[⏮]	Move the current location to the beginning of the song.
[INC] [DEC]	Move the current location in steps of one tick.
[⏪] [⏩]	Move the current location in steps of one measure.
VALUE dial	Move the current location in steps of one beat.

4. **Press [F1 (Insert)].**

For a MIDI track

The MIDI Phrase Select screen will appear.

For an audio track

The Sample Select screen will appear.

5. **Select the sample/phrase that you want to insert, and press [F8 (Select)].**
   The sample/phrase will be inserted at the specified location.

Deleting a Sample/Phrase from a Track (Delete)

Here's how to delete the selected sample/phrase from the track.

1. **Access the Song Edit screen (p. 232).**
2. **Use [CURSOR] to select the sample/phrase that you want to delete.**
3. **Press [F2 (Delete)].**
   The selected sample/phrase will be deleted from the track.

   MEMO
   This operation simply deletes the sample/phrase from the track; the actual data will remain in the sample/phrase list.

Copying a Sample/Phrase (Copy)

Here's how to copy the currently selected sample/phrase.

1. **Access the Song Edit screen (p. 232).**
2. **Use [CURSOR] to select the sample/phrase that you want to copy.**
3. **Press [F3 (Copy)].**
   The currently selected sample/phrase will be copied immediately following itself.

   MEMO
   If you're using a USB mouse, you can copy a sample/phrase by holding down [SHIFT] and clicking the sample/phrase with the mouse.

Editing a Sample/Phrase (Edit)

Here's how to edit the currently selected sample/phrase.
If a sample is selected: The Sample Edit window will appear.
If a phrase is selected: The Phrase Edit window will appear.

1. **Access the Song Edit screen (p. 232).**
2. **Use [CURSOR] to select the sample/phrase that you want to edit.**
3. **Press [F4 (Edit)].**

For a sample

The Sample Edit screen will appear → p. 266

For a phrase

The Phrase Edit screen will appear → p. 238

Song Utility (Song Util)

Changing the Track Display Zoom and Display Order (Zoom/Track Order)

cf.

"Changing the Track Display Zoom and Display Order (Zoom/Track Order)" (p. 209)

Erasing the Currently-open Song (Song Clear)

Here's how to erase the song that's currently open in the Song Play screen. Use this operation when you want to record a new song. The song file itself that's saved in the project will not be deleted.

NOTE

If you've edited the currently-open song, save it before you continue (p. 254).

1. **Access the Song Edit screen (p. 232).**
2. **Press [F7 (Song Util)].**
   The Song Edit Utility Menu window will appear.
3. **Use ▲ / ▼ to choose "Song Clear," and press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
   A confirmation message will appear.
4. **Press [F7 (OK)] to execute.**
   If you decide to cancel, press [F8 (EXIT)].

Clearing a Track (Track Clear)

Here's how to erase the selected track. The track name and track setup data will also return to the default settings.

1. **Access the Song Edit screen (p. 232).**
2. **Use ▲ / ▼ to select the track that you want to clear.**
3. **Press [F7 (Song Util)].**
   The Song Edit Utility Menu window will appear.
4. **Use ▲ / ▼ to choose "Track Clear," and press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
   A confirmation message will appear.
5. **Press [F7 (OK)] to execute.**
   If you decide to cancel, press [F8 (EXIT)].

Naming a Track (Track Name)

You can assign a name of a track.

1. **Access the Song Edit screen (p. 232).**
2. **Use ▲ / ▼ to select the track that you want to rename.**
3. **Press [F7 (Song Util)].**
   The Song Edit Utility Menu window will appear.
4. **Use ▲ / ▼ to choose "Track Name," and press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
5. **Assign the name.**

   cf.

   For details on assigning a name, refer to **"Assigning a Name"** (p. 42).
6. **Press [F8 (Write)] to finalize the name.**

Changing the Tempo during the Song (Tempo Track)

If you want the tempo to change during the song, insert new tempo change data into the tempo track. Following the location at which you insert the tempo change, the song will play at that tempo. However, if you want to create a gradual tempo change such as a ritardando or accelerando, it's more convenient to use Tempo Recording (p. 223).

TIP

If you want to make the overall tempo of the song faster or slower, you can adjust the playback tempo in the various PLAY screens.

1. **Access the Song Edit screen (p. 232).**
2. **Press [F7 (Song Util)].**
   The Song Edit Utility Menu window will appear.
3. **Use ▲ / ▼ to choose "Tempo Track," and press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
4. **Press [F1 (Create)].**
   The Create Event window will appear. In the window, "Tempo Change" will be selected.
5. **Press [F8 (Execute)].**
   The Create Position window will appear.
6. **Use ◀ / ▶ to move the cursor to "Measure (Meas)," "Beat," and "Tick."**
7. **Turn the VALUE dial or use [INC] [DEC] to specify the location at which the tempo change will be inserted.**
8. **Press [F8 (Execute)] to insert the tempo change.**
9. **The inserted tempo change will have the default tempo value, so adjust the value as desired.**

MEMO

For details on editing the tempo track, refer to **"Editing Individual Items of Sequencer Data (Microscope)"** (p. 250). However, the only data that can be handled by the tempo track is as described in **"Tempo Change"** (p. 236).

Data handled by the tempo track

The tempo track records tempo data for the song.

Tempo Change

This data specifies the tempo. The song will play according to the value of these tempo changes.

The value shown in " ♩=**" is the tempo at which the song will actually play (the playback tempo), and can be adjusted in the PLAY screen of each mode.

If the tempo change value differs from the playback tempo, this means that the playback tempo has been changed temporarily. In other words, the tempo change values have not been rewritten, so this setting will be lost if you switch to a different song or turn off the power. If you want the song to play at this tempo the next time as well, you must re-save the song. This will rewrite the tempo change values to match the actual playback tempo.

Changing the Time Signature during the Song (Beat Track)

If you want the time signature to change during the song, insert new beat change data into the beat track. Following the location at which you insert the beat change, the song will play at that time signature.

NOTE

You can't change the time signature in the middle of a measure. The time signature can be changed only at the beginning of a measure.

1. **Access the Song Edit screen (p. 232).**
2. **Press [F7 (Song Util)].**
   The Song Edit Utility Menu window will appear.
3. **Use ▲ / ▼ to choose "Beat Track," and press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
4. **Press [F1 (Create)].**
   The Create Event window will appear. In the window, "Beat Change" will be selected.
5. **Press [F8 (Execute)].**
   The Create Position window will appear.
6. **Use ◀ / ▶ to move the cursor to "Measure (Meas)."**
7. **Turn the VALUE dial or use [INC] [DEC] to specify the location at which the beat change will be inserted.**
8. **Press [F8 (Execute)] to insert the beat change.**
9. **The inserted beat change will have the default value, so adjust the value as desired.**

   MEMO

   For details on editing the beat track, refer to **"Editing Individual Items of Sequencer Data (Microscope)"** (p. 250). However, the only data that can be handled by the beat track is as described on **"Beat Change"** (p. 236).

Data handled by the beat track

The beat track records time signature data.

Beat Change

This data specifies the time signature (Beat).

Track Edit Function

In the Song Play/Song Edit screen you can perform Track operations such as Insert (Inserting a Blank Measure), Delete (Deleting Unwanted Measures), or Copy (Copying Measures).

NOTE

The Track Edit functions do not edit the phrases or samples themselves. For example, if you have assigned a ten-measure long phrase to measure 1, and then use the track edit function "Track Edit Delete" (Deleting Unwanted Measures) to delete measures 2–3, no content within the phrase will be deleted. If you want to delete material from within the phrase, use a Phrase Modify function (p. 239) to edit the phrase.

1. **In the Song Play/Song Edit screen, press [F7 (Song Util)].**

2. **From the menu that appears, select one of the following items and press [F8 (Select)].**

Menu	Explanation
Track Edit Insert	Inserting a Blank Measure
Track Edit Delete	Deleting Unwanted Measures
Track Edit Copy	Copying Measures

cf.

Details about the windows for each of the Track Edit functions are explained in the section on each function.

MEMO

You can also perform track edit functions in the Song Play/Song Edit screen by holding down [SHIFT] and pressing [F1]–[F3].

3. **Set the parameters for each function. Use the cursor buttons to move the cursor to the desired parameter, and turn the VALUE dial or use [INC]/[DEC] to set the value.**

4. **Press [F8 (Execute)].**
   A confirmation screen will appear.

5. **Press [F7 (OK)] to execute.**

MEMO

You can undo the result of the editing operation by pressing [MENU]➔[F5 (Undo)].

Inserting Blank Measures into a Track (Track Edit Insert)

This function inserts blank measures into a specified phrase position.

Source Track

Select the track that you want to edit. If you want to edit all tracks, select "ALL."

Measure, For (Edit Range)

Specifies the measure location at which the blank measures are to be inserted, and the number of blank measures to be inserted.

Beat (Time Signature)

Specify the time signature.

Deleting Unwanted Measures from a Track (Track Edit Delete)

This function deletes a specified area of sequencer data, and moves the subsequent data to fill the gap. As a result, the measure length will be shortened by the number of deleted measures.

Source Track

Select the track that you want to edit. If you want to edit all tracks, select "ALL."

Measure, For (Edit Range)

Specifies the range of measures that are to be deleted. If you set "For" to "ALL," all measures will be specified.

Copying Measures of a Track (Track Edit Copy)

You can copy measures of the specified region in a track.

NOTE

If the region to copy does not include the beginning of a phrase or sample, that phrase or sample will not be copied.

Source Track

Select the track that you want to edit. If you want to edit all tracks, select "ALL."

Src Measure, For (Edit Range)

Specifies the range of copy-source measures. If you set "For" to "ALL," all measures will be specified.

Dst Measure (Destination Measure)

Specifies the copy-destination measure.
If you want the copy destination to be right after the last measure of a phrase, set this parameter to "END."

Copy Times

Specifies the number of times that the data will be copied to the copy destination.

Editing a Phrase (Phrase Edit)

NOTE

If a certain phrase is used by multiple songs in a project, editing that phrase will affect the content of all these songs. If you will be editing a phrase that is used by other songs, it's a good idea to duplicate the phrase beforehand.

→ **"Duplicating a Phrase (Duplicate)"** (p. 215)

Opening the Phrase Edit Screen

To edit a phrase, access the Phrase Edit screen.

The Phrase Edit screen can be opened from the MIDI Phrase List or from the Song Edit screen.

From MIDI Phrase List

1. **Press [SONG].**

The Song Play screen will appear.

2. **Press [F3 (Phrase List)].**

The MIDI Phrase List screen will appear.

3. **Turn the VALUE dial or use [INC] [DEC] or ▲ / ▼ to select the phrase that you want to edit.**

4. **Press [F8 (Phrase Edit)].**

The Phrase Edit screen will appear.

From Song Edit

1. **Press [SONG].**

The Song Play screen will appear.

2. **Press [F8 (Song Edit)].**

The Song Edit screen will appear.

3. **Use [CURSOR] to select the phrase that you want to edit.**

4. **Press [F4 (Edit)].**

The Phrase Edit screen will appear.

F-key operations in the Phrase Edit screen

F-key	Explanation		Page
F1 Clear	Erases the currently-edited phrase. The phrase file itself that's saved in the project will not be deleted.		p. 239
F2 Save	Saves the phrase to the project.		p. 239
F3 Modify	Quantize	Corrects the timing of the phrase	p. 240
	Erase	Erases unwanted performance data	p. 242
	Delete	Deletes unwanted measures	p. 243
	Copy	Copies data	p. 243
	Insert	Inserts blank measures	p. 244
	Transpose	Transposes the pitch	p. 244
	Change Velocity	Changes the velocity (volume)	p. 245
	Change Channel	Changes the MIDI channel	p. 246
	Change Duration	Changes the length of the notes	p. 247
	Shift Clock	Moves the performance data forward or backward	p. 248
	Data Thin	Thins-out performance data	p. 249
	Truncate	Deletes the blank region at the beginning	p. 249
F4 Microscope	Edits individual MIDI messages and performance data recorded in the phrase.		p. 250
F5 Step Rec	Executes step recording, allowing you to enter notes and rests individually.		p. 226
F6 Phrase Beat	Specifies the time signature of a phrase.		p. 239
F7 Play	Plays the currently-edited phrase.		p. 238
F6 Exit	Returns to the previous screen.		–

Playing a Phrase (Play)

Here's how to play the currently-edited phrase.

1. **Access the Phrase Edit screen (p. 238).**

2. **Press [PLAY] or [F7 (Play)].**

Erasing the Currently-edited Phrase (Clear)

Here's how to erase the currently-edited phrase. This operation will not delete the phrase file that's saved in the project.

1. **Access the Phrase Edit screen (p. 238).**
2. **Press [F1 (Clear)].**
   A confirmation message will appear.
3. **Press [F7 (OK)] to execute.**
   If you decide to cancel, press [F8 (EXIT)].

Saving a Phrase (Save)

This operation will save the phrase to the project.
A phrase you recorded or edited is temporary, and will be lost when you turn off the power. If you want to keep the phrase, you must save it.

1. **Access the Phrase Edit screen (p. 238).**
2. **Press [F2 (Save)].**
3. **Assign a name to the phrase.**

   cf.
   For details on assigning a name, refer to **"Assigning a Name"** (p. 42).
4. **When you've finished assigning a name, press [F8 (OK)].**
   A screen will appear where you can select the writing-destination phrase.
5. **Turn the VALUE dial or use [INC] [DEC] to select the phrase number.**
6. **Press [F8 (Write)].**
   A message will ask you to confirm the Write operation.
   Never turn off the power while writing is in progress.
7. **Press [F7 (OK)] to execute.**
   If you decide to cancel, press [F8 (EXIT)].

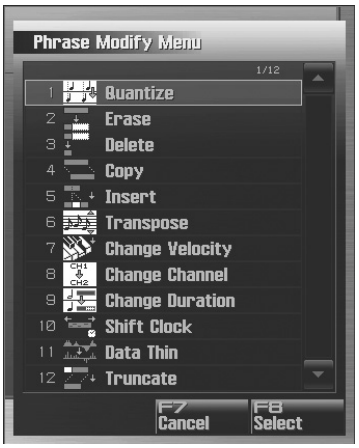
Specifying the Time Signature of a Phrase (Phrase Beat)

Here's how to specify the time signature of a phrase.

1. **Access the Phrase Edit screen (p. 238).**
2. **Press [F6 (Phrase Beat)].**
3. **Use the cursor buttons and the Value dial to specify the time signature of the phrase.**
4. **Press [F8 (Close)].**

Phrase Modify Menu

1. **Access the Phrase Edit screen (p. 238).**
2. **Press [F3 (Modify)].**
   The Phrase Modify Menu window will appear.



3. **Use ▲ / ▼ to choose the desired function, and then press [F8 (Select)].**

Quantize	→ p. 240
Erase	→ p. 242
Delete	→ p. 243
Copy	→ p. 243
Insert	→ p. 244
Transpose	→ p. 244
Change Velocity	→ p. 245
Change Channel	→ p. 246
Change Duration	→ p. 247
Shift Clock	→ p. 248
Data Thin	→ p. 249
Truncate	→ p. 249

MEMO
When the phrase modify menu is displayed, you can press a dynamic pad to jump to the respective modify screen.

cf.
For details on the edit window for each phrase modify function, refer to the corresponding explanation.

4. **Set the parameters of the edit function you chose. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or use [INC] [DEC] to make settings. Verify that you've selected the object you intended to edit, and make changes if necessary.**
5. **Press [F8 (Execute)] to execute.**
   When the operation is completed, the display will briefly indicate "Completed !".

TIP
If you decide to cancel, press [F7 (Cancel)].

MEMO
You can Undo the result of editing (p. 217).

Aligning a Phrase's Timing (Quantize)

In the chapter **"Recording MIDI"** (p. 217), we explained **Recording Quantize**, which lets you quantize during realtime recording. Alternatively, it is also possible to quantize a phrase that has already been recorded.

NOTE

The Quantize operation will correct only the timing at which notes were pressed (note-on) and released (note-off), and will not correct any other sequencer data. This means that if you record MIDI messages such as bend range or modulation along with notes, quantization can cause the notes to go out of sync with the MIDI messages, skewing timing. To avoid such problems it is better to record non-keyboard data afterward, using mix recording, etc.

cf.

For details on the settings, refer to **"Phrase Modify Menu"** (p. 239)

Part Group

Specifies the Part Group.

Value	Explanation
Internal	Internal (internal sound generator)
EXP1	Expansion board 1
EXP2	Expansion board 2
External	External MIDI output
ALL	All part group

Ch (MIDI Channel)

Specifies the MIDI channel(s) of the notes to be quantized.

If you wish to quantize all notes, set this parameter to "ALL." When quantizing only the notes of a specific MIDI channel, select that channel.

Value: ALL, Ch1–Ch16

Measure, For (Edit Range)

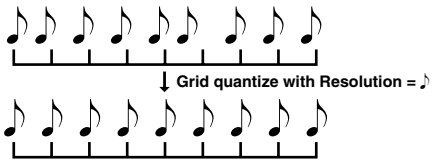
Sets the range of measures that are to be quantized. If you set "For" to "ALL," all measures will be specified.

Quantize Type

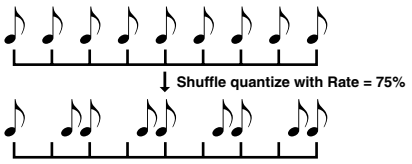
Specifies the Quantize range.

Value

GRID: Grid Quantize will be applied to recording. Since the notes will be adjusted to the timing of the specified note value, you can use this when you want drums or bass (for example) to play in an accurate rhythm.



SHUFFLE: Shuffle Quantize will be applied to recording. Use this when you want to produce a "shuffle" or "swing" rhythmic feel.



TEMPLATE: The Fantom-G provides 71 quantize templates. These templates contain various quantize settings for applying rhythmic 'feels' of many different musical categories. Select the template you want for quantization.

* *If your sequencer data notes are too far off from accurate time, Template Quantize may not work that efficiently so you won't achieve the desired results. If this is the case, apply Grid Quantize to your sequencer data first to lose timing mistakes.*

Resolution (Grid Quantize Resolution)

This parameter is used when Grid Quantize is selected. Specifies quantization time interval as a note value. Choose a Resolution that matches the smallest note in the area you're quantizing.

Value: 𝅘𝅥𝅯 , 𝅘𝅥𝅯₃ , 𝅘𝅥𝅮 , 𝅘𝅥𝅮₃ , ♪ , ♩₃ , ♩

Strength (Grid Quantize Strength)

This parameter is used when Grid Quantize is selected. This parameter specifies a percentage of how note timing will be corrected toward the timing interval that is specified by the Resolution parameter. With a setting of "100%," the note will move all the way to the nearest timing interval of the Grid Resolution setting. A setting of "0%" will not change note timing at all.

Resolution (Shuffle Quantize Resolution)

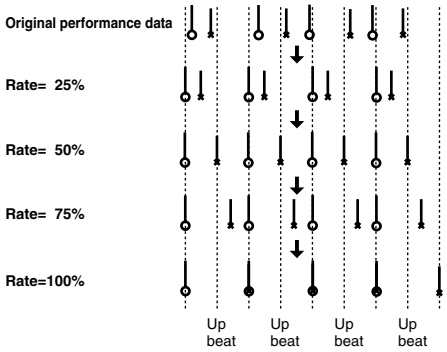
This parameter is used when Shuffle Quantize is selected. Specifies quantization time interval as a note value.

Value: 𝅘𝅥𝅯 , ♪

Rate (Shuffle Quantize Rate)

This parameter is used when Shuffle Quantize is selected. Specifies how far apart you want a down-beat specified by the Shuffle Resolution parameter to be from the up-beat that immediately follows. By shifting the timing of an up-beat, you can create a "swing" feel. A setting of "50%" will place the timing of the up-beat note at the exact mid point between the down-beat and the next down-beat. A setting of "0%" will move the up-beat note to the same timing as the previous down-beat. A setting of "100%" will move it to the same timing as the following down-beat.

Value: 0–100%



Quantize Template (Quantize Template)

Specifies the template you wish to use.

Here is a list of preset groove templates.

001	Dance (small dynamics)
002	Dance (large dynamics)
003	Dance (light swing)
004	Dance (heavy swing)
005	Dance (dragging beats, small dynamics)
006	Dance (dragging beats, large dynamics)
007	Dance (dragging beats, light swing)
008	Dance (dragging beats, heavy swing)
009	Dance (pushing beats, small dynamics)
010	Dance (pushing beats, large dynamics)
011	Dance (pushing beats, light swing)
012	Dance (pushing beats, heavy swing)
013	Fusion (small dynamics)
014	Fusion (large dynamics)
015	Fusion (light swing)
016	Fusion (heavy swing)
017	Fusion (dragging beats, small dynamics)
018	Fusion (dragging beats, large dynamics)
019	Fusion (dragging beats, light swing)
020	Fusion (dragging beats, heavy swing)
021	Fusion (pushing beats, small dynamics)
022	Fusion (pushing beats, large dynamics)
023	Fusion (pushing beats, light swing)
024	Fusion (pushing beats, heavy swing)
025	Reggae (small dynamics)
026	Reggae (large dynamics)
027	Reggae (light swing)
028	Reggae (heavy swing)
029	Reggae (dragging beats, small dynamics)
030	Reggae (dragging beats, large dynamics)
031	Reggae (dragging beats, light swing)
032	Reggae (dragging beats, heavy swing)
033	Reggae (pushing beats, small dynamics)
034	Reggae (pushing beats, large dynamics)
035	Reggae (pushing beats, light swing)
036	Reggae (pushing beats, heavy swing)
037	Pops (small dynamics)
038	Pops (large dynamics)
039	Pops (light swing)
040	Pops (heavy swing)
041	Pops (dragging beats, small dynamics)
042	Pops (dragging beats, large dynamics)
043	Pops (dragging beats, light swing)
044	Pops (dragging beats, heavy swing)
045	Pops (pushing beats, small dynamics)
046	Pops (pushing beats, large dynamics)
047	Pops (pushing beats, light swing)
048	Pops (pushing beats, heavy swing)
049	Rhumba (small dynamics)
050	Rhumba (large dynamics)
051	Rhumba (light swing)
052	Rhumba (heavy swing)
053	Rhumba (dragging beats, small dynamics)
054	Rhumba (dragging beats, large dynamics)
055	Rhumba (dragging beats, light swing)
056	Rhumba (dragging beats, heavy swing)
057	Rhumba (pushing beats, small dynamics)
058	Rhumba (pushing beats, large dynamics)
059	Rhumba (pushing beats, light swing)
060	Rhumba (pushing beats, heavy swing)
061	Samba (for Pandeiro, etc.)
062	Samba (for Surdo, Timbale)
063	Axe (for Caixa)
064	Axe (for Surdo)
065	Salsa (for Cascala)
066	Salsa (for Conga)
067	Triplets
068	Quintuplets
069	Sextuplets
070	Septuplets over two beats
071	Lagging triplets

* *The templates are designed for a 4/4 time signature. Applying them to a performance of a different time signature may not produce the desired result.*

* *The style names shown here are only for your convenience; they are not intended to imply that the templates are usable only for the named style. You can certainly try them with other styles of music.*

Timing (Quantize Timing)

This specifies how much a note will move toward the timing interval of the template you pick. At a setting of 100%, the note will be perfectly timed with the template. At a setting of 0%, the note will not move at all.

Value: 0–100%

Range Min, Range Max

Specifies the range of note numbers to be quantized.

For example, if you want to quantize the range between C3 and C4, set "Note Min" to "C3," and set "Note Max" to "C4."

You can also specify the key range by pressing keys on the keyboard.

Erasing Unwanted Performance Data (Erase)

This function erases all the sequencer data inside the specified area. As the erased data is replaced by rests, the original measures will remain.

cf.

For details on the settings, refer to **"Phrase Modify Menu"** (p. 239).

Part Group

Specifies the Part Group.

Value	Explanation
Internal	Internal (internal sound generator)
EXP1	Expansion board 1
EXP2	Expansion board 2
External	External MIDI output
ALL	All part group

Ch (MIDI Channel)

Selects the MIDI channel of the data to be erased.

When you want to erase all sequencer data, set this parameter to "ALL." To erase sequencer data of one specific MIDI channel only, select that MIDI channel.

Value: ALL, Ch1–Ch16

Measure, For (Edit Range)

Specifies the range of measures that are to be erased. If you set "For" to "ALL," all measures will be specified.

Status

Selects the type of data to be erased.

Value

ALL
NOTE
Poly Aftertouch
Control Change
Program Change
Channel Aftertouch
Pitch Bend
System Exclusive
Tune Request

Range Min, Range Max

If you have set the Status parameter to "NOTE," "P.AFT," "C.C," or "PROG," specify the range. Set "Range Min" to the lowest value of the range, and "Range Max" to the highest value of the range.

TIP

To erase all notes or polyphonic aftertouch data, set "Range Min" to "C -1" and "Range Max" to "G9." To erase C4, set "Range Min" and "Range Max" to "C4." To erase C3 through C4, set "Range Min" to "C 3" and "Range Max" to "C4."

- To erase all controller numbers, set "Range Min" to "0" and "Range Max" to "127." To erase all program numbers, set "Range Min" to "1" and "Range Max" to "128." To erase number 4, set "Range Min" and "Range Max" to "4." To erase numbers 3 through 14, set "Range Min" to "3" and "Range Max" to "14."

Deleting Unwanted Measures (Delete)

This function deletes a specified area of sequencer data, and moves the subsequent data to fill the gap. As a result, the measure length will be shortened by the number of deleted measures.

cf.

For details on the settings, refer to **"Phrase Modify Menu"** (p. 239).

Measure, For (Edit Range)

Specifies the range of measures that are to be deleted. If you set "For" to "ALL," all measures will be specified.

Copying Phrases (Copy)

This function copies a specified area of sequencer data.

cf.

For details on the settings, refer to **"Phrase Modify Menu"** (p. 239).

Part Group

Specifies the Part Group.

Value	Explanation
Internal	Internal (internal sound generator)
EXP1	Expansion board 1
EXP2	Expansion board 2
External	External MIDI output
ALL	All part group

Ch (MIDI Channel)

Selects the MIDI channel of the data to be copied.

When you want to copy all the sequencer data, set this parameter to "ALL." To copy only the sequencer data of a specific MIDI channel, select the MIDI channel.

Value: ALL, Ch1–Ch16

Src Measure, For (Edit Range)

Specifies the range of copy-source measures. If you set "For" to "ALL," all measures will be specified.

Dst Measure (Destination Measure)

Specifies the copy-destination measure.

If you want the copy destination to be right after the last measure of a phrase, set this parameter to "END."

Copy Mode

Specifies whether you want to preserve the existing data in the copy destination when copying.

Value

MIX: Combines the data from the copy source with the existing data in the copy destination.

REPLACE: Musical data in the copy destination will be erased (i.e., overwritten) when the copy takes place. Only the sequencer data of the MIDI channels specified by the Channel parameter will be overwritten, and data of other MIDI channels will remain.

Copy Times

Specifies the number of times that the data will be copied to the copy destination.

Status

Selects the type of data to be copied.

Value

ALL
NOTE
Poly Aftertouch
Control Change
Program Change
Channel Aftertouch
Pitch Bend
System Exclusive
Tune Request

Range Min, Range Max

If you have selected "NOTE," "P.AFT," "C.C," or "PROG" for the Status parameter, specify the range. Set "Range Min" to the lowest value of the range, and "Range Max" to the highest value of the range.

TIP

To copy all notes or polyphonic aftertouch data, set "Range Min" to "C-1" and "Range Max" to"G9." To copy C4, set "Range Min" and "Range Max" to "C4." To copy C3 through C4, set "Range Min" to "C3" and "Range Max" to "C4."

- To copy all controller numbers, set "Range Min" to "0" and "Range Max" to "127." To copy all program numbers, set "Range Min" to "1" and "Range Max" to "128." To copy number 4, set "Range Min" and "Range Max" to "4." To copy numbers 3 through 14, set "Range Min" to "3" and "Range Max" to "14."

Inserting a Blank Measure (Insert)

This function inserts blank measures into a specified phrase position.

cf.

For details on the settings, refer to **"Phrase Modify Menu"** (p. 239).

Measure, For (Edit Range)

Specifies the measure location at which the blank measures are to be inserted, and the number of blank measures to be inserted.

Transpose the Key (Transpose)

This transposes the pitch of notes within a specified area, over a +/- 127 semitone range. Use this function to modulate from one key to another in a phrase, or to transpose the entire phrase.

cf.

For details on the settings, refer to **"Phrase Modify Menu"** (p. 239).

Part Group

Specifies the Part Group.

Value	Explanation
Internal	Internal (internal sound generator)
EXP1	Expansion board 1
EXP2	Expansion board 2
External	External MIDI output
ALL	All part group

Ch (MIDI Channel)

Specifies the MIDI channel(s) of the notes to be transposed.
Set this parameter to "ALL" for transposing all notes. When transposing only the notes of specific MIDI channel(s), select the MIDI channel(s) using this parameter.
Value: ALL, Ch1–Ch16

Measure, For (Edit Range)

Sets the range of measures that are to be transposed. If you set "For" to "ALL," all measures will be specified.

Range Min, Range Max

Specifies the range of note numbers to be transposed. For example, if you want to transpose notes in the range of C3 through C4, set "Range Min" to "C3" and "Range Max" to "C4." You can also specify the key range by pressing keys on the keyboard.

Bias

Specifies the transpose amount in semitone steps. Set a "+" (positive) value to raise the pitch, or a "-" (negative) value to lower the pitch. If you do not want to transpose, set this to "0."
Value: -127– +127

If You Want to Lower the Bass Sound One Octave...

If your bass is played one octave higher than the staff notation, use the Transpose function to lower it one octave.
To lower the bass sound one octave, set the Range parameter to "Lowest–Highest" for the bass part, and set the Bias parameter to "-12."

When You Want to Change Percussion Sounds...

You can also use the Transpose function to change percussion sounds.
Suppose you want to change conga to tom. If the conga sound is assigned to the D4 key, and the tom sound is assigned to the C3 key, set the Range parameter to "D4–D4" and the Bias parameter to "-14."

Changing the Velocity (Change Velocity)

This function modifies the keyboard playing dynamics (velocity) of a specified note area.

cf.
For details on the settings, refer to **"Phrase Modify Menu"** (p. 239).

Part Group

Specifies the Part Group.

Value	Explanation
Internal	Internal (internal sound generator)
EXP1	Expansion board 1
EXP2	Expansion board 2
External	External MIDI output
ALL	All part group

Ch (MIDI Channel)

Specifies the MIDI channel(s) of notes for which velocity will be modified.
To modify velocity for all notes, set this parameter to "ALL." When modifying the velocity for only the notes of a specific MIDI channel, select that MIDI channel using this parameter.

Value: ALL, Ch1–Ch16

Measure, For (Edit Range)

Specifies the range of measures whose velocity will be changed. If you set "For" to "ALL," all measures will be specified.

Bias

Use this parameter to add a fixed bias amount to all velocities. If you want to increase the velocity values by 10, set this to "+10."
Value: -99– +99

Magnify

Set this parameter if increases or decreases in velocity variations are desired. For less velocity variation, use settings of "99%" or less. For more velocity variation, set it to "101%" or greater. With a setting of "100%," velocity values do not change.
Value: 0–200%

Range Min, Range Max

Specifies the range of note numbers for which velocity will be modified. For example, if you want to modify the velocity of notes in the range of C3 through C4, set "Range Min" to "C3" and "Range Max" to "C4." You can also specify the key range by pressing keys on the keyboard.

Changing the MIDI Channel (Change Channel)

This function transfers the MIDI channel of a specified area of sequencer data into a different MIDI channel.

cf.

For details on the settings, refer to **"Phrase Modify Menu"** (p. 239).

Part Group

Specifies the Part Group.

Value	Explanation
Internal	Internal (internal sound generator)
EXP1	Expansion board 1
EXP2	Expansion board 2
External	External MIDI output
ALL	All part group

Measure, For (Edit Range)

Specifies the range of measures in which the MIDI channel will be changed. If you set "For" to "ALL," all measures will be specified.

Status

Selects the type of data for which you wish to change the MIDI channel.

Value

ALL
NOTE
Poly Aftertouch
Control Change
Program Change
Channel Aftertouch
Pitch Bend

Range Min, Range Max

If you have set the Status parameter to "NOTE," "P.AFT," "C.C," or "PROG," you can specify the range of data. Set "Range Min" to the lowest value of the range, and "Range Max" to the highest value of the range.

TIP

To change the MIDI channel of all notes or polyphonic aftertouch data, set "Range Min" to "C -1" and "Range Max" to "G9." To change the MIDI channel of C4, set "Range Min" and "Range Max" to "C4." To change C3 through C4," set "Range Min" to "C3" and "Range Max" to "C4."

- To change the MIDI channel of all controller numbers, set "Range Min" to "0" and "Range Max" to "127." To change the MIDI channel of all program numbers, set "Range Min" to "1" and "Range Max" to "128." To change number 4, set "Range Min" and "Range Max" to "4." To change numbers 3 through 14, set "Range Min" to "3" and "Range Max" to "14."

Src Channel, Dst Channel (MIDI Channel)

Set Src Channel to the MIDI channel that you want to change, and set Dst Channel to the MIDI channel to which it will be changed.

If you have selected ALL for the source MIDI channel, the sequencer data of all MIDI channels will be combined into the destination MIDI channel.

Value: ALL, 1–16

NOTE

It is not possible to select "ALL" for the destination MIDI channel.

Modifying the Length of Notes (Change Duration)

This function modifies the duration (time from note-on to note-off) of notes within a specified area. Depending on the setting, you can also create staccato or tenuto.

cf.
For details on the settings, refer to **"Phrase Modify Menu"** (p. 239).

Part Group

Specifies the Part Group.

Value	Explanation
Internal	Internal (internal sound generator)
EXP1	Expansion board 1
EXP2	Expansion board 2
External	External MIDI output
ALL	All part group

Ch (MIDI Channel)

Specifies the MIDI channel(s) of notes for which duration will be modified.

If you wish to modify the duration for notes of all MIDI channels, set this parameter to ALL. When changing the duration for notes of a specific MIDI channel only, select that MIDI channel using this parameter.

Value: ALL, Ch1–Ch16

Measure, For (Edit Range)

Specifies the range of measures whose durations will be changed. If you set "For" to "ALL," all measures will be specified.

Bias

Set this parameter if you wish to increase or decrease all durations by a fixed amount. If you want to extend all duration by 10, set this to "+10."

Value: -4800– +4800

Magnify

Set this parameter if you wish to increase or decrease durations by a specified ratio. When set to "100%," no change is made. A value of "101%" or higher increases the duration; values of "99%" or lower decrease the duration. For example, to halve duration, set this parameter to "50%." To double durations, set this parameter to "200%."

Value: 0–200%

Range Min, Range Max

Specifies the range of note numbers for which duration will be modified. For example, if you want to change the duration of notes in the range of C3 to C4, set "Range Min" to "C3" and "Range Min" to "C4." You can also specify the key range by pressing keys on the keyboard.

Shifting Performance Data Forward and Back (Shift Clock)

This function shifts the timing of sequencer data backward or forward in time within a specified area in steps of 1 tick. Slight shifts of timing can speed up or drag performance.

NOTE

When this function is executed, data that would be moved to a point before the beginning of the phrase will automatically shift to the beginning of the phrase. If data would be moved to a point past the end of the phrase, additional new measures will be created automatically as needed. The time signature of the newly created measures will be the same as that of the measure immediately preceding.

cf.

For details on the settings, refer to **"Phrase Modify Menu"** (p. 239)

Part Group

Specifies the Part Group.

Value	Explanation
Internal	Internal (internal sound generator)
EXP1	Expansion board 1
EXP2	Expansion board 2
External	External MIDI output
ALL	All part group

Ch (MIDI Channel)

Selects the MIDI channel of the data to be shifted in time.

To shift ticks of all sequencer data, set this parameter to "ALL." To shift the sequencer data tick of just one specific MIDI channel, select that MIDI channel.

Value: ALL, Ch1–Ch16

Measure, For (Edit Range)

Specifies the range of measures in which the sequencer data will be moved in units of one tick. If you set "For" to "ALL," all measures will be specified.

Bias

Specify the amount (number of ticks) by which the sequencer data will be moved.

Value: -4800– +4800

Status

Selects the type of data to be shifted in time.

Value

ALL
NOTE
Poly Aftertouch
Control Change
Program Change
Channel Aftertouch
Pitch Bend
System Exclusive
Tune Request

Range Min, Range Max

If you set the Status parameter to "NOTE," "P.AFT," "C.C," or "PROG," specify the range of data. Set "Range Min" to the lowest value of the range, and "Range Max" to the highest value of the range.

TIP

To shift all notes or polyphonic aftertouch data, set "Range Min" to "C -1" and "Range Max" to "G9." To shift C4, set "Range Min" and "Range Max" to "C4." To shift C3 through C4, set "Range Min" to "C3" and "Range Max" to "C4."

- To shift all controller numbers, set "Range Min" to "0" and "Range Max" to "127." To shift all program numbers, set "Range Min" to "1" and "Range Max" to "128." To shift number 4, set "Range Min" and "Range Max" to "4." To shift numbers 3 through 14, set "Range Min" to "3" and "Range Max" to "14."

Thinning Out the Sequencer Data (Data Thin)

Continuously variable controllers such as aftertouch, pitch bend, and expression tend to create unexpectedly large amounts of data when operated. Data Thin will strip out redundant data to increase the amount of memory available for the sequencer.

cf.

For details on the settings, refer to **"Phrase Modify Menu"** (p. 239).

Part Group

Specifies the Part Group.

Value	Explanation
Internal	Internal (internal sound generator)
EXP1	Expansion board 1
EXP2	Expansion board 2
External	External MIDI output
ALL	All part group

Ch (MIDI Channel)

Selects MIDI channel of the data to be thinned.

To thin all sequencer data, set this parameter to "ALL." To thin sequencer data of just one specific MIDI channel, select that MIDI channel.

Value: ALL, Ch1–Ch16

Measure, For (Edit Range)

Specifies the range of measures whose sequencer data will be thinned. If you set "For" to "ALL," all measures will be specified.

Data Thin Value

For thinning data which incorporates rapid changes, use higher settings. If you don't want to thin that much data even though it is subject to rapid change, use lower settings.

Data Thin Time

If you are thinning data that changes gradually over time, use higher settings. If you don't want to thin that much data even though the changes are gradual, use lower settings.

Status

Selects the type of data to be thinned.

Value

ALL
Poly Aftertouch
Control Change
Channel Aftertouch
Pitch Bend

Range Min, Range Max

If you set the Status parameter to "P.AFT" or "C.C," specify the range of data. Set "Range Min" to the lowest value of the range, and "Range Max" to the highest value of the range.

TIP

To thin out all polyphonic aftertouch data, set "Range Min" to "C -1" and "Range Max" to "G9." To thin out C4, set "Range Min" and "Range Max" to "C4." To thin out C3 through C4, set "Range Min" to "C3" and "Range Max" to "C4."

- To thin out all controller numbers, set "Range Min" to "0" and "Range Max" to "127." To thin out number 4, set "Range Min" and "Range Max" to "4." To thin out numbers 3 through 14, set "Range Min" to "3" and "Range Max" to "14."

Deleting Blank Measures (Truncate)

Copying may sometimes create blank measures at the beginning of a phrase. Truncate deletes silent portions from the beginning of the specified phrase to the first note-on.

NOTE

If other sequencer data (such as program changes or control changes) is recorded between the beginning and the first note-on of the specified phrase, only the last data event of each type will be placed before the note-on.

cf.

For details on the settings, refer to **"Phrase Modify Menu"** (p. 239).

1. **Press [F8 (Execute)] to execute the Truncate operation.**

Editing Individual Items of Sequencer Data (Microscope)

Microscope lets you edit individual items of sequencer data recorded in a phrase, such as MIDI messages.

Editing Sequencer Data (Basic Procedure in the Microscope)

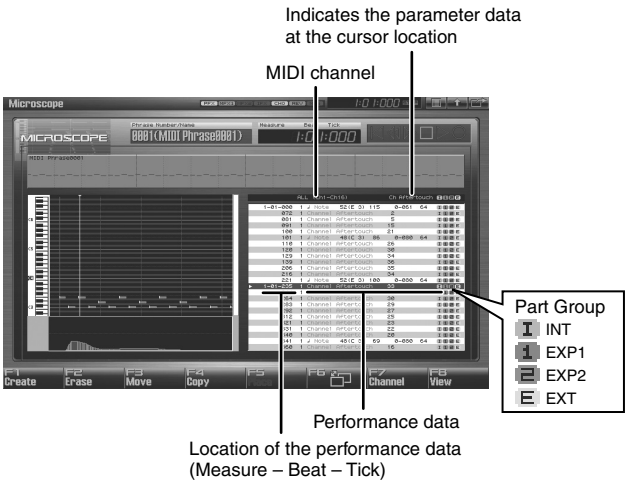
Access the Microscope screen when you want to view the sequencer data recorded in a phrase. Each line indicates the location (measure-beat-tick) at which the sequencer data is recorded, and the data recorded at that location.

1. Access the Phrase Edit screen (p. 238).

2. Press [F4 (Microscope)].

The Microscope screen will appear.

Use ▲ / ▼ to view the performance data.



F-key operations in the Microscope screen

F-key	Explanation	Page
F1 Create	Inserts data.	p. 252
F2 Erase	Erases data.	p. 252
F3 Move	Moves data.	p. 253
F4 Copy	Copies data.	p. 253
F5 Place	Pastes the copied data.	p. 253
F6 ⧉	Switches the display of the piano roll.	p. 250
F7 Channel	Switches the part whose data is displayed.	p. 250
F8 View	Selects the data that is displayed.	p. 252

3. You can press [F6 (⧉)] to switch the display of the piano roll.

4. Press [F7 (Channel)] to select the part whose performance data you want to view or edit.

Choose "ALL" if you want to view performance data of all MIDI channels.

Channel: ALL, 1–16

Part Group: ALL, INT, EXP1, EXP2, EXT

MEMO

In order to make efficient use of the display space in the screen, locations in which no performance data exists are normally not shown.

cf.

For an explanation of the various types of performance data, refer to **"Sequencer Data Handled by Phrases"** (p. 251) .

5. When you've finished editing, press [F8 (Close)].

6. Use ▲ / ▼ to select the performance data that you want to edit.

7. Use ◀ / ▶ to select the parameter that you want to edit.

8. Turn the VALUE dial or use [INC] [DEC] to change the value.

TIP

Notes, the note name (note number) of polyphonic aftertouch data, and the on-velocity or off-velocity of a note can also be specified by pressing a note on the keyboard.

TIP

If you press [ENTER], the performance data currently indicated by "▶" will be transmitted from the MIDI OUT connector. In the case of a note message, pressing [ENTER] will sound that note.

cf.

If you're editing a system exclusive message, refer to "Editing a system exclusive message" on the following page.

9. Repeat steps 3 through 8 to edit the data.

10. To close the Microscope screen, press [EXIT].

MEMO

You can Undo the result of editing (p. 217).

Editing a System Exclusive Message

1. **Use ▲ or ▼ to move the cursor to the location of the system exclusive message that you want to edit.**

2. **Press ▶.**
   The System Exclusive Edit window appears.

3. **Press ◀ or ▶ to move the cursor to the data that you want to edit.**

4. **Turn the VALUE dial or press [INC] [DEC] to edit the value.**
   If you want to add data between "F0:" and ":F7," move the cursor to that location and press [F3 (Insert)]. A value of "00" will be inserted. Change this to the desired value.
   To delete data, move the cursor to the relevant location and press [F2 (Delete)].

5. **When you are finished editing, press [F8 (Execute)] to finalize the values of the system exclusive message.**
   To cancel, press [F7 (Cancel)].

   TIP

   If you decide to discard the changes you made to the system exclusive message and return to the Microscope screen, press [EXIT].

- In the case of a Roland type IV system exclusive message, the checksum can be calculated automatically when you finalize the values. If you do not want to calculate the checksum automatically, press [F1 (Auto Sum)] to turn off the light.
- When you press [F4 (Test)], the system exclusive message you are editing will be transmitted from the MIDI OUT connector.

Sequencer Data Handled by Phrases

Phrases can record the following eight types of sequencer data. The recorded location (measure-beat-tick) is displayed at the far left of each data item, and the MIDI channel number is displayed beside it.

Note

These MIDI messages represent notes. 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, which specifies the duration of the note; and Off Velocity, which determines the force with which the key is released.

Program Change

This MIDI message switches sounds. The program number (PC#) selects the sound.

Control Change

This MIDI message applies various effects such as modulation or expression. The controller number (CC#) selects the function, and Value specifies the depth of the effect.

Pitch Bend

This MIDI message changes the pitch. The value specifies the amount of pitch change.

Poly Aftertouch

This MIDI messages applies aftertouch to an individual note. From the left, the parameters are Note Number which specifies the key, and Value which specifies the depth of the aftertouch.

Channel Aftertouch

This MIDI message applies aftertouch to an entire MIDI channel. Value specifies the depth of the aftertouch.

System Exclusive

These are MIDI messages used to make settings unique to the Fantom-G, such as sound settings. Input the data between "F0" and "F7."

Tune Request

This MIDI message causes an analog synthesizer to tune itself.

Viewing Sequencer Data (View)

Since a phrase contains a large amount of sequencer data, the display may be cluttered and difficult to read. For this reason, the Fantom-G lets you specify the type(s) of sequencer data that will be displayed in the screen. This is convenient when you want to check or edit only a specific type of sequencer data.

1. **Access the Microscope screen (p. 250).**

2. **Press [F8 (View)].**
   The View Select window appears.

3. **Use ▲ or ▼ to select the sequencer data that will be displayed.**

Note:	Note messages. These MIDI messages represent notes.
Poly Aftertouch:	Polyphonic aftertouch. These MIDI messages apply aftertouch to individual keys.
Control Change:	Control change messages. These MIDI messages apply various effects such as modulation or expression.
Program Change:	Program change messages. These MIDI messages select sounds.
Channel Aftertouch:	Channel aftertouch messages. These MIDI messages apply aftertouch to an entire MIDI channel.
Pitch Bend:	Pitch bend messages. These MIDI messages change the pitch.
System Exclusive:	System exclusive messages. These MIDI messages are used to make settings unique to the Fantom-G, such as those for the sound parameters.
Tune Request:	This MIDI Message cause an analog synthesizer to tune it self.

4. **Press [INC] or [DEC] to switch.**
   If you press [F6 (ALL OFF)], none of the sequencer data will be displayed.
   If you press [F7 (ALL ON)], all of the sequencer data will be displayed.

5. **Press [F8 (Close)] to close the View Select window.**

Inserting Sequencer Data (Create)

You can insert new sequencer data into a desired location of a phrase.

cf.
For details on the sequencer data that can be inserted, refer to **"Sequencer Data Handled by Phrases"** (p. 251).

1. **Access the Microscope screen for the phrase into which you want to insert sequencer data (p. 250).**

2. **Press [F1 (Create)].**
   The Create Event window appears.

3. **Press ▲ or ▼ to select the sequencer data that will be inserted.**

4. **Press [F8 (Execute)] to insert the performance data.**

5. **The sequencer data that was inserted will have the default parameter values, so edit them as necessary.**

Erasing Sequencer Data (Erase)

If desired, you can erase just an individual event of sequencer data.

MEMO
Data recorded in the tempo track (p. 235) or beat track (p. 236) can also be erased in the same way.
You can't erase the tempo change located at the beginning of the tempo track, or the beat change and phrase beat located at the beginning of the beat track.

1. **Access the Microscope screen for the phrase from which you want to erase sequencer data (p. 250).**

2. **Press ▲ or ▼ to move the cursor to the sequencer data that you want to erase.**

   TIP
   To erase a multiple consecutive data, hold down [SHIFT] and press ▲ or ▼ to select the sequencer data.

3. **Press [F2 (Erase)] to erase the sequencer data.**

Moving Sequencer Data (Move)

You can move an individual item of sequencer data to a different location.

MEMO

Data recorded in the tempo track (p. 235) or beat track (p. 236) can also be moved in the same way.
You can't move the tempo change located at the beginning of the tempo track, or the beat change and phrase beat located at the beginning of the beat track.

1. **Access the Microscope screen for the phrase whose data you want to move (p. 250).**
2. **Press ▲ or ▼ to move the cursor to the sequencer data that you want to move.**

   TIP

   To move a multiple consecutive data, hold down [SHIFT] and press ▲ or ▼ to select the sequencer data.
3. **Press [F3 (Move)].**
   The Move Event window appears.
4. **Press ◀ or ▶ to move the cursor to the "measure," "beat," and "tick" fields.**
5. **Turn the VALUE dial or Press [INC] [DEC] to specify the location to which the data will be moved.**
6. **Press [F8 (Execute)] to move the sequencer data.**

Copying Sequencer Data (Copy)

Sequencer data can be copied to the desired location. This is convenient when you want to use the same sequencer data at multiple locations.

MEMO

Data recorded in the tempo track (p. 235) or beat track (p. 236) can also be copied in the same way.

1. **Access the Microscope screen for the phrase whose sequencer data you want to copy (p. 250).**
2. **Press ▲ or ▼ to move the cursor to the sequencer data that you want to copy.**
3. **Press [F4 (Copy)].**
4. **Press [F5 (Place)].**
   The Place Event window appears.
5. **Press ◀ or ▶ to move the cursor to the "measure," "beat," and "tick" fields.**
6. **Turn the VALUE dial or Press [INC] [DEC] to specify the location to which the data will be copied.**
7. **Press [F8 (Execute)] to paste the data.**

Saving a Song (Song Save)

A song you record is initially held in the temporary area. The song in the temporary area will be lost if you turn off the power or load a different song. If you want to keep this song, you'll need to save it to the project.

What the Saved Song Data Contains

Along with the sequencer data, the song data also contains the studio set, live set, patch, and system setup data that you were using at that time.

The studio set, live set, and patch data saved within the song data is special data for reproducing the song; it is separate from the user studio sets, live sets, and user patches.

* *If you want to use this data with a different song, or to use it independently of any song, you must save the data in the user area.*

What is Saved at the Same Time as the Song

The samples and phrases used by the song are automatically saved when you save the song.

Saving a Song (Save)

cf.

If you want to save phrases individually

→ **"Saving a Phrase (Save)"** (p. 216)

cf.

If you want to save samples individually

→ **"Saving a Sample (Save)"** (p. 274)

1. **In the Song Play screen or Song Edit screen, press [WRITE].**
   The WRITE MENU window appears.

2. **Use ▲ / ▼ to select "Song," and then press [F8 (Select)].**
   The Song Name window will appear.

3. **Assign a name to the song.**

   cf.

   For details on how to assign a name, refer to **"Assigning a Name"** (p. 42).

4. **When you've finished assigning the name, press [F8 (OK)].**
   A screen will appear, allowing you to select the writing-destination song.

5. **Turn the VALUE dial or use [INC] [DEC] to select a song number.**

6. **Press [F8 (Save)].**
   A writing confirmation message will appear.

   NOTE

   Never turn off the power while data is being written.

7. **To write the data, press [F7 (OK)].**

* *If you decide to cancel, press [F8 (EXIT)].*

Resampling the Contents of All Tracks to a Single Sample

Here's how you can combine the performance of all audio tracks and MIDI tracks to a single sample.
After creating a sample in this way, you can save it on your computer or another device as a completed song.

1. **Load the song that you want to resample (p. 204).**
2. **Press [⏮] to move the song position to the beginning.**
3. **Press the [SAMPLING] button.**
4. **Press [F2 (Re-Sampling)].**
5. **Press [F2 (Auto Trig)].**
6. **Press [PLAY].**
   Resampling will begin.
7. **When the song ends, press [F7 (Stop)].**

   TIP

   Alternatively, you can set the **"Stop Trigger"** (p. 260) parameter to "TIME" and set the **"Sampling Length"** (p. 261) parameter to the ending location of the song so that resampling will stop automatically.
8. **In the Sample Edit screen (p. 266), listen to the sample you just created by resampling.**

   TIP

   The volume of resampled phrases may be less than the volume of the original phrases. As necessary, use the Normalize operation (p. 270) to raise the volume.

   NOTE

   The resampled sample will be lost if you turn off the power. If you want keep the sample, press [WRITE] to save it (p. 274).

Copying a Resampled Sample to Your Computer to Create a CD or MP3

A sample you created by resampling can be copied to your computer. The sample will be a WAV file, which you can use to create a CD or MP3 on your computer.

1. **Verify the number of the sample you resampled. (In this example we'll assume it's number 0001.)**
2. **Use the USB Storage function (p. 285) to copy the following sample to your computer.**

   "FantomG.Prj/SMPL/0001.WAV"

   (The number in the .WAV file name will be the sample number.)

   MEMO

   "**FantomG.prj**" is the name of the project folder in the Fantom-G's internal memory. Multiple projects can be saved in USB memory. By default, the project folders will be numbered as "**FantomG001.Prj**," "**FantomG002.Prj**," etc., and the portion preceding the filename extension will be the project name you assigned when saving.

Save As an SMF File (Save As SMF)

Here's how to save the song that you loaded (temporary song) or MIDI phrase as an SMF file.

1. In the Song Play/Song Edit screen, press [F7 (Song Util)], choose "Save As SMF" from the menu that appears, and then press [F8 (Select)].

The Save As SMF screen will appear.

MEMO

If you want to convert a MIDI phrase to an SMF file, press [F3 (Util Menu)] in the MIDI Phrase List screen, choose "Save As SMF" from the menu that appears, and then press [F8 (Select)].

2. Specify SMF Format, the desired Part Group, and then press [F8 (Execute)].

- **SMF Format Select**

Format	Explanation
Format 0	Convert the song to a Format 0 Standard MIDI File (all performance data is saved in one track) and save it. An extension of ".MID" will be added automatically.
Format 1	Convert the song to a Format 1 Standard MIDI File (performance data is saved in more than one track) and save it. An extension of ".MID" will be added automatically.

- **Part Group**

The performance data of the part group you specified will be saved as an SMF file.

Value	Explanation
Internal	Internal (internal sound generator)
EXP1	Expansion board 1
EXP2	Expansion board 2
External	External MIDI output
ALL	All part group

3. Assign a file name, and then press [F8 (OK)].

A screen will ask for confirmation.

4. Press [F7 (OK)] to execute.

The SMF file will be saved in the SMF folder of the project. In the case of a project in internal memory, the SMF file will be saved in the "FantomG.Prj/SEQ/SMF" folder.

* *The filename extension will be ".MID" whether you select "Save SMF (Format 0)" or "Save SMF (Format 1)." The two cannot be distinguished in this way.*

NOTE

When you save data in SMF format, the sound setup data will not be saved. In order to ensure that the correct sounds are played, you must record the appropriate bank select and program numbers.

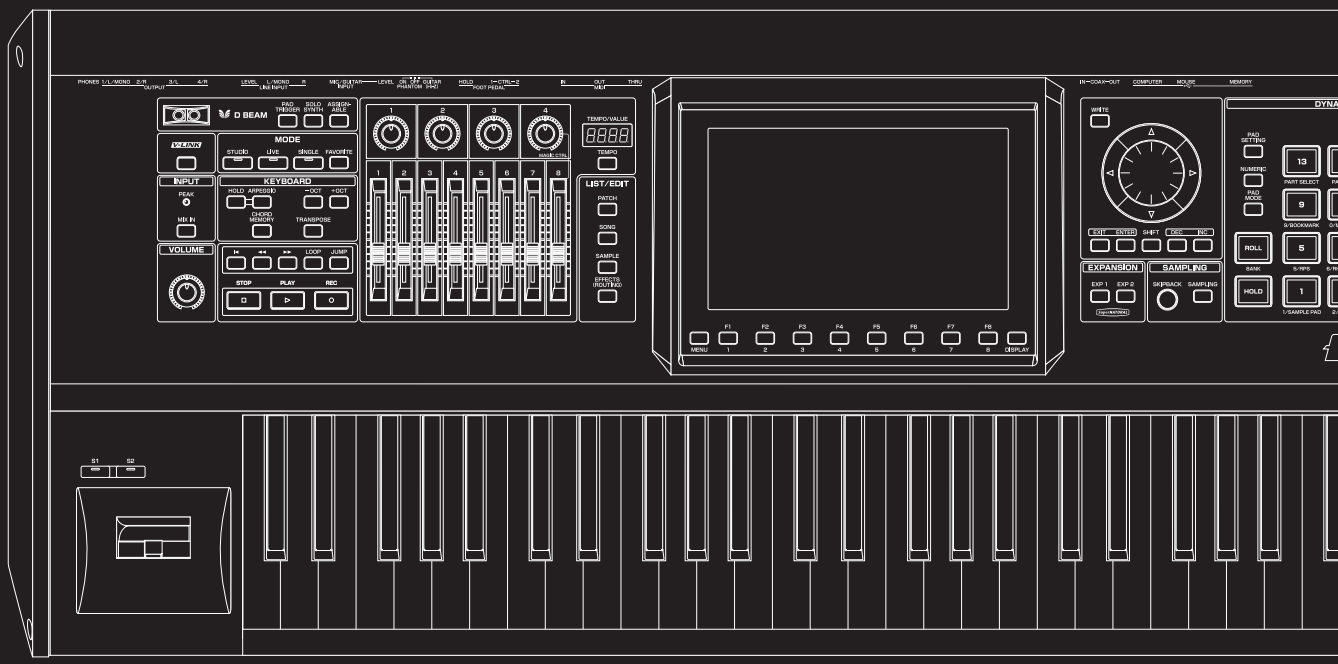
NOTE

Audio tracks are not saved in an SMF file.

07: Sampler

This chapter explains how to sample sounds and edit samples.

- Sampling ..... p. 258
- Editing a Sample ..... p. 263



Sampling

The Fantom-G lets you sample audio sources, such as an audio device, mic, or CD.

This section explains the sampling procedure and what the parameters do.

TIP

Sampling time

The Fantom-G contains 32 MB of memory, which allows about 6 minutes of mono or about 3 minutes of stereo sampling. If you want to sample for a longer time than this, you must install separately sold memory (DIMM) (p. 312, p. 314).

* *The available recording time may be shorter depending on how memory is being used.*

Switching External Input On/Off

1. Press [MIX IN] to turn it on.

The button will light.

MEMO

You can use the System setting **"Mix In Switch"** (p. 301) to memorize the on/off setting.

2. To turn it off, press [MIX IN] again.

Making Input Source Settings (Input Setting)

1. Connect your CD player, mic, or other audio source to the AUDIO INPUT jacks, MIC/GUITAR jack or to the DIGITAL AUDIO IN connector located on the rear panel of the Fantom-G.

cf.

For details on connecting your equipment, refer to the Quick Start Guide section entitled **"Connecting your equipment"** (p. 38).

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.**

* *When connection cables with resistors are used, the volume level of equipment connected to the inputs (AUDIO INPUT) may be low. If this happens, use connection cables that do not contain resistors.*

* *If an external device is connected to the DIGITAL AUDIO IN connector, disconnecting the cable or powering-off the external device may cause noise to be subsequently heard in the input from DIGITAL AUDIO IN. If this occurs, correctly re-connect your external device, or turn off the Fantom-G's [MIX IN] switch.*

2. Hold down [SHIFT] and press [MIX IN].

3. Press [CURSOR] to select the parameter that you want to set.

4. Turn the VALUE dial or press [INC] [DEC] to set the value.

cf.

See **"Functions of Input Setting Parameters"** (p. 258) for each parameter's functions.

5. Play back the external input source.

6. If you use AUDIO INPUT, turn the LEVEL knob (rear panel: p. 24) to adjust the volume.

* *If you're using DIGITAL AUDIO IN or USB AUDIO, this adjustment is not necessary.*

* *If the volume of the external source is too high, the PEAK indicator will light. If this occurs, turn down the LEVEL knob until the PEAK indicator no longer lights.*

7. Press [EXIT] to return to the previous screen.

Functions of Input Setting Parameters

This section explains the functions the different Input Setting parameters have, as well as the composition of these parameters.

- **Mix In Switch**

  Turns the external input on/off.

  Value: OFF, ON
- **Input Select**

  Specifies the input source of the sound to be sampled.

  Value

  DIGITAL IN: DIGITAL AUDIO IN jack
  LINE IN L/R: INPUT jacks L/R (stereo)
  LINE IN L: INPUT jack L (mono)
  MIC/GUITAR: MIC/GUITAR jack
  USB AUDIO: USB connector
- **Digital/USB Input Level**

  If you've set Input Select to DIGITAL IN or USB AUDIO, this adjusts the input level.

  Value: 0–127
- **Input Effect Switch**

  Specifies whether the external input sound will be sent through the effects processor (Input Effect).

  Value: OFF, ON

- **Input Effect Type**

  Selects the type of effect that will be applied to the external input source.

  Value: Equalizer, Enhancer, Compressor, Limiter, Noise Suppressor, Center Canceler

  When you press [F7 (Input Effect)], the parameter setting screen for the currently selected input effect will be displayed **"Input Effect Setup Settings"** (p. 259).

- **Mix In Output Assign**

  Output destination of the external input sound that is mixed in

  Value

  A: Output to OUTPUT (A) jacks without passing through effects

  B: Output to OUTPUT (B) jacks without passing through effects

  MFX1: Output through multi-effects 1

  MFX2: Output through multi-effects 2 (* Studio Mode only)

  EXP1: Output through expansion board 1

  EXP2: Output through expansion board 2

* *EXP1 or EXP2 is available only when the corresponding expansion board supports audio input.*

- **Mix In Output Level**

  Volume level of the external input sound.

  Value: 0–127

- **Mix In Chorus Send Level**

  Adjusts the depth of chorus that will be applied to the external input source. Set this to "0" if you do not want to apply chorus.

  Value: 0–127

- **Mix In Reverb Send Level**

  Depth of reverb applied to the external input sound. Set this to "0" if you don't want to apply reverb.

  Value: 0–127

Input Effect Setup Settings

1. Hold down [SHIFT] and press [MIX IN].

The Input Effect Setup screen appears.

2. Press [CURSOR] to move the cursor to a parameter.

3. Turn the VALUE dial, or press [INC] /[DEC] to set the value.

- **Input Effect Type**

  Selects the input effect type.

Parameter	Explanation
01: Equalizer	Adjusts the tone of the low-frequency and high-frequency ranges.
02: Enhancer	Modifies the harmonic content of the high-frequency range to add sparkle to the sound.
03: Compressor	Restrains high levels and boosts low levels to make the overall volume more consistent.
04: Limiter	Compresses the sound when it exceeds a specified volume, to keep distortion from occurring.
05: Noise Suppressor	Suppresses noise during periods of silence.
06: Center Canceler	Removes the sounds that are localized at the center of the stereo input. This is a convenient way to eliminate a vocal.

In this settings screen, you can edit parameters for the type of input effect you selected.

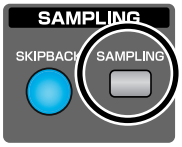
MEMO

For details on the parameters that can be edited, refer to the section **"Input Effect Parameters"** (p. 186).

4. Press [F8 (Exit)] or [EXIT] to return to the previous screen.

Sampling Procedure

1. Press [SAMPLING] 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)]–[F6 (Solo with FX)] to select the sampling mode. The sampling-standby screen will appear.
To cancel, press [F8 (Exit)].

* *You cannot sample the sound that is output from the OUTPUT B jacks. You'll need to set things up so that the sound you want to sample is output from the OUTPUT A (MIX) jacks.*

Sampling mode

Mode	Explanation
Sampling: [F1 (Sampling)]	Sample a sound from an external input source. * *Operating the keyboards, pads, D beam or sequencer will not play the internal sound generator.*
Re-Sampling: [F2 (Re-Sampling]	Resample the sound of the internal sound generator. The sound of the external input will not be heard. * *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. 270) to raise the volume.*
Mix Sampling: [F3 (Mix)]	Sample the combined sounds of the internal sound generator and an external input source.
Auto divide sampling: [F4 (Auto Divide)]	Sample an extended source, and automatically divide it into several samples at silent regions. If the sample contains silence, it will be divided at that point, and the subsequent portion will be assigned to the next sample number. * *Operating the keyboards, pads, D beam or sequencer will not play the internal sound generator.*
Solo sampling: [F5 (Solo)]	While playing the internal sound generator as usual, sample only the sound from the external input. * *Effects other than the Input Effect can't be applied to the external input sound.*
Solo with effects sampling: [F6 (Solo with FX)]	While playing the internal sound generator, only the sounds from the external input will be recorded. At this time, an effect can be applied to the external input sound. * *MFX (multi-effect) can't be applied to the sound of the internal sound generator.*

3. Make the settings for things such as the input source of the sound to be sampled, and triggering.

- **Input Select**

  Specifies the input source of the sound that is to be sampled.

  Value

  DIGITAL IN: DIGITAL AUDIO IN jack
  LINE IN L/R: INPUT jacks L/R (stereo)
  LINE IN L: INPUT jack L (mono)
  MIC/GUITAR: MIC/GUITAR jack
  USB AUDIO: USB connector

* *This cannot be set when resampling.*

- **Stereo Switch**

  Specifies whether the sound will be sampled in stereo or in monaural. Mono sampling uses half as much memory space.

  Value

  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.

- **Pre Sample Time**

  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.

  Value: 0–1000 ms

- **Stop Trigger**

  Specifies how sampling will end.

  Value

  MANUAL: Continue sampling until you press [STOP].
  BEAT: Stop sampling after the specified number of beats at the current tempo (BPM).
  TIME: Sample the specified length of time.

- **Sampling Length**

  You can specify this if Stop Trigger is "BEAT" or "TIME."

  Value

  When Stop Trigger is "BEAT":

  1–20000: Number of beats to continue sampling

  When Stop Trigger is "TIME":

  000'00"010–107'47"000: length of time to continue sampling

  MEMO

  By holding down [SHIFT] and turning the VALUE dial you can adjust this in steps of one second.

- **Auto Trigger Level**

  Specifies the volume at which sampling will begin if you have pressed [F2 (Auto Trig)] to turn Auto Trig ON.

  Value: 0–7 (A setting of 0 is the minimum.)

- **Gap Time**

  Specifies the length of the silences at which the sample will be divided if the Sampling Mode is set to Auto Divide. 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.

  Value: 500, 1000, 1500, 2000 ms

* *This parameter is valid only when you are using Auto Divide Sampling.*

- **Input Setting: [F1 (Inp Setting)]**

  Makes settings for the external input (p. 258).

- **Auto Trigger Sw: [F2 (Auto Trig)]**

  If this is on, sampling will begin automatically when the input sound is detected.

  NOTE

  Before you turn Auto Trig on, perform steps 4 and 5 to set the input level.

- **Trim Sw: [F3 (Trim Sw)]**

  If this is turned on, the Start point and End point settings (p. 267) will be automatically adjusted after sampling is performed, so any silent portions at the beginning or end of the sampled sound are excluded.

4. Play the external input source.

5. If you use AUDIO INPUT, turn the LEVEL knob (rear panel: p. 24) to adjust the volume.

* *If you're using DIGITAL IN, this adjustment is not necessary.*

* *If the volume of the external source is too high, the PEAK indicator will light. If this occurs, turn down the LEVEL knob until the PEAK indicator no longer lights.*

* *If the level of the sound to be sampled is too high, the word "CLIP" will appear in the level meter in the screen.*

* *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.*

6. Press [F8 (Start)] to begin sampling.

* *If the Auto Trigger setting is on, sampling will begin as soon as sound is input.*

7. If Stop Trigger is set to MANUAL, press [F7 (Stop)] to stop sampling.

The Sample Edit (p. 266) screen will appear.

* *If you want to edit the sample, refer to p. 263.*

When you finish sampling, the sample will automatically be added to the sample list. Press [F1 (Sample List)] to view the sample list.

Samples you record will be lost when you turn off the power. If you want to keep your sample, press [F2 (Save)] to save it (p. 274).

Samples without the " " symbol and samples with the " " symbol have not been saved.

8. Press [EXIT] to go back to where you were before you entered the Sampling screen.

Dividing a Sample During Sampling

1. **During sampling, press [F8 (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).*

Sampling Earlier in Time (Skip Back Sampling)

Skip Back Sampling is a function that lets you sample what were playing immediately prior to that point, even if you were not recording. When you press the SKIPBACK button, the performance that you were playing for a certain length of time before that moment will be sampled.
This is extremely convenient if you've been playing a phrase repeatedly, and want to sample it only after you've managed to play it correctly.

Button lit: Skip-back sampling can be performed in this state.

Button unlit: Skip-back sampling cannot be performed. Not operating. You cannot use skip-back sampling if there is insufficient free memory.

Button blinking: Skip Back Sampling will be executed.

1. **Play the Fantom-G's keyboard or pads, or connect an instrument or some other device to the AUDIO IN jacks or DIGITAL AUDIO IN and input sounds or phrases.**

2. **Press [SKIPBACK].**
   Skip Back Sampling will be executed.

   When Skip Back Sampling ends, the Sample Edit screen will appear (p. 266).

NOTE

Samples captured by Skip Back Sampling will be lost when you turn off the power. If you want to keep the sample, perform the Save procedure (p. 274).

MEMO

You can specify how far back sampling will occur when you perform skip-back sampling (5–40 seconds). With the factory settings this is set to 10 seconds (**"Skip Back Time"** (p. 302)).

Editing a Sample

This section explains how you can edit a sample that you sampled/imported.

Editing is performed in sample memory—a memory area dedicated to samples.

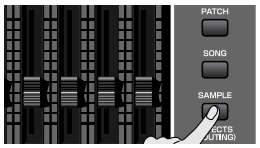
* *You cannot execute this with more than one sample selected.*

Selecting a Sample (Sample List)

Select a sample from the list.

Selecting a Sample

1. Press [SAMPLE] twice.



The Sample List display appears.

F-key operations in the Sample List screen

F-key	Explanation		Page
F1 Load	Loads a sample from the project into memory.		p. 264
F2 Save	Saves the selected sample to the project.		p. 274
F3 Util Menu	Save All	Saves all samples.	p. 274
	Load All	Loads all samples	p. 264
	Delete Sample	Deletes the sample from the project.	p. 265
	Unload	Deletes the sample from memory.	p. 264
F4 Mark	Adds a check mark to each sample		p. 263
F5 Mark All	Adds check marks to all samples in the list		p. 263
F6 Exit	Returns to the previous screen.		–
F7 Preview	Auditions the selected sample.		–
F8 Sample Edit	Displays the edit screen for the selected sample.		p. 266

2. Use VALUE dial, [INC] [DEC], or ▲ ▼ to select a sample.

If you hold down [SHIFT] while you operate the above buttons, the sample number will change in steps of ten.

You can press [F7 (Preview)] to audition the selected sample.

3. Press [F8 (Sample Edit)].

The Sample Edit Screen appears. (p. 266)

The sample list shows the current state of the samples.

Sample name	Indicates the name of the sample. Sample for which this field indicates "**EMPTY**" have not been loaded into memory. Load them if necessary.
	Indicates whether the file exists in the project. Samples for which the "" symbol is not shown have not been saved, and will be lost when you turn off the power. Save them if necessary.
	Indicates that the sample has been edited. Your edits will be lost when you turn off the power. Save the sample if necessary.

MEMO

By pressing [F4 (Mark)] or [F5 (Mark All)], you can add marks to the list, allowing you to perform operations (such as Delete or Import) on multiple samples in a single operation.

- If you want to select multiple samples, press [F4 (Mark)] to add a check mark to each sample you want to select.
- If you select a marked sample and press [F4 (Mark)], the check mark will be removed.
- If you press [F5 (Mark All)], a check mark will be added to all samples in the list.
- If you press [F5 (Mark All)] when all samples in the list already have a check mark, the check marks will be cleared from all samples.

Loading a Sample (Load)

Here's how you can load a sample from the project into sample memory.

1. **Press [SAMPLE].**

The Sample Edit screen will appear.

2. **Press [F1 (Sample List)].**
The Sample List display appears.

3. **Use VALUE dial, [INC] [DEC], or ▲ ▼ to select a sample.**

4. **Press [F1 (Load)].**
A message will ask you for confirmation.

5. **Press [F7 (OK)] to execute.**
To cancel, press [F8 (EXIT)].

Loading All Samples (Load All)

Here's how you can load all samples from the project into sample memory.

1. **Press [SAMPLE].**

The Sample Edit screen will appear.

2. **Press [F1 (Sample List)].**
The Sample List display appears.

3. **Press [F3 (Util Menu)].**
The Sample Utility Menu window will appear.

4. **Press ▲ or ▼ to select "Load All," and then press [F8 (Select)].**
To cancel, press [F7 (Cancel)].
A message will ask you for confirmation.

5. **Press [F7 (OK)] to execute.**
To cancel, press [F8 (EXIT)].

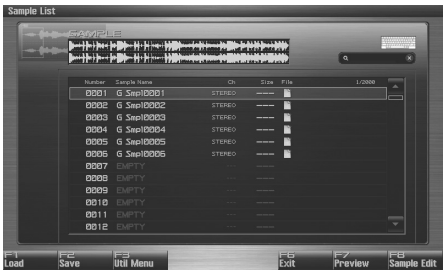
Unloading a Sample (Unload)

This operation erases (unloads) the sample from sample memory. The sample file itself that is saved in the project will not be deleted.

1. **Press [SAMPLE].**

The Sample Edit screen will appear.

2. **Press [F1 (Sample List)].**
The Sample List display appears.



3. **Use VALUE dial, [INC] [DEC], or ▲ ▼ to select a sample.**

4. **Press [F3 (Util Menu)].**
The Sample Utility Menu window will appear.

5. **Press ▲ or ▼ to select "Unlode," and then press [F8 (Select)].**
To cancel, press [F7 (Cancel)].
A message will ask you for confirmation.

6. **Press [F7 (OK)] to execute.**
To cancel, press [F8 (EXIT)].

Deleting a Sample (Delete)

This operation completes deletes the sample saved in the project, along with its file.

1. **Press [SAMPLE].**

The Sample Edit screen will appear.

2. **Press [F1 (Sample List)].**
The Sample List display appears.

3. **Use VALUE dial, [INC] [DEC], or ▲ ▼ to select a sample.**

4. **Press [F3 (Util Menu)].**
The Sample Utility Menu window will appear.

5. **Press ▲ or ▼ to select "Delete Sample," and then press [F8 (Select)].**
To cancel, press [F7 (Cancel)].
A message will ask you for confirmation.

6. **Press [F7 (OK)] to execute.**
To cancel, press [F8 (EXIT)].

Importing an Audio File (WAV/AIFF) from Your Computer

Audio files (WAV/AIFF) from your computer can be imported into memory as samples.

cf.
"Importing Audio file (Import Audio)" (p. 287)

Displaying Sample Edit Screen (Sample Edit)

1. Press [SAMPLE].

The Sample Edit screen will appear.

NOTE

Samples that you edit will be lost when you turn off the power. If you want to keep them, you must Save them (p. 274).

F-key operations in the Sample Edit screen

F-key	Explanation		Page
F1 Sample List	Shows the sample list.		p. 263
F2 Param	Displays the Sample Parameter screen, where you can make various settings for the sample.		p. 268
F3 Modify	Truncate	Cuts an unwanted portion	p. 269
	Emphasis	Boosts/limits the high frequency range	p. 269
	Normalize	Maximizes the volume	p. 270
	Amp	Applies a volume envelope	p. 270
	Time Stretch	Stretches/shrinks the sample	p. 271
	Chop	Divides the sample	p. 272
F4 Beat ◀	Specifies the start/end point of the sample in units of a beat.		p. 267
F5 Beat ▶	Specifies the start/end point of the sample in units of a beat.		p. 267
F6 Zoom	Zooms the waveform display.		p. 266
F7 Preview	Auditions the selected sample.		–
F8 Exit	Returns to the previous screen.		–

Parameters in the Sample Edit screen

Parameter	Explanation	Page
Start Point	The point at which playback will start.	p. 267
Loop Start	The point at which loop playback (second time and onwards) will start.	p. 267
End Point	The point at which playback will end.	p. 267
Zoom Horz	The magnification (horizontal axis) of the display.	p. 266
Zoom Vert	The magnification (vertical axis) of the display.	p. 266
Original Key	Note number that will play the sample at the pitch at which it was sampled.	p. 268
BPM	Specifies the original tempo of the sample.	p. 268
Sample Gain	Adjusts the gain of the sample.	p. 268

Magnifying/Shrinking the Waveform Display (Zoom)

Here's how to change the magnification of the sample display.

1. In the Sample Edit screen, press [F6 (Zoom)].

The Zoom window will appear.

2. Use [CURSOR] to change the magnification of the display.

- Horizontal axis (time axis): 1/1–1/65536
  Press ▶ to increase the display magnification.
  Press ◀ to decrease the display magnification.
- Vertical axis (waveform amplitude axis): x1–x128
  Press ▲ to increase the display magnification.
  Press ▼ to decrease the display magnification.

3. Press [F8 (Close)] to close the window.

Even without displaying the Zoom window, you can press ◀ ▶ to expand/shrink the horizontal axis, or hold down [SHIFT] and press ▲ ▼ 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 you want to edit, and access the Sample Edit screen.

* *For details on how to select a sample, refer to* ***"Selecting a Sample"*** *(p. 263).*

2. Use ▲ or ▼ 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.

MEMO

By pressing [F7 (Preview)] you can audition the region between the start point and end point.

MEMO

If you hold down [F7 (Preview)] and edit the start/loop/end point, the sample will play repeatedly across that point. Since the sound in the region you're specifying will play repeatedly, this is a convenient way to check your setting.
(Zooming-in or zooming-out on the waveform will change the region that loops.)

3. Either turn the VALUE dial or use [INC], [DEC] to move the point so it's where you want it to be.

You'll probably find it convenient to zoom-in when making fine adjustments, and zoom-out when making major adjustments (p. 266).

You can move the point in units of one beat by pressing [F4 (Beat ◀)] or [F5 (Beat ▶)].

MEMO

After specifying the start point and end point, you can execute Truncate (p. 269) to delete unwanted portions at the beginning and end of the sample.

About the beat

Samples contain beat data. Up to 100 beat locations are specified for one sample. If the sample contains more than 100 beats, fifty beat locations will be specified from the beginning and end of the sample, respectively.

When you want to reset the beat indication (Reset Grid function [F7 (Reset Grid)])

From the Sample Edit screen, specify the start point of the sample, press [F2 (Sample Param)] to access the Sample Prm screen, specify the BPM, and then press [F7 (Reset Grid)]. This will reapply the grid to the sample according to the start point and BPM you specified. To execute, press [F8 (Execute)].

NOTE

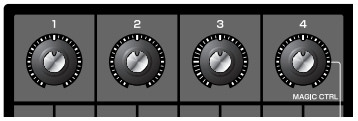
Sample modify menu operations (Chop, Normalize, etc.) apply to the entire sample. Even if you specify a start point or end point, they will be ignored. If you want to apply the operation only to the region between the start point and end point, use Truncate to delete unwanted portions of the sample, and then perform the sample modify menu operation.

Using the Knobs to Edit the Points

You can use the knobs to edit each point. Using the knobs is convenient when you need to make large changes to the value.

1. Use the CONTROL knobs to specify the following editing points.

From the left, the knobs have the following functions.



1 : Start Point

2 : Loop Start

3 : End Point

4 : Zoom-in/zoom-out the horizontal axis of the display

Making Settings for Sample (Sample Parameters)

Here you can make various settings for the sample.

1. **Select the sample that you want to edit (p. 263).**

2. **Press [SAMPLE] to access the Sample Edit screen, and press [F2 (Param)].**

3. **Press ▲ or ▼ to select a parameter.**

4. **Use VALUE dial or [INC], [DEC] to edit the value.**

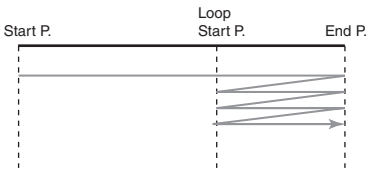
- **Loop Mode**

  Specifies how the sample will be played.

  Value

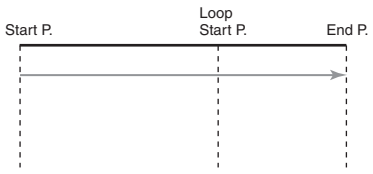
  FWD (Forward):

  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.



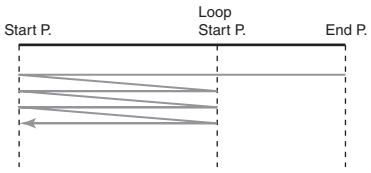
  ONE-SHOT:

  The sample will be played back only once, from the Start point to the End point.



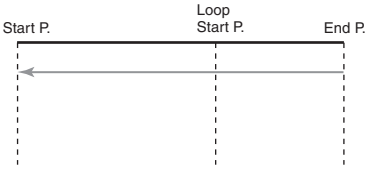
  REV (Reverse):

  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.



- **Loop Tune**

  Specifies the pitch of the loop region.

  Value: -50– +50

* *Make fine adjustments in one-cent (1/100 semitone) increments.*

- **Original Key**

  Note number that will play the sample at the pitch at which it was sampled.

  Value: 0 (C-1)–127 (G9)

- **BPM (TEMPO)**

  Specifies the original tempo of the sample.

  When setting the BPM (tempo) value, you can hold down [SHIFT] and turn the VALUE dial, or use [INC] [DEC] to adjust the value to the right of the decimal point.

  Value: 5.00–300.00

* *In order to synchronize the tempo, Wave Temp Sync (p. 92) must be turned on.*

- **Time Stretch Type**

  Specifies how the tempo will be synchronized. Decreasing this value will optimize the sound for more rapid phrases, and increasing this value will optimize the sound for slower phrases.

  Value: TYPE01–TYPE10

- **Start Fine**

  Fine adjustment of the Start point.

  Value: 0–255

- **Loop Start Fine**

  Fine adjustment of the Loop Start point.

  Value: 0–255

- **Loop End Fine**

  Fine adjustment of the End point.

  Value: 0–255

- **Sample Gain**

  This adjusts the gain of the sample, letting you boost the volume if it decreased in the process of sampling.

  Value: 0, +6, +12 [dB]

- **Sample Fine Tune**

  This adjusts the pitch of the sample in steps of one cent (over a range of +/-50 cents).

  Value: -50– +50

* *1 cent = 1/100th of a semitone*

- **Sample Level**

  This adjusts the volume of the sample.

  Value: 1–127

* *By pressing [F7 (Reset Grid)] you can reassign the sample grid according to the specified start point and BPM. To execute, press [F8 (Execute)].*

5. **Press [EXIT] when you are finished.**

Sample BPM calculation function

Calculates the BPM (tempo) of the sample.

1. **Access the Sample Parameter screen.**
2. **Press [F5 (BPM Calc)] to open the BPM Calc window.**
3. **Enter the sample's length (Measure) and time signature (Beat).**
4. **Press [F8 (Execute)] to calculate the tempo and enter the value in the BPM field of the Sample Parameter screen.**

Removing Unwanted Portions of a Sample (Truncate)

This operation cuts the portions of the sample that are earlier than the Start Point and later than the Loop End Point.

1. **Press [SAMPLE] to access the Sample Edit screen.**
2. **Press ▲ or ▼ to select the parameter.**
   - **Start Point:** Specifies the sample start point.
   - **End Point:** Specifies the sample end point.
3. **Either turn the VALUE dial or use [INC] [DEC] to set the value.**
4. **Press [F3 (Modify)].**
   The Sample Modify Menu window will appear.
5. **Press ▲ or ▼ to select "Truncate," and then press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
6. **If you want to replace the current sample with the truncated sample, press [F6 (Over Write)].**
7. **Press [F8 (Execute)].**
   A message will ask you for confirmation.
8. **Press [F7 (OK)] to execute.**
   To cancel, press [F8 (EXIT)].

   MEMO

   If [F6 (Over Write)] is off, **pressing [F7 (OK)] to execute** will create the edited sample in the lowest unused sample number in the list.

Boosting or Limiting the High-frequency Range of the Sample (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 [SAMPLE] to access the Sample Edit screen.**
2. **Press [F3 (Modify)].**
   The Sample Modify Menu window will appear.
3. **Press ▲ or ▼ to select "Emphasis," and then press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
4. **Either turn the VALUE dial or use [INC] [DEC] to select the emphasis type.**
   - **PreEmphasis:** Emphasizes the high-frequency range.
   - **DeEmphasis:** Attenuates the high-frequency range.
5. **If you want to replace the current sample with the emphasized sample, press [F6 (Over Write)].**
6. **Press [F8 (Execute)].**
   A message will ask you for confirmation.
7. **Press [F7 (OK)] to execute.**
   To cancel, press [F8 (EXIT)].

   MEMO

   If [F6 (Over Write)] is off, **pressing [F7 (OK)] to execute** will create the edited sample in the lowest unused sample number in the list.

Maximizing the Volume of a Sample (Normalize)

This operation raises the level of the entire sample as much as possible without exceeding the maximum level. In some cases, the volume of a phrase you resampled (p. 260) will be lower than the volume of the original phrase. In this case, it is a good idea to boost the volume by executing the Normalize operation.

1. **Press [SAMPLE] to access the Sample Edit screen.**
2. **Press [F3 (Modify)].**
   The Sample Modify Menu window will appear.
3. **Press ▲ or ▼ to select "Normalize," and then press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
4. **If you want to replace the current sample with the normalized sample, press [F6 (Over Write)].**
5. **Press [F8 (Execute)].**
   A message will ask you for confirmation.
6. **Press [F7 (OK)] to execute.**
   To cancel, press [F8 (EXIT)].

   MEMO

   If [F6 (Over Write)] is off, **pressing [F7 (OK)] to execute** will create the edited sample in the lowest unused sample number in the list.

Amp

This operation applies an envelope (time-variant change) to the volume of the sample. You can also adjust the volume of the entire sample.

1. **Press [SAMPLE] to access the Sample Edit screen.**
2. **Press [F3 (Modify)].**
   The Sample Modify Menu window will appear.
3. **Press ▲ or ▼ to select "Amp," and then press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
4. **Use VALUE dial or [INC] [DEC] to set the value.**
   - **Rate:** Specifies the rate of volume boost.
     This specifies how much boost will be applied relative to the current volume. The entire sample you select will be boosted.
     Value: 0–400%
5. **If you want to specify a point, press [F5 (Point)] to light it into red. Press ▲ or ▼ to select a parameter, and then use VALUE dial or [INC] [DEC] to set the value.**
   - **Current Point:** Specifies the currently selected point. Beginning near the start point, the points will be numbered 1, 2, 3, or 4.
     Value: 1–4
   - **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.
     Value: 0–400%
6. **If you want to replace the current sample with the normalized sample, press [F6 (Over Write)].**
7. **Press [F8 (Execute)].**
   A message will ask you for confirmation.
8. **Press [F7 (OK)] to execute.**
   To cancel, press [F8 (EXIT)].

   MEMO

   If [F6 (Over Write)] is off, **pressing [F7 (OK)] to execute** will create the edited sample in the lowest unused sample number in the list.

Stretching or Shrinking a Sample (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 [SAMPLE] to access the Sample Edit screen.**

2. **Press [F3 (Modify)].**
   The Sample Modify Menu window will appear.

3. **Press ▲ or ▼ to select "Time Stretch," and then press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].

4. **Press ▲ or ▼ to select the parameter.**

- **Edit Time Stretch**

  VALUE

  BPM: Changes the BPM of the sample to the BPM you specifies.

  Time: Specifies the length of the sample as a time value.

  Rate: Specifies the length relative to the current length of the sample.

  Value: 50.0–200.0%

- **Type**

  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.

  Value: TYPE01–TYPE10

- **Quality Adjust**

  Make fine adjustments to the tonal quality of the Time Stretch.

  Value: 1–10

5. **Use VALUE dial or [INC] [DEC] to specify the tempo/length.**
   When setting the BPM (tempo) value, you can hold down [SHIFT] and turn the VALUE dial, or use [INC] [DEC] to adjust the value to the right of the decimal point.

6. **Press [F8 (Execute)].**
   A message will ask you for confirmation.

7. **Press [F7 (OK)] to execute.**
   To cancel, press [F8 (EXIT)].

Dividing a Sample into Notes (Chop)

The **chop** function divides a sample waveform into separate notes.

* *The Create Sample Set function makes it easy to create a sample set from the chopped samples.*

Procedure for Dividing a Sample

You can freely specify the point(s) at which the sample is to be divided.

1. **Press [SAMPLE] to access the Sample Edit screen.**
2. **Press [F3 (Modify)].**
   The Sample Modify Menu window will appear.
3. **Press ▲ or ▼ to select "Chop," and then press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
4. **Press ▲ or ▼ to move the cursor to "Current Address."**
5. **Either turn the VALUE dial or use [INC] [DEC] to move the point.**
6. **At the location where you want to divide the sample, press [F4 (Add Point)].**
   The current location will be the dividing point.
7. **Repeat steps 5 and 6 to specify other dividing points as desired.**
   You can specify up to 15 locations at which to divide the sample; i.e., the sample will be divided into a maximum of 16 pieces.
8. **Audition the sample as described in the section "Auditioning the Divided Samples" (p. 273).**
   If you want to re-make settings, move or delete the point (p. 273).
9. **Press [F8 (Execute)].**
   A message will ask you for confirmation.
10. **To execute the division, press [F7 (OK)].**
    To cancel, press [F8 (EXIT)].
    When you execute the Chop operation, a message will ask whether you want to execute Create Sample Set.

    * *The divided samples will be added to the sample list.*
11. **If you want to execute Create Sample Set, press [F8 (Execute)].**

    NOTE

    When you execute Create Sample Set, any setting changes that you've made for a patch, rhythm set, or sample set will be lost.

    MEMO

    When you execute Create Sample Set, a sample set with the divided samples assigned to the pads will be automatically created.
12. **If you don't want to execute Create Sample Set, press [F7 (Cancel)].**

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 [SAMPLE] to access the Sample Edit screen.

2. Press [F3 (Modify)].
The Sample Modify Menu window will appear.

3. Press ▲ or ▼ to select "Chop," and then press [F8 (Select)].
To cancel, press [F7 (Cancel)].

4. Press [F6 (Auto Chop)].

5. Either turn the VALUE dial or use [INC] [DEC] to select the method by which the sample is to be divided.

- **Chop Type**
  Specifies how the sample will be divided.
  Value
  Level: Divides according to volume.
  Beat: Divides at beats based on the BPM (p. 268) of the sample.
  Divide x: The sample will be divided into the specified number of equal-sized samples.

6. Press ▼.

7. Either turn the VALUE dial or use [INC] [DEC] to set the value.

- **Level (If Chop Type is Level)**
  Level at which the sample is to be divided. Lower settings of this value will cause the sample to be divided more finely.
  Value: 1–10
- **Beat (If Chop Type is Beat)**
  Beat interval at which the sample is to be divided.
  Value: 1/32, 1/16T, 1/16, 1/8T, 1/8, 1/4T, 1/4, 1/2, 1/1, 2/1
- **Times (If Chop Type is Divide x)**
  Number of samples into which the sample is to be divided.
  Value: 2–16

8. Press [F8 (Execute)].
The sample will be automatically divided according to your settings, and the points will be specified. A maximum of 15 division points will be set (16 regions).
To cancel, press [F7 (Cancel)].

9. Audition the sample as described in the section "Auditioning the Divided Samples" (p. 273)
If you want to re-make settings, move or delete the point **"Moving a Dividing Point"** (p. 273).

10. Press [F8 (Execute)].
A message will ask you for confirmation.

11. To execute the division, press [F8 (Execute)].
* *To cancel, press [F7 (Cancel)].*
When you execute Auto Chop, a message will ask you whether you want to execute Create Sample Set.

12. If you want to execute Create Sample Set, press [F8 (Execute)].

MEMO

When you execute Create Sample Set, a sample set with the divided samples assigned to the pads will be automatically created.

13. If you don't want to execute Create Sample Set, press [F7 (Cancel)].
You will return to the Sample Edit screen.

Auditioning the Divided Samples

After dividing the sample, you can press the 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],...[16].

Moving a Dividing Point

1. Press ▲ or ▼ to move the cursor to "Point No."

2. Turn the VALUE dial to select the point that you want to move.
In order from the start point, the points are numbered 1, 2,...15.

3. Press ▼.

4. Turn the VALUE dial to move the dividing point.

Deleting a Dividing Point

1. Press ▲ or ▼ to move the cursor to "Point No."

2. Turn the VALUE dial to select the point that you want to delete.

3. Press [F5 (Clear Point)].
The dividing point will be deleted.

Saving a Sample (Save)

Here's how to save the selected sample into the project.

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 [SAMPLE].**

2. **Press [F1 (Sample List)].**
   The Sample List display appears.

   Samples without the "" symbol and samples with the "" symbol have not been saved.

3. **Use VALUE dial, [INC] [DEC], or ▲ ▼ to select the sample that you want to save.**

4. **Press [F2 (Save)].**

5. **Assign a name to the sample.**

   cf.

   For details on assigning names, refer to **"Assigning a Name"** (p. 42)

6. **When you have finished inputting the name, press [F8 (OK)].**
   A screen will appear allowing you to select the write-destination sample.

7. **Turn the VALUE dial, or use [INC] [DEC] to select the sample number.**

8. **Press [F8 (Write)].**
   A message will ask you for confirmation.
   Never switch off the Fantom-G while data is being saved.

9. **Press [F7 (OK)] to execute the save operation.**
   To cancel the operation, press [F8 (EXIT)].

- You can't save by overwriting another sample.

MEMO

You can also save a sample by pressing the [WRITE] button to access the WRITE MENU, and then choosing "Sample."

Saving all samples (Save All)

Here's how to save all samples of the sample list into the project.

1. **Press [SAMPLE].**

2. **Press [F1 (Sample List)].**
   The Sample List display appears.

   Samples without the "" symbol and samples with the "" symbol have not been saved.

3. **Press [F3 (Util Menu)].**
   The Sample Utility Menu window will appear.

4. **Press ▲ or ▼ to select "Save All," and then press [F8 (Select)].**
   To cancel, press [F7 (Cancel)].
   A message will ask you for confirmation.

5. **Press [F7 (OK)] to execute.**
   To cancel, press [F8 (EXIT)].

MEMO

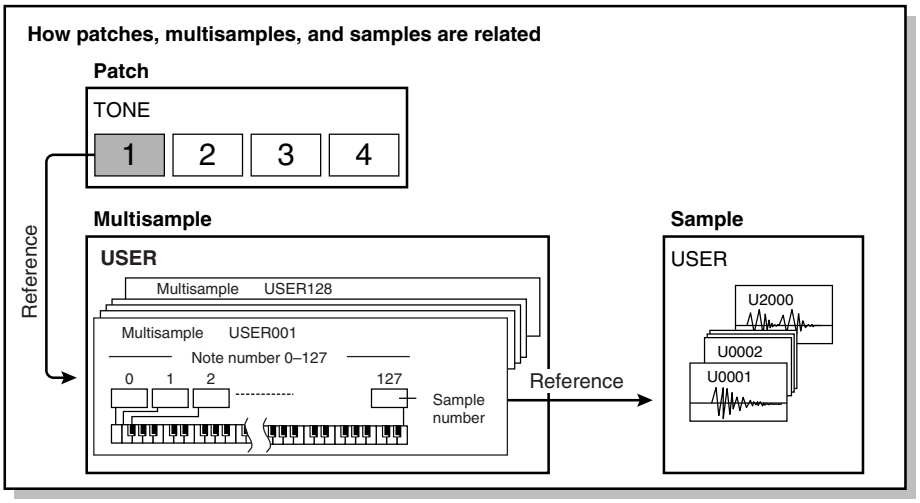
When you execute Save All, the samples will be written in the same numerical order as they appear in the sample list. The sample names will be assigned automatically.

Multisample

Creating a multisample

A "multisample" is a set of different samples assigned to the notes of the keyboard. One multisample can split up to 128 samples across the keyboard. You can store 128 multisamples in user memory.

* *In order to hear a multisample, you must assign it to a patch.*



Creating a multisample in the Patch Edit screen

1. Select the patch that you want to edit.

MEMO

You should start by initializing the patch settings. (p. 87)

MEMO

You can't create a multisample if the patch type is "Rhythm" or "Sample Set."

2. Press [PATCH] twice to get the Patch Pro Edit screen.

3. Press [F1 (⇑)] or [F2 (⇓)] to select "Wave."

4. Set the parameters as follows to assign the multisample to the desired Tone 1–4.

- **Wave Group:** MSAM (Multisample waveforms)
- **Wave Number. L (Mono):** Multisample number

* *For details on making this setting, refer to* ***How to Make Patch Settings*** *(p. 84).*

* *If you want to use a stereo multisample, specify the same number for L and R.*

5. Press [F4 (Util Menu)].

The Song Utility Menu window will appear.

6. Use ▲ / ▼ to choose "Multisample Edit," and press [F8 (Select)].

The Multisample Edit window will appear.

7. Edit the multisample.

* *For details on editing, refer to "Editing a multisample" (p. 276).*

8. Save the multisample.

* *In the Multisample Edit screen, press [WRITE] and save the multisample as directed by the screen that appears.*

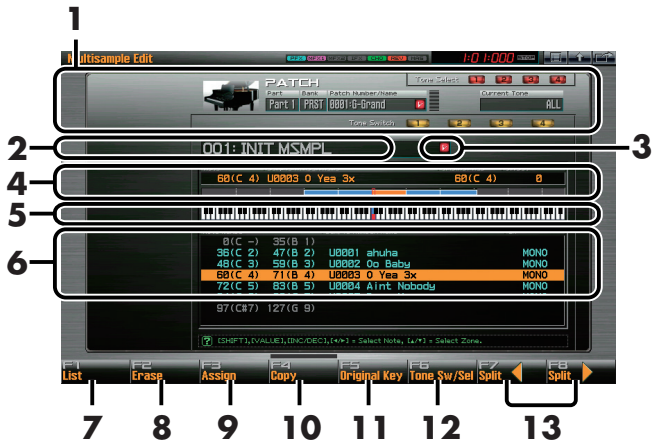
9. Save the patch.

* *For details on how to save the patch, refer to* ***Saving Patches You've Created (Write)*** *(p. 88).*

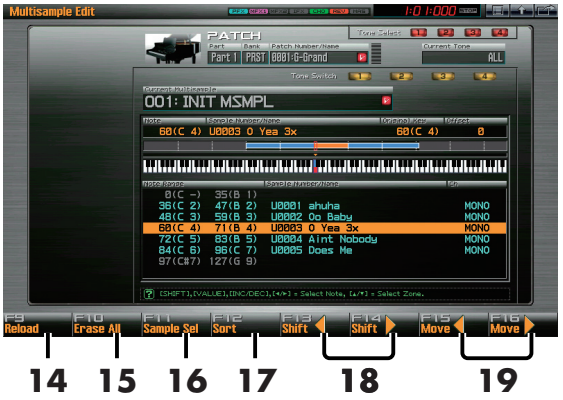
Editing a multisample

About the Multisample Edit screen

Multisample Edit Screen



If you hold down [SHIFT]



1. **Shows information about the patch.**
2. **Shows the name of the multisample.**
3. **Indicates whether the multisample has been edited.**
4. **Shows information about the current note.**
5. **Indicates the original key of the sample.**
6. **Shows a list of the samples assigned to the multisample.**
7. **Changes the multisample assigned to a tone (p. 277).**
8. **Erases the data from the selected region of notes (p. 277).**
9. **Assigns a sample to the selected region (p. 277).**
10. **Copies a sample from a key to another key (p. 277).**
11. **Specifies the original key of the sample (p. 278).**
12. **Opens the Tone Switch/Select window (p. 277).**
13. **Moves the split point (p. 277).**
14. **Returns a multisample to the last-written state (p. 277).**
15. **Erases all notes (p. 278).**
16. **Assigns a sample to the current zone (p. 278).**
17. **Sorts samples in a multisample in the order of their original key (p. 278).**
18. **Moves all samples to left or right (p. 278).**
19. **Moves the data of the current zone to left or right (p. 278).**

Selecting the notes to edit

1. **Press the keyboard to select the sample you want to edit.**
   You can select a region by pressing two notes.

   MEMO

   You can also make your selection by turning the VALUE dial, by using ◀ ▶, or by using [INC][DEC]. In this case, hold down [SHIFT] to select a region of notes.

Changing the multisample assigned to a tone (List)

Here's how you can change the multisample that's assigned to the current tone.

1. **In the Multisample Edit screen, press [F1 (List)].**
   The Multisample List window will open.

The buttons have the following functions.

- VALUE dial, ▲ ▼, [INC][DEC]
  Change the number of the multisample to be assigned.
- [F7 (Cancel)] or [EXIT]
  Cancel the operation and return to the previous screen.
- [F8 (Select)]
  Assigns the selected multisample to the current tone, and return to the previous screen.

Erasing the data from the selected region of notes (Erase)

1. **In the Multisample Edit screen, press [F2 (Erase)].**
   The data for the selected region of notes will be erased.

Assigning a sample to the selected region (Assign)

1. **In the Multisample Edit screen, press [F3 (Assign)].**
   The Sample List window will appear, allowing you to assign the selected sample to the selected region.

The buttons have the following functions.

- [F6 (Preview)]
  Auditions the sample.
- [F7 (Exit)] or [EXIT]
  Cancel the operation and return to the previous screen.
- [F8 (Select)]or [ENTER]
  Selects the sample and return to the Multisample Edit screen.

Copying a sample from a key to another key (Copy)

Here's how the sample assigned to a note can be copied to a different note of the keyboard.

1. **In the Multisample Edit screen, press the key to which the copy-source sample is assigned.**
   You can also select the note by using VALUE dial, ▲ ▼, or [INC][DEC].
   The Sample Data area shows information about the sample assigned to the current note.
2. **Press [F4 (Copy)] so it lights in red.**
3. **Press the copy-destination key.**
   If you specify a region by pressing more than one key, the data will be copied to the region between the lowest and highest keys you press.
4. **Take your hand off the keyboard.**
   [F4 (Copy)] will go dark, and you will return to the normal Multisample Edit screen.

Opening the Tone Switch/Select window (Tone Sw/Sel)

1. **In the Multisample Edit screen, press [F6 (Tone Sw/Sel)].**
   The Tone Switch/Select window will open.
   This is the same as when you press [F8 (Tone Sw/Sel)] in the Single Play screen.
2. **Press [EXIT] to close the window.**

Moving the split point (Split Point)

The "Split Point" is the boundary between zones (p. 278).

1. **In the Multisample Edit screen, press [F7 (Split⇐)][F8 (Split⇒)].**
   The split point of the selected sample and the adjacent sample will move to left or right.

Returning a multisample to the last-written state (Reload)

Here's how you can return the currently edited multisample to the state in which it was last written.

1. **In the Multisample Edit screen, hold down [SHIFT] and press [F1 (Reload)].**
   A screen will ask you for confirmation.
2. **Press [F7 (OK)].**
   If you decide to cancel, press [F8 (CANCEL)].

Erasing all notes (Erase All)

Here's how to erase all notes.

1. **In the Multisample Edit screen, hold down [SHIFT] and press [F2 (Erase All)].**
   A screen will ask you for confirmation.

2. **Press [F7 (OK)].**
   If you decide to cancel, press [F8 (CANCEL)].

Replacing the sample of the current zone (Sample Select)

A "zone" is a region to which the same sample is assigned. Here's how to assign a sample to the currently selected zone (the "current zone").

1. **In the Multisample Edit screen, hold down [SHIFT] and press [F3 (Sample Select)].**
   The Sample List window will appear, allowing you to assign the selected sample to the current zone.

The buttons have the following functions.

- [F7 (EXIT)] or [Exit]
  Cancel the operation and return to the previous screen.
- [F6 (Preview)]
  Auditions the sample.
- [F8 (Select)] or [ENTER]
  Selects the sample and return to the Multisample Edit screen.

Specify the original key (Original Key) of the sample

Samples you record or import are set so that they will play at their original pitch when you press the C4 note.
In order to correctly match the key of the sample to the keyboard, you must modify the "original key" of the sample.
For example, if you sampled a sound whose pitch was E4, you'll need to change its "original key" setting to E4 so that it will play at its original pitch when you press the E4 note of the keyboard.

* *A sample will not play more than two octaves higher than its original key.*

1. **In the Multisample Edit screen, press [F5 (Original Key)].**
   The Sample Original Key window will open.

The buttons have the following functions.

- VALUE dial, [INC][DEC]
  Change the original key of the sample assigned to the current note.
- [F7 (Preview)]
  The sample will play at its current original key while you continue holding down the button.
- [F8 (Close)]
  Closes the Sample Original Key window.
- Keyboard
  When you play the keyboard, the original key of the sample assigned to the most recently pressed note will be displayed.

2. **Save the sample whose original key you changed.**

* *For details on saving a sample, refer to* ***Saving a Sample (Save)*** *(p. 274).*

Sorting samples in the order of their original key (Sort)

This operation reassigns all samples currently assigned to the multisample, so that they are placed in the order of their original key setting. (This produces the same result as Create Multisample.)

1. **In the Multisample Edit screen, hold down [SHIFT] and press [F4 (Sort)].**
   A screen will ask you for confirmation.

2. **Press [F7 (OK)].**
   If you decide to cancel, press [F8 (CANCEL)].

Moving all samples to left or right (Shift)

Here's how all samples assigned to notes can be shifted to the left or right.

1. **In the Multisample Edit screen, hold down [SHIFT] and press [F5 (⇐)][F6 (⇒)].**

Moving the data of the current zone to left or right (Move)

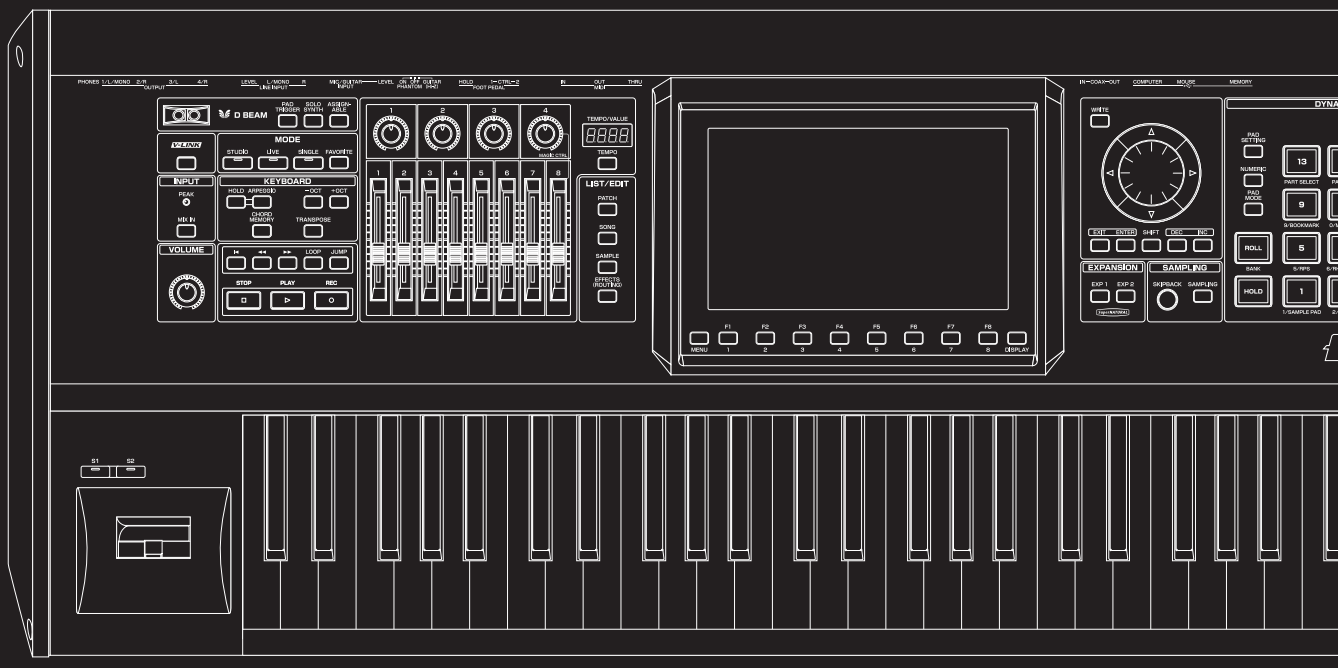
Here's how the sample of the current zone can be moved to left or right.

1. **In the Multisample Edit screen, hold down [SHIFT] and press [F7 (⇐)][F8 (⇒)].**

08: Various Settings (Menu and System)

This chapter explains the menus and system settings.

- Menu Reference ..... p. 280
- System Settings ..... p. 290
- V-LINK ..... p. 305



Menu Reference

Menus

The menus contain various functions you will find helpful when using the Fantom-G.

Press [MENU] to access the menu, select the desired function, and execute it.

Menu name	Explanation	Page
Project	Load or save a project	p. 280
System	Access the System Setting screen	p. 290
Factory Reset	Reset the Fantom-G to the factory-set condition	p. 284
Format USB Memory	Formats (initializes) USB memory	p. 284
USB Storage	Connects the Fantom-G to a computer and mounts the internal memory as USB memory	p. 285
Import Audio	Imports a WAV/AIFF format audio file into the Fantom-G	p. 289

Project-related Settings (Project)

Here's how to load a project from internal memory or USB memory into the Fantom-G's temporary area, or save the project from the Fantom-G's temporary area.

Load Project

This operation will load a project from internal memory or USB memory into the Fantom-G's temporary area.

NOTE

When you load a project, the contents of the temporary area will be rewritten. If the temporary area contains important data, you must save it to internal memory or USB memory before loading a project.

1. **Press [MENU] to access the Menu window.**
2. **Turn the VALUE dial or use [CURSOR] to choose "Project," and then press [ENTER].**
   The Project Menu will appear.
3. **Turn the VALUE dial or use [CURSOR] to choose "Load Project," and then press [F8 (Select)].**

   MEMO

   You can also press [F1 (Load)] to execute this.
4. **Press [F1 (Internal)] or [F2 (USB Memory)] to select the load-source area (internal memory or USB memory).**
5. **Use ▲ or ▼ to select the project that you want to load.**
6. **Press [F8 (Load)].**
   A confirmation message will appear.
7. **Press [F7 (OK)] to execute.**

* *If you decide to cancel, press [F8 (EXIT)].*

Save Project

This operation will save the project from the temporary area to internal memory or USB memory.

1. **Press [MENU] to access the Menu window.**
2. **Turn the VALUE dial or use [CURSOR] to choose "Project," and then press [ENTER].**
   The Project Menu will appear.
3. **Turn the VALUE dial or use [CURSOR] to choose "Save Project," and press [F8 (Select)].**

   MEMO

   You can also press [F2 (Save)] to execute this.
   A confirmation message will appear.
4. **Press [F7 (OK)] to execute.**

* *If you decide to cancel, press [F8 (EXIT)].*

MEMO

If an error message appears

An error message may appear if the data cannot be successfully saved, such as when there is insufficient space in internal memory or USB memory.
"Error Messages" (p. 322) lists the various errors that may appear, and explains the appropriate response.

Save As Project

This operation will save the project from the temporary area to internal memory or USB memory under a different name.

1. **Press [MENU] to access the Menu window.**
2. **Turn the VALUE dial or use [CURSOR] to choose "Project," and then press [ENTER].**
   The Project Menu will appear.
3. **Turn the VALUE dial or use [CURSOR] to choose "Save As Project," and press [F8 (Select)].**

   MEMO

   You can also press [F3 (Save As)] to execute this.
4. **Press [F1 (Internal)] or [F2 (USB Memory)] to select the save-destination area (internal memory or USB memory).**
5. **Press [F8 (Save As)].**
6. **The Project Name window will appear. Enter a name, and press [F8 (OK)].**

   MEMO

   If you selected internal memory, there will be no step for entering a name.

   cf.

   For details on how to enter a name, refer to **"Assigning a Name"** (p. 42).
   A confirmation message will appear.
7. **Press [F7 (OK)] to execute.**

* *If you decide to cancel, press [F8 (EXIT)].*

MEMO

If an error message appears

An error message may appear if the data cannot be successfully saved, such as when there is insufficient space in internal memory or USB memory.
"Error Messages" (p. 322) lists the various errors that may appear, and explains the appropriate response.

Create Project

This operation will create a new project.

When you execute a factory reset, preload data is loaded into the User Patch and User Live / Studio Set areas. If you don't need the preload data, choose internal memory when executing Create Project. This allows you to create a project in which all data is initialized.

NOTE

If you create a new project by selecting the internal memory, **the user project that is inside the Fantom-G will be over-written (erased)**. If you have important data, please backup to USB memory.

1. **Press [MENU] to access the Menu window.**
2. **Turn the VALUE dial or use [CURSOR] to choose "Project," and then press [ENTER].**
   The Project Menu will appear.
3. **Turn the VALUE dial or use [CURSOR] to choose "Create Project," and press [F8 (Select)].**

   MEMO

   You can also press [F4 (Create)] to execute this.
4. **Press [F1 (Internal)] if you want to create the new project in internal memory, or press [F2 (USB)] if you want to create it in USB memory. Then press [F8 (Create)].**
5. **If you selected USB memory, the Project Name window will appear. Enter a name, and press [F8 (OK)].**

   MEMO

   If you selected internal memory, the Project Name window will not appear; proceed to step **6.** below.

   cf.

   For details on how to enter a name, refer to **"Assigning a Name"** (p. 42).

   A confirmation message will appear.
6. **Press [F7 (OK)] to execute.**

* *If you decide to cancel, press [F8 (EXIT)].*

MEMO

If an error message appears

An error message may appear if the data cannot be successfully saved, such as when there is insufficient space in internal memory.

"Error Messages" (p. 322) lists the various errors that may appear, and explains the appropriate response.

MEMO

If you selected USB memory, according to the default settings, projects will be named using a sequential number, like this: "FantomG001," "FantomG002," etc., but you are free to change this. On your computer, projects will appear as folders named "Project name.Prj" located in the root of the USB memory.

If you rename the folder (project name) on your computer, you will not be able to use "." as the first character. Do not modify the filename extension. Also, there are certain characters (\ / : , ; * ? " < > |) that cannot be used in the name.

Backup Project

This operation will back up a project from internal memory to USB memory (only one).

1. **Press [MENU] to access the Menu window.**
2. **Turn the VALUE dial or use [CURSOR] to choose "Project," and then press [ENTER].**
   The Project Menu will appear.
3. **Turn the VALUE dial or use [CURSOR] to choose "Backup Project," and then press [F8 (Select)].**

   MEMO

   You can also press [F5 (Backup)] to execute this.

   A confirmation message will appear.
4. **Press [F7 (OK)] to execute.**

* *If you decide to cancel, press [F8 (EXIT)].*

MEMO

If an error message appears

An error message may appear if the data cannot be successfully saved, such as when there is insufficient space in internal memory.

"Error Messages" (p. 322) lists the various errors that may appear, and explains the appropriate response.

Restore Project

By executing this operation, a project previously backed up to USB memory using Backup Project can be restored into internal memory.

NOTE

Restoring a backup will overwrite the internal memory. If internal memory contains important data, save it to USB memory before you execute the Restore Project operation.

1. **Press [MENU] to access the Menu window.**
2. **Turn the VALUE dial or use [CURSOR] to choose "Project," and then press [ENTER].**
   The Project Menu will appear.
3. **Turn the VALUE dial or use [CURSOR] to choose "Restore Project," and then press [F8 (Select)].**

   MEMO

   You can also press [F6 (Restore)] to execute this.
   A confirmation message will appear.
4. **Press [F7 (OK)] to execute.**

* *If you decide to cancel, press [F8 (EXIT)].*

System Settings (System)

cf.

"System Settings (Settings Common to All Modes)" (p. 290)

Reset to Default Factory Settings (Factory Reset)

This restores all data in the Fantom-G to the factory-set condition (**Factory Reset**).

NOTE

If there is important data you've created that's stored in the Fantom-G's User memory, all such data is discarded when a Factory Reset is performed (**the data of the internal user memory will be lost**). If you want to keep the existing data, save it on a USB memory (p. 281) or save it via USB to your computer (p. 285).

1. **Press [MENU] to open the Menu window.**
2. **Turn the VALUE dial or use [CURSOR] to select "Factory Reset," and then press [ENTER].**
   A message will ask confirmation.
3. **Press [F7 (OK)] to execute the Factory Reset.**

* *To cancel, press [F8 (EXIT)].*

NOTE

This process will require several minutes. Never turn off the power until this process has been completed.

4. **When the display indicates "Factory Reset Completed!," press [F7 (OK)].**

Format USB Memory

This formats (initializes) the USB memory that's connected to the rear panel USB MEMORY connector.

NOTE

If the format of the USB memory is other than FAT, it won't be recognized by the Fantom-G. (Nor will the Fantom-G be able to format it.) In this case, use your computer to format the USB memory using the "FAT" or "FAT32" file system. (If you're using Mac OS X, format the USB memory using the "MS-DOS file system (FAT32).")

1. **Press [MENU] to open the Menu window.**
2. **Turn the VALUE dial or use [CURSOR] to select "Format USB Memory," and then press [ENTER].**
   A message will ask confirmation.
3. **Press [F7 (OK)] to execute the Format USB memory.**

* *To cancel, press [F8 (Cancel)].*

4. **When the display indicates "Format USB memory Completed!," press [F7 (OK)].**

Exchanging Files with Your Computer (USB Storage)

By connecting the Fantom-G with your computer via a USB cable, you can transfer files from Internal memory or a USB memory to and from the hard disk or other media of your computer, in order to back up your data.

You can use software on your computer to edit WAV/AIFF files you've

created on the Fantom-G. Conversely, WAV/AIFF files that you've created on your computer can be used on the Fantom-G.

In this way, USB Storage mode lets you transfer files such as patch and waves to or from a connected computer.

NOTE

Close the DAW software on your computer before you enter USB Storage mode.

Never connect or disconnect the USB cable or turn off the power while in USB Storage mode.

Connections

1. **With the Fantom-G not connected, start up your computer.**
2. **Use a USB cable to connect the Fantom-G to your computer.**
3. **Turn on the power (POWER ON switch) of the Fantom-G.**

Specify the Connection-Destination

When the Fantom-G is connected to your computer, you can select the area on the Fantom-G to which a connection is to be made; either the internal user area or the USB memory.

1. **Press [MENU].**
2. **Turn the VALUE dial or use [CURSOR] to select "USB Storage," and then press [ENTER].**
   The USB Storage screen will appear.
3. **Press [F1 (Internal)] or [F2 (USB memory)] to connect with your computer.**
   * *To cancel the connection, press [Exit].*
4. **The display will differ as follows, depending on the computer you're using.**

- **Windows Vista/XP users**
  A drive named "FANTOM G" will be displayed within My Computer. If a USB memory is connected, its volume name will be displayed.
- **Mac OSX users**
  A drive icon named "FANTOM G" will appear on the desktop. If a USB memory is connected, its volume name will be displayed.

Cautions Regarding Folders and Files

You must observe the following points when the Fantom-G is connected to your computer via USB.

- Don't use your computer to move or delete folders within the Fantom-G.
- Don't use your computer to format or optimize the Fantom-G's user memory or USB memory, or execute operations such as Scan Disk.
- The Fantom-G can only handle filenames consisting of single-byte alphanumeric characters.

  You cannot use a period "." at the beginning of a file name. Certain other characters (\ / : , ; * ? " < > |) can also not be used in a file name.
- Only the following types of files can be transferred between the Fantom-G and your computer.

  Song files (.SVQ/.SVA/.SVP)
  Standard MIDI Files (.MID)
  Audio files (.WAV/.AIF/.AIFF)
  Bitmap files (.BMP) (800 x 480 pixels)
  Text file (.TXT)
- To handle these files, use the appropriate method described below.

Standard MIDI Files	Place the files in the following folder. **FantomG.Prj/SEQ/SMF** folder "**FantomG.Prj**" is the name of the project folder in the Fantom-G's internal memory. Multiple projects can be saved in USB memory. By default, the project folder names will be numbered as "**FantomG001.Prj**," "**FantomG002.Prj**," etc., but the portion preceding the filename extension will be the project name you assign when saving the project.
Audio files	When placing the files from your computer, place them in the following location. **IMPORT** folder Then import the audio files. If you want to use your computer to read samples that were written by the Fantom-G, load the files from the Project folder/SMPL folder into your computer.
BMP files	When placing the files from your computer, place them in the following location. **IMPORT** folder
Text files	When placing the files from your computer, place them in the following location. **IMPORT** folder Then import the text file.

Exiting Storage Mode

Windows Vista/XP Users

1. **In My Computer, right-click the "removable hard disk" icon and execute "Remove."**
2. **Press [EXIT].**

Mac OSX Users

1. **Drag the Fantom-G drive icon into the trash.**
2. **Press [EXIT].**

Examples of Using Storage Mode

Copying a standard MIDI file (SMF) from your computer to the Fantom-G

Here's how to copy a standard MIDI file from your computer to the Fantom-G.

1. **On your computer, prepare the standard MIDI file (.MID) that you want to copy.**

2. **Use the USB Storage function (p. 285) to copy the standard MIDI file (.MID) to the following folder of the Fantom-G's internal memory or the USB memory.**

   "FantomG.Prj/SEQ/SMF" folder

   MEMO

   "**FantomG.Prj**" is the name of the project folder in the Fantom-G's internal memory. Multiple projects can be saved in USB memory. By default, the project folder name will be numbered as "**FantomG001.Prj**," "**FantomG002.Prj**," etc., but the portion preceding the filename extension will be the project name you assign when saving the project.

Importing Audio file (Import Audio)

cf.

"Import Audio" (p. 289)

Using a Bitmap File as a Background in the Display (Import BMP)

Via USB memory (or internal memory), you can use **a bitmap file (Windows BMP format, 24-bit, 800x480 pixel)** as wallpaper for the Fantom-G.

1. **On your computer, prepare the bitmap file (Windows BMP format, 24-bit, 800x480 pixel) that you want to use as wallpaper.**
2. **Using the USB Storage function, copy the bitmap file to the "IMPORT" folder of USB memory or the Fantom-G's internal memory.**
3. **Press [MENU].**
4. **Turn the VALUE dial to select "System," and then press [ENTER].**
5. **Press [F5 (Wallpaper)].**
   The Wallpaper screen will appear.

   MEMO

   Sixteen different images can be shown as the background. The imported file will overwrite the currently selected image. If you want to delete an imported file, select an image (1–16) and press [F2 (Delete)].
6. **Press [F1 (Import BMP)].**
7. **Press [F1 (Internal)] or [F2 (USB Memory)] to select the import-source area (internal memory or USB memory).**
8. **Press ▲ or ▼ to select the file that you want to import.**
9. **Press [F8 (Select)].**
   The file you want to import will be displayed.

   * *To cancel, press [F7 (Cancel)].*
10. **Press [F8 (Execute)].**
    The file will be imported.

    * *To cancel, press [F7 (Cancel)].*

    MEMO

    The changed wallpaper setting is temporary, and will be lost when you turn off the power. If you want to keep the setting, press [F7 (Sys Write)] to write it into the Fantom-G's system memory.

Displaying Text Memos in the Favorite Screen (Import Text)

You can create a text file on your computer and display it in the Favorite screen (p. 54). Since this lets you add a note to each bank, it's a convenient way to provide reminders, such as an explanation of each screen.

1. **Create a text file on your computer, and save it with a filename extension of ".TXT".**
2. **Place the file created by step 1 in the "IMPORT" folder of USB memory or the Fantom-G's internal memory.**
3. **Execute "Import TEXT" to import the text file.**
   For details on how to import, refer to **"Importing a Text File (Import Text)"** (p. 56).

Import Audio

Here's how to import an audio file (WAV/AIFF).

1. **On your computer, prepare the audio file (WAV/AIFF format) that you want to import.**
2. **Using the USB Storage function, copy the audio to the "IMPORT" folder of USB memory or the Fantom-G's internal memory.**
3. **Press [MENU].**
4. **Turn the VALUE dial to select "Import Audio," and then press [ENTER].**
5. **Press [F1 (Internal)] or [F2 (USB Memory)] to select the import-source area.**
   [F1 (Internal)]: Import from Internal memory.
   [F2 (USB Memory)]: Import from a USB memory.
6. **Press [F8 (Import Audio)].**
   A message will ask you for confirmation.
   * *To cancel, press [F7 (Cancel)].*
7. **Press [F7 (OK)].**
   The file will be imported, and the Sample List screen will appear.
   * *To cancel, press [F8 (EXIT)].*

MEMO

The imported file will be added to the sample list as a sample. This sample is temporary, and will be lost when you turn off the power. If you want to keep it, press [WRITE] to save the data (p. 274).

MEMO

By pressing [F4 (Mark)] or [F5 (Mark All)], you can add marks to the list, allowing you to perform operations (such as Delete or Import) on multiple samples in a single operation.

- If you want to select multiple samples, press [F4 (Mark)] to add a check mark to each sample you want to select.
- If you select a marked sample and press [F4 (Mark)], the check mark will be removed.
- If you press [F5 (Mark All)], a check mark will be added to all samples in the list.
- If you press [F5 (Mark All)] when all samples in the list already have a check mark, the check marks will be cleared from all samples.

System Settings (Settings Common to All Modes)

Settings that affect the entire operating environment of the Fantom-G, such as tuning and MIDI message reception, are referred to as **system functions.** This section explains how to make settings for the System functions and describes the functions of the different System parameters.

How to Make System Function Settings

1. Press [MENU] to open the Menu window.

2. Turn the VALUE dial or use [CURSOR] to select "System," and then press [ENTER].

The System Setup screen appears.

F-key operations in the System Setup screen

F-key	Explanation	Page
F1 Group/Up	Moves the edit group tab upward.	–
F2 Group/Down	Moves the edit group tab downward.	–
F3 Setup	Edits the system parameters.	p. 291
F4 Info	Displays system information.	p. 302
F5 Wallpaper	Specifies the wallpaper.	p. 303
F6 Appearance	Edits screen-related settings.	p. 304
F7 Sys Write	Saves system settings.	p. 290
F8 Exit	Returns to the previous screen.	–

3. The parameters are organized into several edit groups. Use [F1 (Up)] [F2 (Down)] to switch tabs.

4. Use [CURSOR] to move the cursor to the parameter you wish to modify.

MEMO

When the cursor is located at a parameter value, you can press [ENTER] to access a window for setting the value.

- When all the parameters cannot be shown within a single settings screen, a scroll bar will be displayed at the right side of the screen. In such cases, press ▼ to scroll the screen downward.

5. Turn the VALUE dial or press [INC] [DEC] to get the value you want.

6. Repeat steps 3–5 to set each System parameter you want to edit.

7. To save the settings you modified, press [F7 (Sys Write)] and perform the Write operation. If you do not want to save, press [EXIT] to return to the previous screen.

Saving the System Settings (System Write)

Changes you make to the System function settings are only temporary—they will be discarded as soon as the power is turned off. If you want to keep any changes you've made in the system settings, you must save them in internal system memory.

NOTE

When you perform the save procedure, the data that previously occupied the save destination will be lost. However, the factory setting data can be recovered by performing the Factory Reset procedure.

1. Change the system function settings, and press [F7 (Sys Write)].

The display will indicate "System Write Completed!" The data will be saved, and you're returned to the System Setup screen.

Functions of System Parameters

This section explains what the different System parameters do, and also how these parameters are organized.

cf.

For details on these settings, refer to **"How to Make System Function Settings"** (p. 290).

Pedal/D Beam

NOTE

The usable range of the D Beam controller will become extremely small when used under strong direct sunlight. Please be aware of this when using the D Beam controller outside.

NOTE

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. Increase this value will raise the sensitivity (p. 291).

D Beam Assign Source

This specifies whether the D Beam Controller switch will follow the system settings (SYS) or follow the live set or studio set (TEMP).

Value: SYS, TEMP

D Beam Sens (D Beam Sensitivity)

This sets the D Beam controller's sensitivity. Increasing this value will raise the sensitivity.

Value: 0–127

Control Pedal 1 Assign
Control Pedal 2 Assign

This specifies the function of each pedal connected to the FOOT PEDAL CTRL 1, 2 jacks.

Value

OFF: Off

CC01–31, 32(OFF), 33–95: Controller numbers 1–31, 32(OFF), 33–95

AFTERTOUCH: Aftertouch

BEND UP: The pitch will rise in semitone steps (maximum 4 octaves) each time you press the pedal.

BEND DOWN: The pitch will fall in semitone steps (maximum 4 octaves) each time you press the pedal.

START/STOP: The sequencer will start/stop.

TAP TEMPO: Tap tempo (a tempo specified by the interval at which you press the pedal).

PROG UP: The next sound number will be selected.

PROG DOWN: The previous sound number will be selected.

USER GROUP UP: The user group patch of the next number or bank will be selected.

USER GROUP DOWN: The user group patch of the previous number or bank will be selected.

FAVORITE UP: The favorite patch/live set/studio set of the next number or bank will be selected.

FAVORITE DOWN: The favorite patch/live set/studio set of the previous number or bank will be selected.

PANEL SWITCH: The result will be the same as pressing the switch assigned by Panel Switch Assign (see below).

Control Pedal 1 Panel Switch Assign
Control Pedal 2 Panel Switch Assign

Specifies the switch that will operate when Pedal 1 Assign or Pedal 2 Assign (see preceding item) are set to "**PANEL SWITCH**."

Control Pedal 1 Polarity
Control Pedal 2 Polarity

Selects the polarity of the pedal. On some pedals, the electrical signal output by the pedal when it is pressed or released is the opposite of other pedals. If your pedal has an effect opposite of what you expect, set this parameter to "REVERSE." If you are using a Roland pedal (that has no polarity switch), set this parameter to "STANDARD."

Value: STANDARD, REVERSE

Hold Pedal Polarity

Select the polarity of the Hold pedal. On some pedals, the electrical signal output by the pedal when it is pressed or released is the opposite of other pedals. If your pedal has an effect opposite of what you expect, set this parameter to "REVERSE." If you are using a Roland pedal (that has no polarity switch), set this parameter to "STANDARD."

Range: STANDARD, REVERSE

Continuous Hold Pedal

This setting determines whether the HOLD PEDAL jack will provide support for half-pedaling (ON), or not (OFF). When this is set to support use of half-pedaling techniques, you can then connect an optional expression pedal (DP-8, etc.), and employ pedal work to achieve even finer control in performances in which piano tones are used.

Value: OFF, ON

Keyboard

Keyboard Velocity

Specifies the velocity value that will be transmitted when you play the keyboard. If you want actual keyboard velocity to be transmitted, set this to "REAL." If you want a fixed velocity value to be transmitted regardless of how you play, specify the desired value (1–127).

Value: REAL, 1–127

Keyboard Velocity Curve

Adjusts the keyboard's touch.

Value

LIGHT: Light weight synthesizer keyboard like

MEDIUM: Standard

HEAVY: Acoustic piano simulation

Keyboard Velocity Sens (Keyboard Velocity Sensitivity)

Adjusts the sensitivity of the keyboard. As you increase this setting, higher velocity values will be transmitted according to the force with which you play. Normally you will leave this set at "0."

Value: -63– +63

Aftertouch Sens (Aftertouch Sensitivity)

Specifies the Aftertouch sensitivity. Higher values will allow Aftertouch to be applied more easily. Normally you will leave this at "100."

Value: 0–100

Dynamic Pad

Pad Assign Source

Specifies whether changes in pad mode will follow the system's Pad Mode setting (SYS) or follow the live set or studio set (TEMP).

Value: SYS, TEMP

Pad Velocity

For all sixteen pads, this specifies the velocity (loudness) that is produced when you strike a pad. With the "REAL" setting, you'll be able to produce dynamics by varying your striking force. With a setting of "1–127," the pads will produce the specified velocity value regardless of your actual striking force.

Value: REAL, 1-127

Pad Sens (Pad Sensitivity)

Specifies the relation between your striking force and the velocity that is produced.

Value

LIGHT: It will be easy to produce the maximum velocity without having to strike very hard.

MEDIUM: This is the standard pad sensitivity setting.

HEAVY: You will have to strike quite strongly to produce the maximum velocity.

Pad Aftertouch Sens (Pad Aftertouch Sensitivity)

"Aftertouch" means additional pressure that you apply on a pad after striking it. This setting adjusts the aftertouch sensitivity. Higher values make it easier to apply aftertouch. Normally you will leave this at a setting of "100."

Value: 0-100

Pad Roll Resolution

Specifies the speed of repeated strikes when using the pads to play rolls.

Values: ♩ , ♩3 , ♪ , ♪3 , 𝅘𝅥𝅯 , 𝅘𝅥𝅯3 , 𝅘𝅥𝅰 , 𝅘𝅥𝅰3

Pad Mode

Specifies the pad mode (p. 188) when the Fantom-G starts up (when a project is loaded).

Value: SAMPLE PAD, RHYTHM, CHORD MEMORY, ARPEGGIO, RPS, RHYTHM PTN, TONE SEL/SW, TRACK MUTE, BOOKMARK, MIDI TX SW, EFFECT SW, PATCH MFX SW, PART SELECT, PART MUTE, USER GROUP, FAVORITE

RPS Set Assign Source

You can specify whether the RPS Set Number will follow the setting of each Live / Studio Set (TEMP) or the setting for the entire Fantom-G (SYS).

Value

TEMP: Use the RPS Set Number of each Live / Studio Set

SYS: Use the Fantom-G's global settings

Rhythm Pattern Set Assign Source

You can specify whether the Rhythm Pattern Set Number will follow the setting of each Live / Studio Set (TEMP) or the setting for the entire Fantom-G (SYS).

Value

TEMP: Use the Rhythm Pattern Set Number of each Live / Studio Set

SYS: Use the Fantom-G's global settings

Knob/Slider

Knob Slider Mode

Specifies whether, when a knob or slider is moved, its position will immediately be output as control data (DIRECT) or whether control data will be output only after the knob or slider position has passed through the value of the parameter (CATCH).

If you select "MULTI" as the Knob Slider Mode setting, you'll be able to use the knobs, sliders, D Beam, and S1/S2 buttons to simultaneously control multiple parts (each part whose keyboard switch is on).

Value

DIRECT: Moving a knob or slider will always transmit the control data of its current position

CATCH: When you move a knob or slider, it will begin transmitting control data only when its position passes the value of the parameter

MULTI: The knobs, sliders, D Beam, and S1/S2 buttons will simultaneously control multiple parts (each part whose keyboard switch is on). The knobs and sliders will operate in the same way as "DIRECT."

MEMO

MULTI (multi-part control) will control multiple parts only if CC, AFTERTOUCH, or PITCH BEND is assigned to the controller.

NOTE

Depending on the parameter being controlled with the sliders or controls, you may not be able to obtain the CATCH effect, even though you've set the Knob Slider Mode to "CATCH."

Knob Assign Select

Specifies whether the operation of knobs 1–4 will automatically change according to the screen (SCREEN) or will be fixed at the Knob 1–4 Assign settings (FIX).

Value: FIX, SCREEN

Knob Assign Source

Specifies whether the operation of knobs 1–4 will follow the system settings Knob 1–4 Assign (SYS) or the setting of the live set or studio set (TEMP).

Value: SYS, TEMP

Knob 1–4 Assign

Specify the functions that will be controlled by the knobs.

Value

OFF: Off

CC01–31, CC32(OFF), 33–95: Control Change

AFTERTOUCH: Aftertouch

PITCH BEND: Pitch Bend

ARPEGGIO ACCENT: Arpeggio accent rate

ARPEGGIO SHUFFLE: Arpeggio shuffle rate

ARPEGGIO OCT UP: The range in which the arpeggio is sounded will rise in steps of an octave.

ARPEGGIO OCT DOWN: The range in which the arpeggio is sounded will lower in steps of an octave.

MASTER LEVEL: Master Level (p. 297)

DIGITAL/USB INPUT LEVEL: Digital/USB Input Level (p. 258)

* *If the system setting **"Knob Assign Source"** (p. 293) is "System," the system setting will be used. If this is "TEMP," the setting of the live set or studio set will be used.*

Slider Assign Select

Specifies whether the operation of sliders 1–8 will automatically change according to the screen (SCREEN) or will be fixed at the Slider 1–8 Assign settings (FIX).

Value: FIX, SCREEN

Slider Assign Source

Specifies whether the operation of sliders 1–8 will follow the system settings Slider 1–8 Assign (SYS) or the settings of the live set or studio set (TEMP).

Value: SYS, TEMP

Slider 1–8 Assign

Specify the functions that will be controlled by the sliders.

Value

OFF: Off

CC01–31, CC32(OFF), 33–95: Control Change

AFTERTOUCH: Aftertouch

PITCH BEND: Pitch Bend

ARPEGGIO ACCENT: Arpeggio accent rate

ARPEGGIO SHUFFLE: Arpeggio shuffle rate

ARPEGGIO OCT UP: The range in which the arpeggio is sounded will rise in steps of an octave.

ARPEGGIO OCT DOWN: The range in which the arpeggio is sounded will lower in steps of an octave.

* *If the system setting **"Slider Assign Source"** (p. 293) is "System," the system setting will be used. If this is "TEMP," the setting of the live set or studio set will be used.*

Magic Control

Magic Control is a function that automatically switches the role of knob 4 and slider 8 according to the screen. In the Patch List screen (p. 49), knob 4 will select the category, and slider 8 will scroll the list.

Knob 4 Assign

Specify the functions that will be controlled by the knob 4.

Value

OFF: Off
CATEGORY/BANK: Switch the category/bank
SCROLL COARSE: Scroll the list
SCROLL FINE: Scroll the list finely

Slider 8 Assign

Specify the functions that will be controlled by the slider 8.

Value

OFF: Off
CATEGORY/BANK: Switch the category/bank
SCROLL COARSE: Scroll the list
SCROLL FINE: Scroll the list finely

Switch S1/S2

Switch S1/S2 Assign Source

Specifies whether the S1/S2 switches will follow the system settings (SYS) or the settings of the live set or studio set (TEMP).

Value: SYS, TEMP

Switch S1/S2 Assign

Specify the functions that will be controlled by the [S1] [S2] switches.

Value

Live Set: OFF, CC01 - CC31, CC32 (OFF), CC33 - CC95, AFTERTOUCH, MONO/POLY, PFX SWITCH, MFX SWITCH, RESERVE, CHORUS SWITCH, REVERB SWITCH, MASTERING SWITCH, MASTER KEY UP, MASTER KEY DOWN, SCALE TUNE SWITCH

Studio Set: OFF, CC01 - CC31, CC32 (OFF), CC33 - CC95, AFTERTOUCH, MONO/POLY, PFX SWITCH, MFX1 SWITCH, MFX2 SWITCH, CHORUS SWITCH, REVERB SWITCH, MASTERING SWITCH, MASTER KEY UP, MASTER KEY DOWN, SCALE TUNE SWITCH

Switch S1/S2 Assign Mode

Turns the [S1] [S2] switches function LATCH/MOMENTARY.

Value

LATCH: The on/off status will alternate each time you press [S1] [S2].

MOMENTARY: The status will be on only while you hold down [S1] [S2].

Sync/Temp

Sync Mode

Specify the synchronization message that the Fantom-G's sequencer will use for operation.

Value

MASTER: The Fantom-G will be the master. Choose this setting when using the Fantom-G by itself without synchronizing to another device, or when you want other MIDI devices to synchronize to the Fantom-G.

SLAVE-MIDI: The Fantom-G will be the slave. Choose this setting when you want the Fantom-G to synchronize to MIDI Clock messages received from another MIDI device.

SLAVE-MTC: The Fantom-G will be the slave. Choose this setting when you want the Fantom-G to synchronize to MTC (MIDI Time Code) received from an external device.

REMOTE: Use this setting when you wish an external MIDI device to have remote start/pause/stop control. The tempo will be in accord with what has been set on the Fantom-G.

MIDI Clock and MTC

MIDI Clock and MTC (MIDI Time Code) are both messages used for synchronization. Select either of them depending on the application.

MIDI Clock transmits and synchronizes operations to a sequencer's performance tempo, whereas MTC synchronizes operations between devices based on an absolute time.

Sync Output (Sync Output Switch)

Set this parameter ON when you want synchronization related MIDI messages (MIDI Clock, Start, Continue, Stop, Song Position Pointer and Song Select) to be transmitted to an external MIDI device. If not, set it OFF.

Value: OFF, ON

Clock Source

When the Sync Mode is set to SLAVE-MIDI or SLAVE-MTC, this setting specifies whether the Fantom-G will synchronize to the tempo from the MIDI IN connector or the tempo from the USB connector.

Value

MIDI: Synchronize to the tempo from the MIDI IN connector.

USB: Synchronize to the tempo from the USB connector.

MMC Mode

When synchronizing the Fantom-G with a hard disk recorder, such as one from the Roland VS series, specify which synchronization signal the Fantom-G's sequencer will use for operation.

Value

MASTER: The Fantom-G will be the master. Use this setting when you want other devices to follow the operation of the Fantom-G.

SLAVE: The Fantom-G will be the slave. Use this setting when you want the Fantom-G to receive MMC (MIDI Machine Control) from an external device and operate accordingly.

MEMO

MMC (MIDI Machine Control) is a specification that allows MIDI messages to be used to control devices such as tape recorders, VTR's, and digital recording systems. Thirty-seven MMC commands are available, including Stop and Play.

MMC Output (MMC Output Switch)

Turn this "ON" if you want to synchronize with a hard disk recorder, such as one from the Roland VS series. When set "ON," MMC (MIDI Machine Control) related commands (Play, Stop and Locate) will be transmitted.

Value: OFF, ON

MTC Sync Output (MTC Sync Output Switch)

Set this parameter ON when you want MTC (MIDI Time Code) to be transmitted to an external MIDI device. If not, set it OFF.

Value: OFF, ON

MTC Frame Rate

Specify the MTC frame rate. Make sure that the same mode is set in both master and slave devices.

Value

24: 24 frames per second

25: 25 frames per second

29N: 29 frames per second

29D: 29 frames per second

30: 30 frames per second

TIP

When synchronizing with a hard disk recorder such as the Roland VS series, any frame rate is all right—as long as the setting matches that of the Fantom-G. However, when synchronizing operation with video devices such as video decks, the video device's frame rate is fixed, so the Fantom-G's setting must correspond to that frame rate.

Types of MTC

The types of MTC that can be selected by the Fantom-G are shown below. Select the same frame rate as that set for the external device. When not using a video device, then any frame rate may be selected as long as the rates are the same on both devices being synchronized.

30: This is 30 frames per second, non-drop format. This is used by audio devices such as analog tape recorders, and for NTSC format black and white video (used in Japan and the U.S.).

29N: This is 29.97 frames per second, non-drop format. This is used for NTSC format color video (used in Japan and the U.S.).

29D: 29.97 frames per second drop format. This is used for NTSC format color video (used in Japan and the U.S.).

25: 25 frame per second frame rate. This is used for SECAM or PAL format video, audio equipment, and film (used in Europe and elsewhere).

24: 24 frame per second frame rate. This is used for video, audio devices, and film in the US.

Non-Drop Format and Drop Format

There are two types of format used by NTSC video cassette recorders, non-drop and drop. Non-drop format features continuous time code, whereas in drop format, which is used for NTSC color video format, the first two frames of every minute are dropped, except for those at ten-minute intervals. In most video and audio production, since formats with continuous frames are easier to deal with, non-drop is generally used. In contrast, in situations such as in broadcast, where the time code must match actual clock time, drop format is used.

MTC Offset Time Hour

Coordinates the playback timing of the Fantom-G and the external device in an hour units.

Value: 00–23 hours

MTC Offset Time Minute

Coordinates the playback timing of the Fantom-G and the external device in a minute units.

Value: 00–59 minutes

MTC Offset Time Second

Coordinates the playback timing of the Fantom-G and the external device in a second units.

Value: 00–59 seconds

MTC Offset Time Frame

Coordinates the playback timing of the Fantom-G and the external device in a frame units.

Value: 00–29 frames
(The maximum value will depend on the frame rate setting.)

MTC Error Level

Determines how often the reception status is checked when MTC is being received from an external device. Stop synchronization if a problem becomes apparent with the check.

Value: 0–10 (the checking interval will be longer for larger values)

MEMO

In strict terms, the lower the numerical value set, the more accurate the check is. However, playback may be stopped overly frequently if too rigorous a check is made, and this soon becomes inconvenient. By raising the Error Level setting, then even if problems with the reception of MTC do occur, synchronization can then continue as long as such problems remain at a level that does not cause undue problems.

Tempo Assign Source

You can specify whether the tempo will follow the setting of each Live / Studio Set (TEMP) or the tempo setting of the song (SYS).

Value

TEMP: Use the tempo of each Live / Studio Set

SYS: Switching the Live / Studio Set will not change the tempo (the song's tempo will be used)

Metronome

Metronome Mode

Specifies when you want the metronome to sound.

* *If [F7 (Click)] in the Tempo window which appears when you press [TEMPO] is lit in red, the metronome will always sound.*

Value

OFF: Will not sound.
PLAY-ONLY: Will sound only during playback.
REC-ONLY: Metronome will sound only for recording.
PLAY&REC: Metronome will sound for playback and recording.
ALWAYS: Metronome will always sound.

Metronome Level

You can adjust the volume of the metronome.

Value: 0–10

Metronome Sound

Selects the metronome sound.

Value

TYPE 1: A conventional metronome sound will be heard. A bell will sound on the first beat.
TYPE 2: Clicks will sound.
TYPE 3: Beeps will sound.
TYPE 4: Cowbell will sound.

Beat Indicator Mode

You can specify how the [PLAY] button (beat indicator) on the panel will blink.

Value

ALWAYS: Always blinks at the specified tempo.
PLAY&REC: Blinks only during playback and recording.

Sound

Local Switch

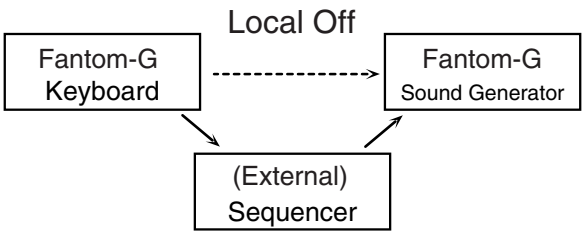
The Local Switch determines whether the internal sound generator is disconnected (OFF) from the controller section (keyboard, pad, pitch bend/modulation lever, knobs, buttons, D Beam controller, pedal, and so on); or not disconnected (ON). Normally this is left "ON," but if you wish to use the Fantom-G's keyboard and controllers to control only external sound modules, set it to "OFF."

Value: OFF, ON

Using the Local Switch

If you're using external sequencer software in conjunction with the Fantom-G's keyboard/controllers and sound generator, you should turn the Local switch OFF for the reasons explained below.

Connecting the Fantom-G to an external sequencer



Typically, things are hooked up so the data travels as follows: the Fantom-G's keyboard → your external sequencer software → the Fantom-G's sound generator. Normally, the Fantom-G's keyboard section is internally connected to its sound generator section; this internal connection is controlled by the Local Switch. If you turn the Local Switch off, the Fantom-G's keyboard and sound generator sections will be independent, allowing you to use the connection described above with your external sequencer software.

Master Tune

Adjusts the overall tuning of the Fantom-G. The display shows the frequency of the A4 note (center A).

Value: 415.3–466.2 Hz

Master Level

Adjusts the volume of the entire Fantom-G.

Value: 0–127

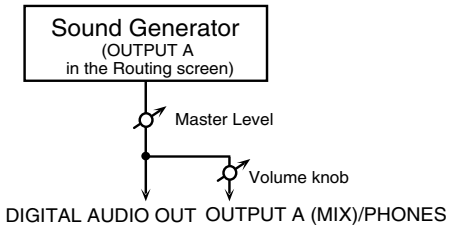
Master Reverb Level

Adjusts the reverb level of the entire Fantom-G.

Value: 0–127

How Do I Adjust the Volume?

MASTER LEVEL adjusts the volume of both the OUTPUT A jacks and the DIGITAL AUDIO OUT jack. The front panel VOLUME knob adjusts only the volume of the OUTPUT A jacks. Here's an explanation of what you need to adjust depending on the output jacks you're using.



When using the OUTPUT A jacks: adjust using the VOLUME knob

The front panel VOLUME knob controls the volume of the OUTPUT A jacks. This means that if you're outputting from the OUTPUT A jacks, the simplest way is to leave the Master Level fixed at 127 (the default setting), and use the VOLUME knob to control the volume.

When using the DIGITAL AUDIO OUT jack: adjust using Master Level

Master Level controls both the OUTPUT A jacks and the DIGITAL AUDIO OUT jack. This means that if you're outputting from DIGITAL OUT, use Master Level to adjust the volume.

NOTE

The Master Level setting is temporary, and will be lost when you turn off the power. If you want to keep the Master Level setting you edited, save the master level in the internal system memory. → **"Saving the System Settings (System Write)"** (p. 290)

Output Gain

This adjusts the output gain from the Fantom-G's Analog Out and Digital Out. When, for example, there are relatively few voices being sounded, boosting the output gain can let you attain the most suitable output level for recording and other purposes.

Value: -12– +12

Mix/Parallel

Specifies how the sound of the entire Fantom-G will be output.

Value

MIX: Set this to have the collective output of all sounds output from the OUTPUT A (MIX) jacks. When you want to check the final overall sound being output, set to MIX.

MEMO

Sounds which are set in the respective Output Assign to be output from the INDIVIDUAL 3 jack are output from the left OUTPUT A (MIX) jack; sounds which are set to be output from the INDIVIDUAL 4 jack are output from the right OUTPUT A (MIX) jack.

TIP

Sounds output from the PHONES jack are the same as those output from the OUTPUT A (MIX) jacks. Therefore, any sounds set with Output Assign to be output from the OUTPUT B jacks is not output from the PHONES jack. Be sure to have any sound you want to hear through the headphones set to "MIX."

PARALLEL: Output according to each Output Assign settings.

Master Key Shift

Shifts the overall pitch of the Fantom-G in semitone steps.

Value: -24– +24

Patch Remain (Patch Remain Switch)

Specifies whether currently sounding notes will continue sounding when another patch or rhythm set is selected (ON), or not (OFF).

Value: OFF, ON

* *When in Studio mode: Depending on the effect settings, currently sounding notes may not remain in some cases.*
* *When in Single mode or Live mode: The Patch Remain function is valid only for the most recently selected sound. Notes of a sound selected earlier may be interrupted.*
* *The Patch Remain setting does not apply to sounds of an expansion board.*

Control Remain (Control Remain Switch)

Specifies whether changes in the sound and volume produced by received MIDI data such as volume and pan (CC 5, 7, 10, 65, 68, 71–74, RPN 0, 1, 2, MONO ON, POLY ON) and by the various controllers will be maintained (ON) or not maintained (OFF) when you select another patch or rhythm set.

Value: OFF, ON

MIDI

Device ID (Device ID Number)

When you want to transmit or receive System Exclusive messages, set this parameter to match the Device ID number of the other MIDI device.

Value: 17–32

Studio Set Control Channel

Studio Set Control Channel selects the MIDI receive channel used during switching of studio sets when MIDI messages (Program Change/Bank Select) are sent from an external MIDI device. Set this to "OFF" if studio sets are not to be switched from an external MIDI device.

Value: 1–16, OFF

NOTE

If only a program change is received, and if the Studio Set Control Channel parameter setting coincides with the MIDI receive channel of a part, priority will be given to switching the studio set.

Live Set Control Channel

Live Set Control Channel selects the MIDI receive channel used during switching of live sets when MIDI messages (Program Change/Bank Select) are sent from an external MIDI device. Set this to "OFF" if live sets are not to be switched from an external MIDI device.

Value: 1–16, OFF

NOTE

If only a program change is received, and if the Live Set Control Channel parameter setting coincides with the MIDI receive channel of a part, priority will be given to switching the live set.

Transmit Program Change (Transmit Program Change Switch)

Specifies whether Program Change messages will be transmitted (ON) or not (OFF).

Value: OFF, ON

Transmit Bank Select (Transmit Bank Select Switch)

Specifies whether Bank Select messages will be transmitted (ON) or not (OFF).

Value: OFF, ON

Transmit Active Sensing (Transmit Active Sensing Switch)

Specifies whether Active Sensing messages will be transmitted (ON) or not (OFF).

Value: OFF, ON

Transmit Edit Data (Transmit Edit Data Switch)

Specify whether changes you make in the settings of a patch, live set or studio set will be transmitted as system exclusive messages (ON), or will not be transmitted (OFF).

Value: OFF, ON

Soft Through (Soft Through Switch)

Thru function re-transmits all messages received at the MIDI IN connector to the MIDI OUT connector without modifying them in any way.

Value: OFF, ON

Remote Keyboard Sw (Remote Keyboard Switch)

Set this parameter "ON" when you want to use an external MIDI keyboard instead of the Fantom-G's keyboard. In this case, the MIDI transmit channel of the external MIDI keyboard can be set to any channel. Normally you will leave this parameter "OFF."

Value: OFF, ON

TIP

Turn this "ON" when you want to control the Fantom-G from an external MIDI device when performing with the Arpeggio or Chord Memory function.

Receive Program Change (Receive Program Change Switch)

Specifies whether Program Change messages will be received (ON) or not (OFF).

Value: OFF, ON

Receive Bank Select (Receive Bank Select Switch)

Specifies whether Bank Select messages will be received (ON) or not (OFF).

Value: OFF, ON

Receive Exclusive (Receive System Exclusive Switch)

Specifies whether System Exclusive messages will be received (ON) or not (OFF).

Value: OFF, ON

Receive GM1 System On (Receive GM System On Switch)

Specifies whether General MIDI System On messages will be received (ON) or not (OFF).

Value: OFF, ON

Receive GM2 System On (Receive GM2 System On Switch)

Specifies whether General MIDI 2 System On messages will be received (ON) or not (OFF).

Value: OFF, ON

Receive GS Reset (Receive GS Reset Switch)

Specifies whether GS Reset messages will be received (ON) or not (OFF).

Value: OFF, ON

USB

USB-MIDI Thru Sw (USB-MIDI Thru Switch)

This switch specifies whether MIDI messages received at the USB connector/MIDI connector will be retransmitted from the USB connector/MIDI OUT connector (ON) or not (OFF).

Value: OFF, ON

Scale Tune

Scale Tune Switch

Turn this on when you wish to use a tuning scale other than equal temperament.

Value: OFF, ON

The Fantom-G allows you to play the keyboard using temperaments other than equal temperament. The pitch is specified in one-cent units relative to the equal tempered pitch.

MEMO

One-cent is 1/100th of a semitone.

- The selected scale applies to MIDI messages received from an external MIDI device.

Patch Scale Tune for C–B

Make scale tune settings for Single mode.

Value: -64– +63

MEMO

One set of Scale Tune settings can be created in Single mode. In Live / Studio mode, this can be set for each part of the Live / Studio set (p. 138).

In Single mode, this is valid only for the keyboard part.

Equal Temperament

This tuning divides the octave into 12 equal parts, and is the most widely used method of temperament used in Western music. The Fantom-G employs equal temperament when the Scale Tune Switch is set to "OFF."

Just Temperament (Tonic of C)

Compared with equal temperament, the principle triads sound pure in this tuning. However, this effect is achieved only in one key, and the triads will become ambiguous if you transpose.

Arabian Scale

In this scale, E and B are a quarter note lower and C#, F# and G# are a quarter-note higher compared to equal temperament. The intervals between G and B, C and E, F and G#, Bb and C#, and Eb and F# have a natural third—the interval between a major third and a minor third. On the Fantom-G, you can use Arabian temperament in the three keys of G, C and F.

<Example>

Note name	Equal temperament	Just Temperament (tonic C)	Arabian Scale
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
Eb	0	+16	-12
E	0	-14	-51
F	0	-2	-8
F#	0	-10	+43
G	0	+2	-4
G#	0	+14	+47
A	0	-16	0
Bb	0	+14	-10
B	0	-12	-49

Preview

Preview Mode

SINGLE: The notes specified by Note Number 1–4 parameter will sound successively one by one.

CHORD: The notes specified by Note Number 1–4 parameter will sound simultaneously.

PHRASE: The Phrase associated with the patch's type/ category is played.

Preview 1–4 Note Number

Specify the pitch of the four notes that will sound when the Preview Mode parameter is set to "SINGLE" or "CHORD."

Value: C-1–G9

NOTE

If "PHRASE" is selected for the Preview Mode parameter, these settings will have no effect.

Preview 1–4 Velocity

Specify the velocity of the four notes that will sound when the Preview Mode parameter is set to "SINGLE" or "CHORD."

Value: OFF, 0–127

NOTE

If "PHRASE" is selected for the Preview Mode parameter, these settings will have no effect.

System Ctrl

System Control 1–4 Source

System Control Assign selects the MIDI message used as the System Control.

System Control

This function, which departs from previously used methods, and instead allows you to use MIDI messages to change tone settings in realtime, is called the **Matrix Control** (p. 109). Similarly, the function allowing you to use MIDI messages to change multi-effects settings in realtime is called the **Multi-effects Control** (p. 158).
Normally, the Matrix Control is used for making patch settings, and the Multi-effects Control for making settings to patches, rhythm sets, sample sets, live sets and studio sets. However, if you do not need to change the MIDI messages used for matrix control or multi-effects control by each patch/rhythm set/sample set/live set/studio set, or if you want to use a specific MIDI message for matrix control or multi-effects control, you will want to make use of **System Control.** In other words, you could call the System Controls global Matrix Control/Multi-effects Control for the entire Fantom-G.
You can use up to four System Controls.

Value

OFF: The system control will not be used.

CC01–31, CC32(OFF), 33–95: Control Change

PITCH BEND: Pitch Bend

AFTERTOUCH: Aftertouch

Screen Saver

Screen Saver Type

Select the type of screen saver.

Value: 1–16

Screen Saver Time

Set the time (minutes) until the screen saver begins working.
If this is OFF, the screen saver will not appear.

Value: OFF, 1–60 min.

Input/Sampling

Input Select

Input source of the external input sound

Value

DIGITAL IN: DIGITAL AUDIO IN jack

LINE IN L/R: INPUT jacks L/R (stereo)

LINE IN L: INPUT jack L (mono)

MIC/GUITAR: MIC/GUITAR jack

USB AUDIO: USB connector

* *When an external device is connected to the DIGITAL AUDIO IN connector and you disconnect the cable or power-off the external device, noise may subsequently be heard in the input from DIGITAL AUDIO IN. If this occurs, correctly reconnect the external device, or turn the Fantom-G's [MIX IN] switch off.*

Digital/USB Input Level

If you've set Input Select to DIGITAL IN or USB AUDIO, this adjusts the input level.

Value: 0–127

Mix In Switch

Turns the external input on/off.

Value: OFF, ON

Default File Type

Specifies the file format used when saving a sample.

Value: WAV, AIFF

Pre Sample Time

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.

Value: 0–1000 ms

Trigger Level

Volume level at which sampling will begin when Auto Trig is ON
A setting of 0 is the minimum.
Value: 0–7

Gap Time

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.
Value: 500, 1000, 1500, 2000 ms

Trimming Switch

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.
Value: OFF, ON

Skip Back Time

Specifies how much earlier in time that you want sampling to take place when you use Skip Back Sampling. If "OFF" selected, skip-back sampling cannot be performed.
Value: OFF, 5s–40s

Startup

Power Up Mode

This setting allows you to choose the mode that you want the Fantom-G to be in when load a project.

Value

SINGLE:	The Fantom-G will be in Single mode when load a project.
STUDIO:	The Fantom-G will be in Studio mode when load a project.
LIVE:	The Fantom-G will be in Live mode when load a project.

Sequencer Auto Track Switch

In the Realtime Rec Standby window, when recording a song, this function will automatically select the same track number as the part you're recording. For example, if the current part of the sound generator is part 3, MIDI track 3 of the song will be selected. If the current part of the sound generator is part 10, MIDI track 10 of the song will be selected. This provides a more intuitive relationship between the parts of the sound generator and the tracks of the song.

cf.
"Auto Track Function" (p. 222)

Value

OFF:	Auto Track function is off
ON:	(default) Auto Track function is on

System Information (Info)

Here's how to view system information.

1. **Press [MENU] to access the menu.**
2. **Turn the VALUE dial or use [CURSOR] to choose "System," and then press [ENTER].**
3. **Press [F4 (Info)].**
4. **Use [F1 (Up)] [F2 (Down)] to switch tabs.**

Features

Displays the main features of the Fantom-G.

Memory Info (Memory Information)

Displays the amount of memory installed.

Expansion Info (Expansion board Information)

Displays the name of the expansion board that is installed.

Version Info (Version Information)

Displays the version of the Fantom-G.

Changing the Wallpaper (Wallpaper)

You can change the background image of the display.
Via USB memory (or internal memory), you can use your own photo or other image data as the background image.

1. **Press [MENU] to access the menu.**
2. **Turn the VALUE dial or use [CURSOR] to choose "System," and then press [ENTER].**
3. **Press [F5 (Wallpaper)].**
   The Wallpaper screen will appear.
4. **Turn the VALUE dial to select the image that you want to use as the background, and press [F8 (OK)].**
   The selected image will be shown as the background.

   MEMO

   The changed wallpaper setting is temporary, and will be lost when you turn off the power. If you want to keep the setting, press [F7 (Sys Write)] to write it into the Fantom-G's system memory.

Importing an Image as Wallpaper (Import)

Via USB memory (or internal memory), you can use **a bitmap file (Windows BMP format, 24-bit, 800x480 pixel)** as wallpaper for the Fantom-G.

1. **On your computer, prepare the bitmap file (Windows BMP format, 24-bit, 800x480 pixel) that you want to use as wallpaper.**
2. **Using the USB Storage function, copy the bitmap file to the "IMPORT" folder of USB memory or the Fantom-G's internal memory.**

   cf.
   "Exchanging Files with Your Computer (USB Storage)" (p. 285)
3. **Press [MENU] to access the menu.**
4. **Turn the VALUE dial to select "System," and then press [ENTER].**
5. **Press [F5 (Wallpaper)].**
   The Wallpaper screen will appear.

   MEMO

   Sixteen different images can be shown as the background. The imported file will overwrite the currently selected image. If you want to delete an imported file, select an image (1–16) and press [F2 (Delete)].
6. **Press [F1 (Import BMP)].**
7. **Press [F1 (Internal)] or [F2 (USB Memory)] to select the import-source area (internal memory or USB memory).**
8. **Press ▲ or ▼ to select the file that you want to import.**
9. **Press [F8 (Select)].**
   The file you want to import will be displayed.
   * *To cancel, press [F7 (Cancel)].*
10. **Press [F8 (Execute)].**
    The file will be imported.
    * *To cancel, press [F7 (Cancel)].*

    MEMO

    The changed wallpaper setting is temporary, and will be lost when you turn off the power. If you want to keep the setting, press [F7 (Sys Write)] to write it into the Fantom-G's system memory.

Delete Wallpaper

Here's how to delete wallpaper that was imported by the user.

1. **Access the Wallpaper screen.**
2. **Turn the VALUE dial to select the image that you want to delete. Press [F2 (Delete)].**
   A confirmation window will appear.
3. **Press [F7 (OK)].**
   * *If you decide to cancel, press [F8 (CANCEL)].*

   MEMO

   You can't delete wallpaper that was provided as part of the factory settings.

Display-related Settings (Appearance)

Here you can make display-related settings. On the Fantom-G you can turn window transparency on/off, and specify the degree of transparency.

1. **Press [MENU] to access the menu.**
2. **Turn the VALUE dial or use [CURSOR] to choose "System," and then press [ENTER].**
3. **Press [F6 (Appearance)].**
   The Appearance screen will appear.

Transparent Switch

Specifies whether windows in the screen will be transparent (ON) or not (OFF).

Value: ON, OFF

Transparency

Specifies the degree of transparency for windows in the screen. Higher values produce greater transparency.

Value: 1–120%

About V-LINK

What is V-LINK?

V-LINK (V-LINK) is a function that allows music and images to be performed together. By using MIDI to connect two or more V-LINK compatible devices, you can easily enjoy performing a wide range of visual effects that are linked to the expressive elements of a music performance.

For example, if you use the Fantom-G in conjunction with the motion dive .tokyo Performance Package, you'll be able to do the following.

- Use the Fantom-G's synthesizer to produce synchronized music and video performances.
- Play the Fantom-G's keyboard, pads or sequencer to switch images on the motion dive .tokyo Performance Package.
- Use the Fantom-G's 1–4 knobs and D Beam controller to control the brightness or hue of an image.

MEMO

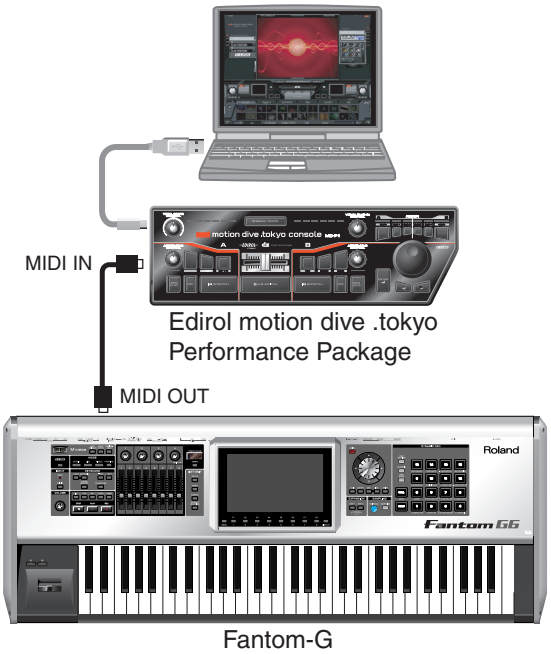
In order to use V-LINK between the Fantom-G and the motion dive .tokyo Performance Package, you'll need to make connections using a MIDI cable (sold separately).

Connection Examples

As an example, we will use a setup in which the Fantom-G is connected to the motion dive .tokyo Performance Package. Use a MIDI cable to connect the Fantom-G's MIDI OUT connector to the MIDI IN connector of the Edirol MD-P1.

NOTE

To prevent malfunction or speaker damage, minimize the volume on all your equipment and turn off the power before you make connections.



Turning the V-LINK ON/OFF

1. In the left of the panel, press [V-LINK] so the indicator is lighted.

The V-LINK setting will be on.

In this state, you can operate the Fantom-G to manipulate images in sync with your performance.

MEMO

Each mode will function as usual even if V-LINK is on.

2. Press [V-LINK] again.

The V-LINK button will go out, and the V-LINK setting will be off.

V-LINK Settings

1. Press [V-LINK] to access the V-LINK SETUP screen.

2. Press [CURSOR] to move the cursor to a parameter, and turn the VALUE dial or use [INC] [DEC] to set the value.

* *Specify the Pad Mode by pressing [F1 (Clip)] or [F2 (Palett)].*

3. If you want to keep your settings, press [F7 (Sys Write)].

4. Press [EXIT].

You're returned to the previous screen.

V-LINK Parameters

Note Tx Ch

MIDI channel that will switch clips/palettes and will control dissolve time.

Value: 1–16

Clip 1 Note No.

Pads 1–16 correspond to clips (or palettes). We recommend that you press [PAD SETTING] to access the Pad setting screen, and set to "Note," using Quick Setup (p. 192) and set Clip1 Note No. to the same value as the "Pad Base Note" setting.

Value: 0(C-1)-127(G9)

Dissolve Time

Control change number that controls the dissolve time (time over which the image switches)

Value: OFF, CC1, CC5, CC7, CC10, CC11, CC71-74, CC91-93, Channel Aftertouch

Ctrl Tx Ch

MIDI channel that will control the color Cb/Cr, brightness, and video effect switching

Value: 1-16

Play Speed Ctrl

Range of video playback speed

The three values are the playback speeds (multiples of normal speed) at the left, center, and right positions of the pitch bend.

Value: 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

Color Cb Ctrl

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

Fade Ctrl

Control change number that controls the output fade

Value: OFF, CC1, CC5, CC7,CC10, CC11, CC71-74, CC91-93, Channel Aftertouch

PAD MODE

Selects whether the pads will switch clips or palettes.

Value: CLIP, PALETT

Press [F1 (Clip)]: switches clips

Press [F2 (Palett)]: switches palettes

Local Sw

Specifies whether the internal sound generator is disconnected (OFF) from the pads, or not (OFF).

Procedure: Press [F5 (Local Sw)].

Value: OFF, ON

Clip Filter

(check boxes 1-32)

Clips that are checked can be switched. Enable/disable switching for each clip

Value: OFF, ON

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

Clip Reset

Turn off the image (solid black).

Procedure: Press [F3 (Clip Reset)].

All Reset

The effect applied to the image will be reset, and brightness, color difference, etc. will all return to the default value.

Procedure: Press [F4 (All Reset)].

09: Appendix

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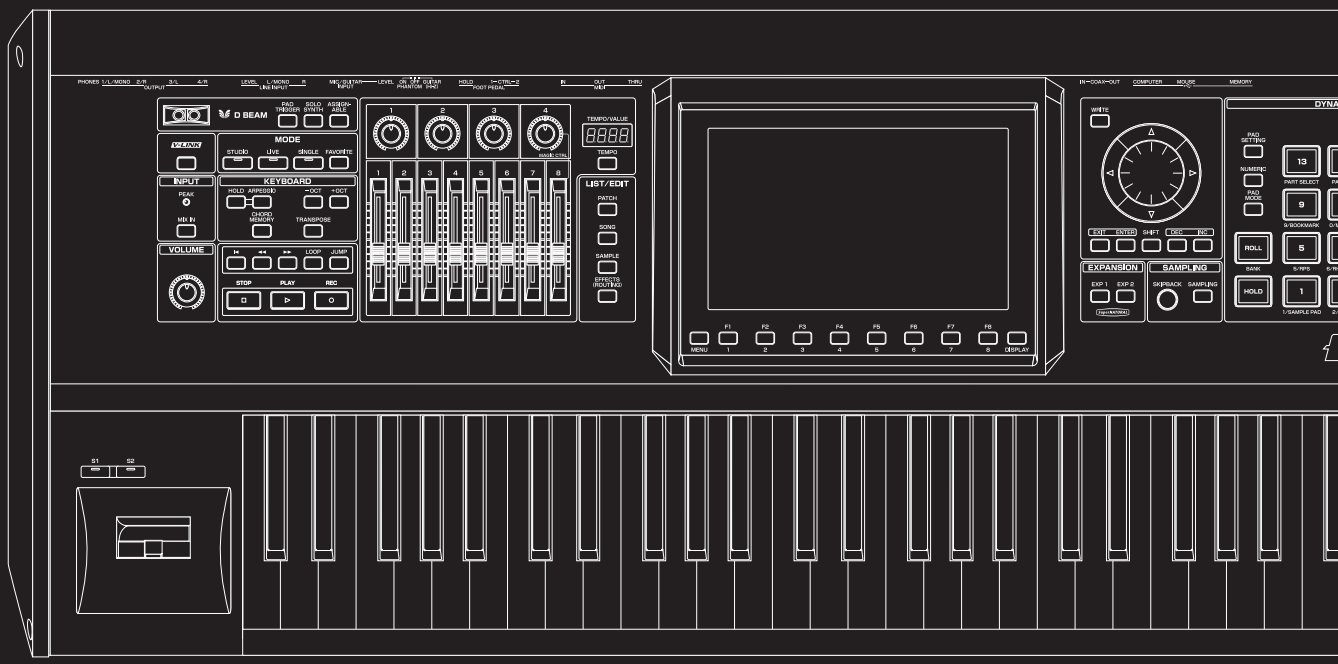
- Expanding the DIMM Memory.....p. 312
- Troubleshooting .....p. 316
- Error Messages.....p. 322
- About MIDI .....p. 323
- Specifications .....p. 326



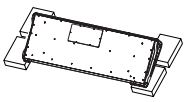
Installing the Expansion Board

Up to two optional Expansion Boards (ARX series; sold separately) can be installed in the Fantom-G.

Cautions When Installing an 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 Phillips 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.

- When installing Expansion Boards, remove only the specified screws.
- Be careful that the screws you remove do not drop into the interior of the Fantom-G.
- Do not leave the bottom cover removed. After installation of the Expansion Boards is complete, be sure to replace the cover.
- Be careful not to cut your hand on the opening for installing the board.
- 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 (ARX series).
- Install only the specified circuit board(s) (ARX series). Remove only the specified screws.
- 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 Fantom-G8 upside-down, at least two persons are required to safely lift and turn the Fantom-G8. Make sure to have a firm grip, to protect yourself from injury and the instrument from damage.
- When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.

How to Install an Expansion Board

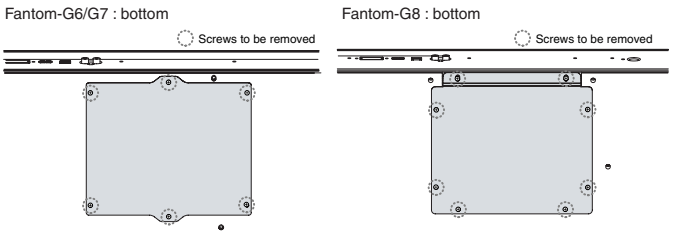
Install the Expansion Boards after removing the panel cover. Boards can be installed in the EXP 1–EXP 2 slots.

NOTE

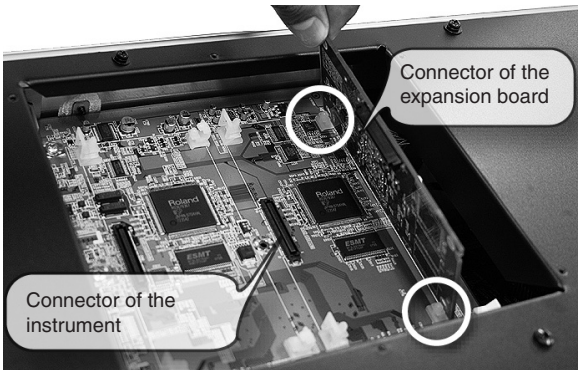
If the slot in which an expansion board is installed differs from the slot in which the board was installed when you saved the live set or studio set (i.e., if you moved the expansion board to a different slot), it will not sound the same as when you saved the data. You must install the expansion board in the same slot it occupied when you saved the live set or studio set.

1. Before installing the Expansion Board, turn off the power of the Fantom-G and all connected devices, and disconnect all cables, including the Power cable, from the Fantom-G.

2. From the Fantom-G, remove only the screws shown in the following diagram, and detach the cover.

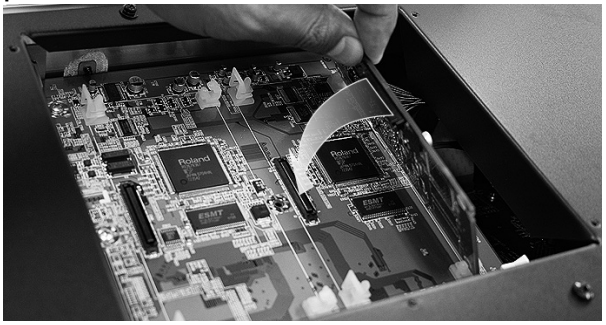


3. Insert the two tabs on the instrument into the holes of the expansion board so that the connectors of the instrument and expansion board are aligned.



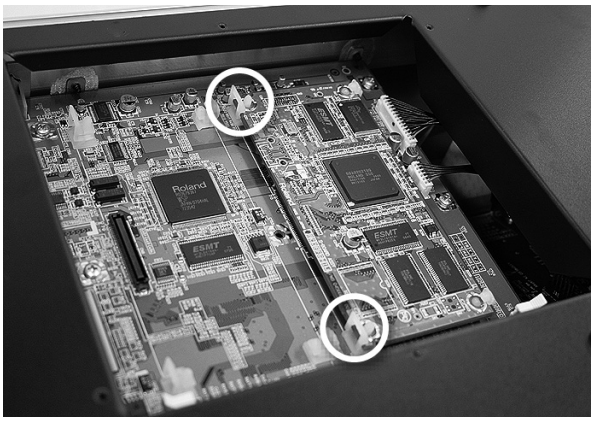
* *Do not touch any of the printed circuit pathways or connection terminals.*

4. Press in the expansion board in the direction shown by the photo.



* *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.*

5. Press firmly inward until the tabs on the instrument lock into the holes of the expansion board.

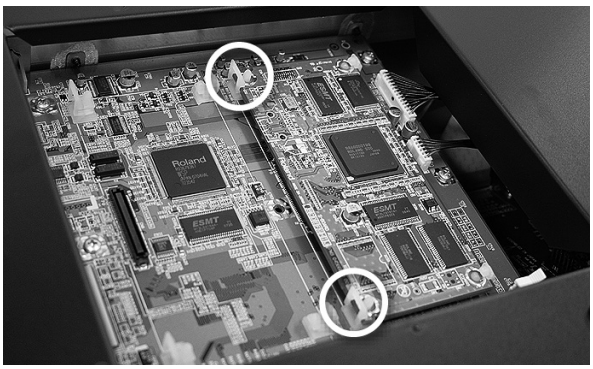


6. Use the screws that you removed in step 2 to fasten the cover back in place.

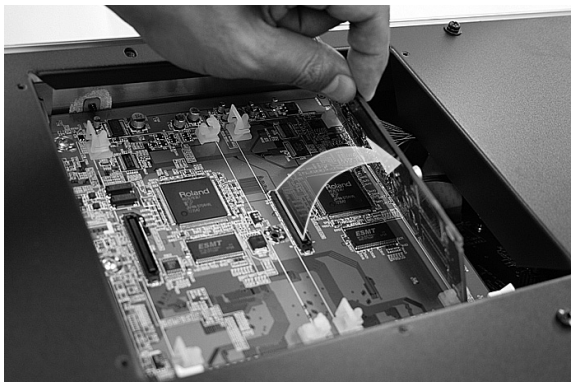
Removing an Expansion Board

To remove an expansion board, reverse the process by which you inserted it.

1. Unlatch the Fantom-G's tabs.



2. Slowly raise the expansion board upright.



3. Pull out the expansion board by reversing step 3 of the installation process.

4. Attach the cover by reversing step 2 of the installation process.

Configuring the Newly-installed Expansion Board

After you've finished installing an expansion board into the Fantom-G, you must perform the following procedure.

MEMO

You'll perform this procedure only once, the first time you turn on the power after inserting an expansion board.

1. Turn on the power as described in "Turning On the Power" (p. 28).

2. When the Fantom-G starts up, an install confirmation screen for the newly inserted expansion board will appear. Press [F8 (Execute)] to execute the install confirmation process.

If you decide to cancel, press [F7 (Cancel)].

NOTE

If the install confirmation screen does not appear when you start up for the first time, it is possible that the expansion board was not detected correctly. Reinstall the expansion board correctly.

NOTE

This process will require several minutes. Never turn off the power until this process has been completed.

3. When the screen indicates that installation has been completed, turn the power off, and then on again.

This completes the installation process.

cf.

For details on using the expansion board, refer to the manual included with the expansion board.

Installation de la carte d'expansion Wave

French language
for Canadian Safety Standard

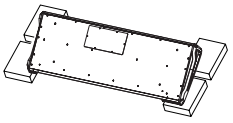
(French Language for Canadian Safety Standard)

Un maximum de deux cartes d'expansion optionnelles (série ARX; vendues séparément) peuvent être installées dans le Fantom-G.

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 Phillips 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.

- Pour installer les cartes d'expansion Wave, retirer uniquement les vis mentionnées.
- Assurez-vous que les vis retirées ne tombent pas dans le Fantom-G.
- Ne pas laisser le panneau de protection avant detache. S'assurer de l'avoir rattacher apres avoir installe le disque dur.
- Faites attention de ne pas vous couper sur l'ouverture d'installation de la carte.
- 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. (ARX series).
- N'installez que les cartes de circuits imprimes spécifiées (ARX series). Enlevez seulement les vis indiquées.
- Lorsque vous déposez le Fantom-G 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.

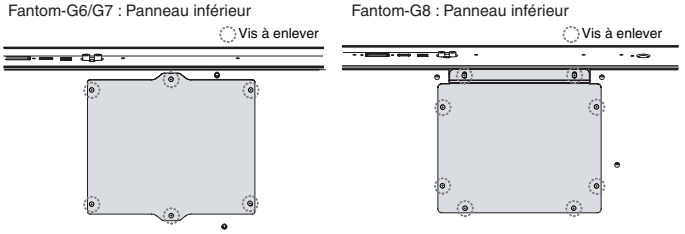


- Il faut au moins deux personnes pour soulever et tourner le Fantom-G8 sens dessus-dessous de manière sécuritaire. Il faut s'assurer d'avoir une bonne prise et de tenir fermement l'appareil pour éviter les blessures et les dommages à l'appareil.
- En plaçant l'appareil sens dessus dessous, manipulez-le avec soin pour éviter de l'échapper, de le laisser tomber ou de se renverser.

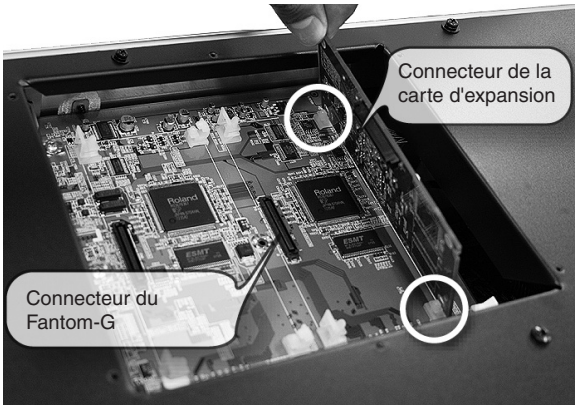
Installation d'une carte d'expansion Wave

Retirer le panneau inférieur avant d'installer les cartes d'expansion. Les cartes peuvent être installées dans les fentes EXP 1 et EXP 2.

1. **Avant d'installer la carte d'expansion Wave, coupez l'alimentation du Fantom-G et de tous les appareils branchés, et débranchez tous les câbles du Fantom-G, y compris le câble d'alimentation.**
2. **Sur les modèles Fantom-G, retirer uniquement les vis illustrées dans le schéma ci-dessous et retirer le couvercle.**

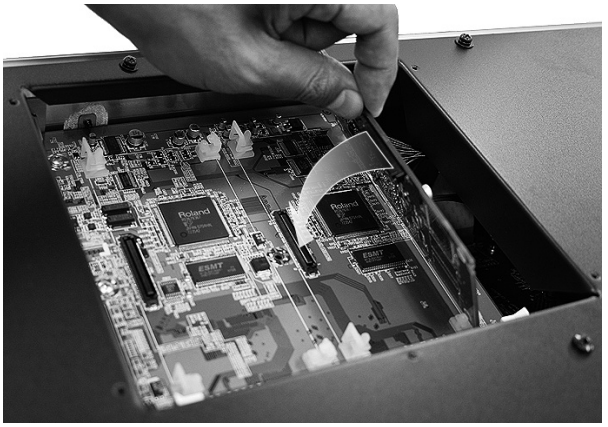


3. **Insérer les deux languettes de l'instrument dans les ouvertures de la carte d'expansion de façon à ce que les connecteurs de l'instrument et la carte d'expansion soient alignés.**



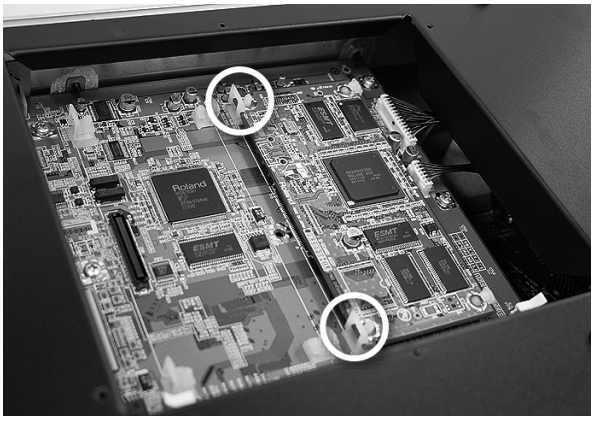
* *Ne pas toucher aux circuits imprimés ni aux points de terminaison des connexions.*

4. **Installer la carte d'expansion en appuyant dans la direction montrée sur la photo.**



* *Ne jamais user de force excessive pour installer une carte de circuits imprimés. Si elle ne s'ajuste pas adéquatement au premier essai, la retirer et essayer à nouveau.*

5. Appuyer fermement vers l'intérieur jusqu'à ce que les languettes soient bloquées dans les ouvertures de la carte d'expansion.

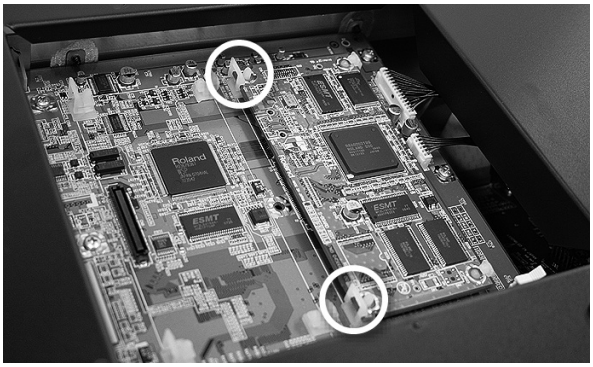


6. Remettez le couvercle en place à l'aide des vis retirées à l'étape 2.

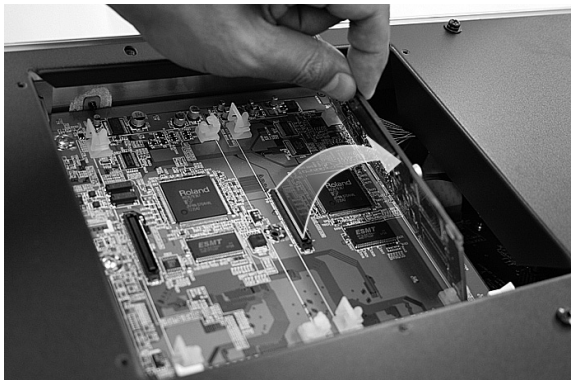
Retrait d'une carte d'expansion

Pour retirer une carte d'expansion, suivre le processus inverse du processus d'insertion.

1. Déverrouiller les languettes du Fantom-G.



2. Soulever lentement la carte d'expansion sans l'incliner.



3. Retirer la carte d'expansion en inversant l'étape 3 du processus d'installation.

4. Fixer le couvercle en inversant l'étape 2 du processus d'installation.

Configuration de la carte d'expansion installée

Une fois l'installation de la carte d'expansion dans le Fantom-G terminée, il faut procéder comme suit.

MEMO

Cette procédure ne doit être faite qu'une seule fois, soit lorsque l'appareil est mis sous tension après l'insertion d'une carte d'expansion.

1. Mettre l'appareil sous tension de la façon décrite à la rubrique "Turning On the Power" (p. 28).

2. Au démarrage du Fantom-G, un message s'affichera pour confirmer la présence de la carte d'expansion installée récemment. Appuyer sur [F8(Exécuter)] pour exécuter le processus de confirmation.

Pour annuler la procédure, appuyez sur [F7(Annuler)].

NOTE

Si l'écran de confirmation ne s'affiche pas lors du premier démarrage après l'installation de la carte d'expansion, il est possible qu'elle ne soit pas détectée correctement. Réinstaller alors la carte d'expansion correctement.

NOTE

Ce processus exige plusieurs minutes. Ne jamais couper l'alimentation avant que le processus de confirmation ne soit terminé.

3. Quand l'écran indique que l'installation est terminée, mettre l'appareil hors tension, et le remettre sous tension.

Cela met fin au processus d'installation.

cf.

Pour des renseignements détaillés sur l'utilisation de la carte d'expansion, se reporter au manuel qui l'accompagne.

Expanding the DIMM Memory

The Fantom-G comes with 32 MB of memory into which audio samples can be loaded. However, in some cases, 32 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 128/256/512 MB/1 GB.

Specifications of the expansion memory (DIMM) that can be used

Supports Unbuffered (non-Registered), PC133, CL=2/3, 128 MB, 256 MB, 512 MB, 1 GB (3.3 V)

Number of pins: 168-pin

Board height: 40 mm or less

NOTE

The Fantom-G is unable to use buffered (registered) DIMM memory.

NOTE

The Fantom-G 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.

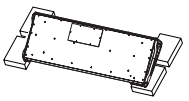
NOTE

Operation is not guaranteed for single samples larger than 512 MB.

Precautions for Expanding Memory

- Always turn the unit off and unplug the power cord before attempting installation of the memory DIMM 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 Phillips 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 Fantom-G.
- 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.
- Install only the specified memory DIMM board. Remove only the specified screws.
- 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.



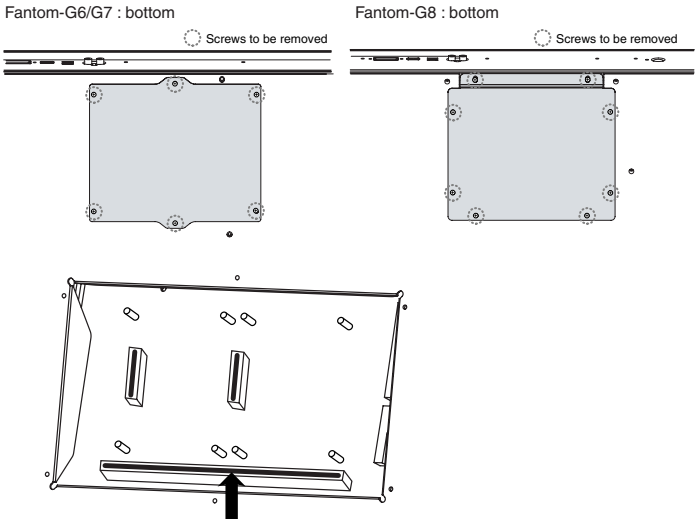
- When turning the Fantom-G8 upside-down, at least two persons are required to safely lift and turn the Fantom-G8. Make sure to have a firm grip, to protect yourself from injury and the instrument from damage.
- When turning the unit upside-down, handle with care to avoid dropping it, or allowing it 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

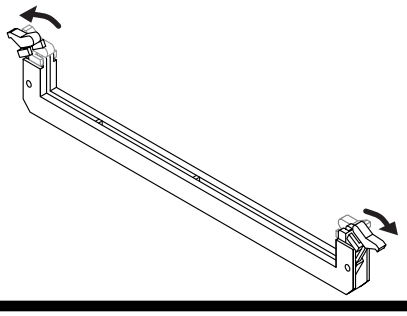
Install the memory module after removing the bottom panel cover.

1. **Before expanding the memory, turn off the power of the Fantom-G and all connected devices, and disconnect all cables, including the Power cord, from the Fantom-G.**

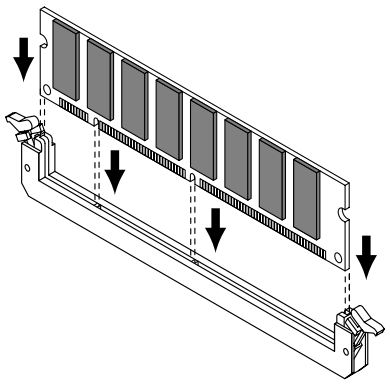
2. **From the Fantom-G, remove only the screws shown in the following diagram, and detach the cover.**



3. **Press outward on the white clips at either end of the socket so they are in their downward position.**



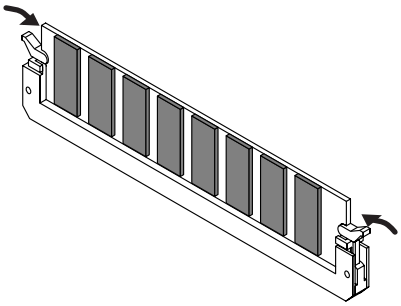
4. **Paying attention to the location of the notches on the memory module and the correct orientation, insert the module vertically within the guides at either side of the socket.**



TIP

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.**

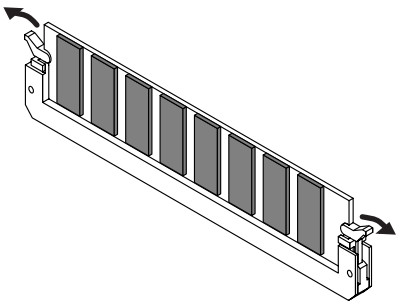


6. **Use the screws that you removed in step 2 to fasten the cover back in place.**

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.**



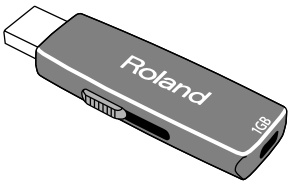
2. **Remove the memory module from the socket.**

Checking that Memory is Installed Correctly

1. **Turn on the power, as described in "Turning On the Power" (p. 28).**
2. **Press [MENU] to open the Menu window.**
3. **Turn the VALUE dial or use [CURSOR] to select "System," and then press [ENTER].**
4. **Press [ENTER].**
5. **Press [F4 (Info)].**
6. **Press [F1 (Up)] or [F2 (Down)] to select "Memory Info."**
   Verify that the screen correctly shows the amount of memory you installed.
7. **Press [EXIT] to exit the System 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 Off the Power"*** *(p. 28), and re-install the memory correctly.*

About USB memory



The contents of DIMM memory will be lost when you turn off the power. The Fantom-G contains 50 M bytes of internal flash memory (internal memory), but if you've expanded the DIMM memory, a fully recorded project will be too large to be saved in internal memory. In this case, you'll need to save the data in USB memory.

Ajouter de la mémoire

French language
for Canadian Safety Standard

Le Fantom-G est livré avec une mémoire de 32 Mo dans laquelle les échantillons audio peuvent être chargés. Toutefois, dans certains cas, une mémoire de 32 Mo sera insuffisante pour charger de grandes quantités de données. Il faudra alors ajouter des modules de mémoire vendus séparément (DIMM). La mémoire est extensible jusqu'à 128/256/512 Mo/1 GB.

Avant d'ajouter de la mémoire, consulter le détaillant, le centre de service Roland le plus proche ou un distributeur autorisé Roland.

Spécifications des modules de mémoire (DIMM) qui peuvent être utilisés

Unbuffered (non-Registered), PC133, CL=2/3, 128 MB, 256 MB, 512 MB, 1 GB (3.3 V)

Nombre de broches:168-pin

Hauteur de la carte:40 mm ou moins

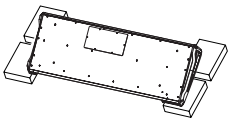
NOTE

Il a été confirmé que le Fantom-G 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.

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 Phillips 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 Fantom-G.
- 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.
- Lorsque vous déposez le Fantom-G 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.



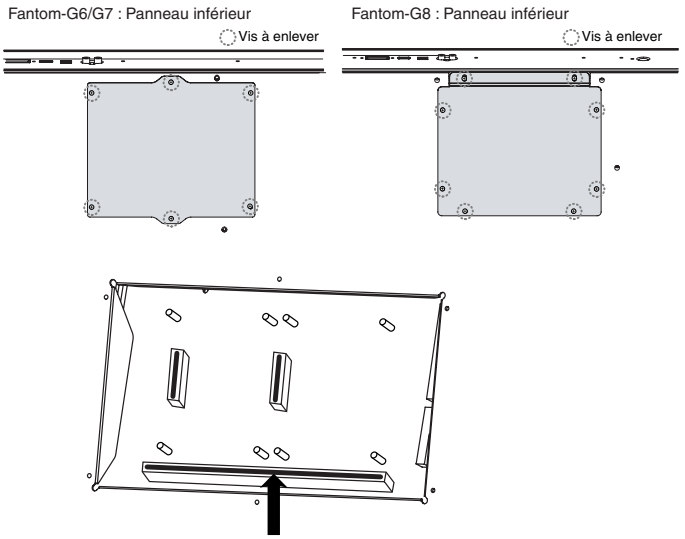
- Il faut au moins deux personnes pour soulever et tourner le Fantom-G8 sens dessus-dessous de manière sécuritaire. Il faut s'assurer d'avoir une bonne prise et de tenir fermement l'appareil pour éviter les blessures et les dommages à l'appareil.
- En plaçant l'appareil sens dessus dessous, manipulez-le 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

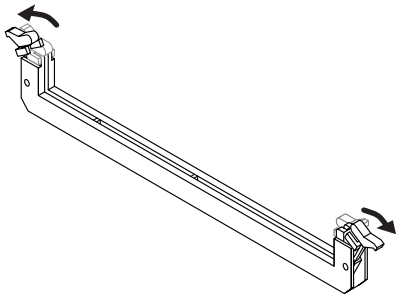
Installez le module de mémoire après avoir retiré le couvercle inférieur.

1. **Avant d'installer la mémoire additionnelle, mettez hors tension le Fantom-G et tous les périphériques connectés et débranchez tous les câbles, y compris le câble d'alimentation du Fantom-G.**

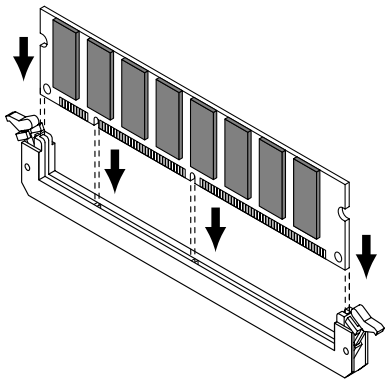
2. **Sur les modèles Fantom-G, retirer uniquement les vis illustrées dans le schéma ci-dessous et retirer le couvercle.**



3. Appuyez sur les clips blancs à l'extrémité de la prise qui devraient être orientés vers le bas.

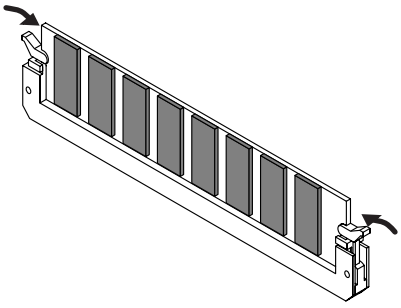


4. Prenez bien note de l'emplacement et de l'orientation de l'encoche du module de mémoire et insérez-le verticalement à l'intérieur des guides qui se trouvent de chaque côté de la prise.



* *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.

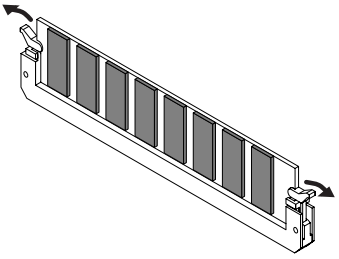


6. À l'aide des vis retirées à l'étape 2, remettez le couvercle en place.

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.

Troubleshooting

If the Fantom-G does not function in the way you expect, first check the following points. If this does not resolve the problem, consult your dealer or a nearby Roland Service Station.

* *If any sort of message is being displayed on the screen during an operation, refer to* ***Error Messages*** *(p. 322).*

Problems Concerning the Entire Fantom-G

Q The power does not turn on.

A Make sure that the Fantom-G's AC cord is connected correctly to its power inlet and to the AC outlet (p. 25).

Issues Related to Sound

Q Turning the VOLUME knob doesn't change the volume.

A If you're using the DIGITAL OUT, the VOLUME knob will not change the volume. Adjust the "Master Level" (p. 297).

Q There is no sound.

A Check the following points.

- Is the power for connected amps and speakers turned on? Is the volume turned all the way down?
- Is the VOLUME knob turned all the way down?
- Have connections been made correctly?
- Can you hear sound through headphones?
  If there is sound in the headphones, it is possible that the connection cables are broken, or that your amp/mixer has malfunctioned. Check your cables and amp/mixer system once again.
- If you do not hear sound when you play the keyboard, check whether the Local Switch is turned OFF.
  Make sure that the Local Switch parameter is turned on (p. 297).
- Have all tones in the patch been turned off?
  Turn the "Tone Switch" on → From the Single Play screen, press [F8 (Tone Sw/Sel)].
- Could the current part be set to External Part (external MIDI output)?
- The Part level settings may be too low.
  Access the Level parameter, and check the level of each part (p. 134).
- Are the Effect settings correct?
  Check the Effect settings ON or OFF, the Effect Balance or Level. (p. 150).
- Are the settings for the output destination correct?
  Check the various output assign settings (p. 136).
- Is the Expansion Board properly installed?
  When selecting the settings that stipulate the use of EXP 1, 2 sound, check that the specified Expansion Board is installed properly in the specified slot (p. 308, p. 310).
- Has the volume been lowered by pedal operations or by MIDI messages (volume messages or expression messages) received from an external MIDI device?
- Could the Favorite Level be set to 0? (p. 54)

  TIP

  In the case of Live/Studio mode, the value of volume messages (Volume) and expression messages (Expression) can be viewed in the Part Information window (p. 132).
- Have the samples been loaded correctly? (p. 264)

Q A specific Part does not sound...

A Check the following points.

- Has the volume level of the part been lowered?
  Adjust the Level parameter to raise the volume of the part that is not heard (p. 134).
- Is the part being muted?
  Set the Mute Switch parameter to "OFF" (p. 134).

Q Specific pitch ranges do not sound...

A Has a restricted range of notes been set?

If a specific range of notes does not sound, check the Key Range settings for the Patch Tone, the Live/Studio Set Part.

- Tone Key Range
  Key Range Lower/Upper parameter (p. 94)
- Part Key Range
  Key Range Lower/Upper parameter (p. 135)

Q The sound is distorted.

A Check the following points.

- Is an effect which distorts the sound being applied?
  If the sound for a specific patch or part is distorted, lower the volume level on that part.
- If all sounds are distorted, use the VOLUME knob to lower the volume level.
- Could the Output Gain be excessively high?
  In "System," check the "Sound" parameter.

Q Pitch is incorrect.

A Check the following points.

- Is the tuning of the Fantom-G incorrect?
  Check the Master Tune parameter setting (p. 297).
- Has the pitch been changed by pedal operations or by Pitch Bend messages received from an external MIDI device?

  TIP

  In the case of Live/Studio mode, the value of Pitch Bend messages (Pitch Bend) can be viewed in the Part Information window (p. 132).
- Have the Coarse Tune or Fine Tune parameters been set for specific Parts?
  Check the Coarse Tune parameter and Fine Tune parameter settings (p. 137).
- Check the Scale Tune setting.
  (System Setting: p. 300, Part Setting: p. 138)

Q The sound is interrupted.

A Sounds will be interrupted if more than 128 voices are used simultaneously.

- Reduce the number of Tones that you are using.
- Increase the Voice Reserve setting for parts that must not drop out. (p. 141)

Q When I play the keyboard, notes do not stop.

A Is the pedal polarity of the Hold Pedal reversed?

Check the Hold Pedal Polarity parameter setting (p. 291).

Q When I press a pad, the sound does not stop sounding.

A Could the [HOLD] pad be lit?

Press the [HOLD] pad once again so the light goes out.

Q The sound is interrupted when I switch studio sets in Studio mode.

A The Fantom-G can use multi-effects to apply a wide variety of effects, and when you switch studio sets, the multi-effect type specified by the patch will also change. In Studio mode, the sound may be interrupted when this occurs. If you want to switch sounds without interruption while you perform, please use Live mode or Single mode.

Q The sound is interrupted when I switch patches in Single mode or Live mode.

A If you turn the Patch Remain parameter (p. 298) "ON," you'll be able to switch patches without interrupting the sound. However, this function applies only to the most recently selected sound; notes of a sound selected prior to that will be interrupted.

Q When switching Patches in Single mode, the volume and other parameters set with Control Changes end up being reset.

A Set Control Remain parameter (p. 298) to "ON." Even once they have switched Patches, Control Change messages that have been received are carried forward, so even when switching a Patch whose level is turned all the way down by a Control Change volume message, the level remains unchanged.

Q If the Tone Delay time value is set to the note, then does the delay time not change beyond a fixed length when the tempo is slowed down?

A There is a maximum permissible value for the Delay Time parameter (p. 103). So, if the time setting is specified in terms of a note value, and the tempo is slowed down, this maximum permissible value will be reached, and it cannot be increased further. The upper time limit for each is the maximum value that can be set other than the numerical value for the beat.

Q Even when I set the Pan for a Patch completely to one side, sound still comes from the other channel...

A The Fantom-G's internal effects are in stereo, so if you have effects applied to a Patch, even if the Pan is set all the way to one side, you will still be able to hear sounds of the effect component from the other channel.

Q Sometimes, when playing legato, the pitch won't rise. Why is this?

A When the Legato Switch parameter (p. 105) is "ON," and the Legato Retrigger parameter (p. 105) is "OFF," and you hold down keys in the high register to play legato, the upper pitch limit of the wave may be exceeded, so that the pitch does not rise as far as you expect, but will stop rising at a certain point. Additionally, if differing upper pitch limits are used for the waves of a Patch that uses multiple tones, it may stop being heard in MONO. When making large pitch changes, set the Legato Retrigger parameter to "ON."

Q The notes sound strange in the upper registers of the keyboard.

A Sometimes when playing the keys in the upper part of the Fantom-G's keyboard, the sound may stop, or the pitch may stop rising; or with certain keys, there may be intermittent noise. This occurs mainly when the Fantom-G's upper pitch limit is exceeded, so this issue doesn't arise in the ranges normally used. But, in any case, it does not indicate a malfunction.

Q The same patch sounds different depending on the sound generator mode.

A In Live/Studio mode, the parameters of each part of the Live/Studio Set can apply further modification to parameters such as pan, octave, and filter, relative to the settings specified by the patch. Thus, Patches in a Live/Studio Set may sound different than they do when heard in Single mode. To return these settings to their initial conditions, select the Patch after execute Factory Reset Temporary for the Live/Studio Set. (p. 284)

Q The volume level of the instrument connected to Fantom-G is too low.

A Check the following points.

- Could you be using a connection cable that contains a resistor? Use a connection cable that does not contain a resistor.
- Check the "Input Setting" (p. 258).

Issues Related to Effects

Q Effects not applied.

A Check the following points.

- The "PFX,""MFX1,""MFX2," "CHO," "REV" or "MASTER" effect switches located in the upper part of the PLAY screen may have been turned off.
  Press [EFFECTS (ROUTING)] to turn them on.
- Are the various effect settings correct? (p. 150)
- If the send level of each effect is set to 0, the effect will not be applied. Check the settings.
- Even with send levels to each effect set at 0, effects are not applied if the Multi-effects Output Level, the Chorus Level, or the Reverb Level is set to 0. Check each setting.
- If Output Assign is set to other than "MFX," the Multi-effects sound will not be output.
- Could the system parameter Master Reverb Level be set to 0?

Q The Modulation or other controller is always on.

A Check the Matrix Controller settings. (p. 109)

The Fantom-G allows you to use the Matrix Control to control Patches in real time. The Matrix Control functions as the control source for the Control Change and other MIDI messages received by the Fantom-G, and makes changes to the various Patch parameters based on these messages.
Depending on these settings, the Fantom-G may be responding to MIDI messages sent from external MIDI devices, and may result the Patches sounding different than intended.

Q Raising the chorus or reverb send level for each part of a Live/Studio Set still does not cause the effect to be applied sufficiently.

A Although you can make Send level settings to the Chorus and Reverb for each individual Part in a Live/Studio Set, these values only set the upper limit of the Chorus and Reverb Send levels for the Patch used. Accordingly, even when the value is set to the maximum of 127, if the Send level is lowered in the Patch being used, there will be no effect. If you want to apply the effect deeply, edit the settings of the patch.

Q Using the Matrix Control or other such means to control the LFO results in noise when the Pan is changed suddenly.

A Lower the change in speed (LFO Rate).

Due to the specialized processing used for the Pan, which alters the volume level in each of the left and right sides, sudden Pan movements causing rapid changes in these levels creates large changes in volume, and noise from this may be audible as a result.

Q Multi-effect 43: TAP DELAY or other delay time value is set to the note, and then the tempo is slowed down, does the delay time not change beyond a fixed length?

A Such Delay time settings have an upper limit, so if the upper limit of a value set to the note is exceeded when the tempo is retarded, that upper value cannot rise any further. The upper time limit for each is the maximum value that can be set other than the numerical value for the beat.

Issues Related to Saving Data

Q The Live/Studio Set sounds different than when it was written.

A Check the following points.

- If you have modified the settings of a patch used by a Live/Studio Set, or if the temporary patch of the Live/Studio Set has been modified by an external MIDI device, these patches must also be saved.
  If patches used by a Live/Studio Set have been edited when you write that Live/Studio Set, the Fantom-G will display a message asking whether you want to discard these patches. In such cases, first save the patch (p. 88) or rhythm set (p. 116), and then save the Live/Studio Set (p. 148) again.
- The Mastering Effect settings may have changed. (These settings are not stored as part of a Live set.)
- The MFX settings may have changed. (These settings are not stored as part of a Live set.)

Q An expansion board sound seems different from when I saved (wrote) it.

A If the expansion board is inserted in a different slot than when you saved the live set or studio set, it will not sound with the settings of when it was saved. You must insert the expansion board in the same slot as when you saved the live set or studio set.

Q Patches sound different than when written.

A Check the following points.

- If you used control changes from an external MIDI device to modify the sound, writing the sound will not save it in its modified state.
- The Mastering Effect settings may have changed. (These settings are not stored as part of a patch.)

Q The Arpeggio and D Beam controller settings in the Live/Studio Mode are different than those for the Live/Studio Set.

A Since the Fantom-G stores arpeggio and D Beam controller settings for each Live/Studio Set, it will operate according to the arpeggio and D Beam controller settings that were specified for each Live/Studio Set.

Issues Related to Sequencer

Q Standard MIDI files (SMF) a does not play back correctly.

A Check the following points.

- Has the Receive General MIDI/General MIDI 2 System On Switch been turned ON?
  Set the Rx GM System ON/Rx GM2 System ON parameter (SYSTEM/MIDI) to "ON" (p. 299).
- Are you trying to start playback from midway through the song?
  The beginning of a GM score song contains a General MIDI/ General MIDI 2 System On message. In some cases, a GM Score cannot be played back correctly unless this message is received.
- Are you trying to play song data designed for the GS Format?
  Data created exclusively for the Sound Canvas Series may not play back properly on the Fantom-G.

Q After recording, the song does not sound when I play it back.

A Have the tracks been muted?

Defeat muting (p. 134).

Q The tempo is different than the last time I played back the song.

A If a song is played back after the tempo is changed, then the new tempo is not saved unless the song is saved to the user memory or USB memory. Conversely, the previous tempo will be erased when you save the song. When saving songs, carefully check the current tempo.

Q Sound Device Tones Are Switched Arbitrarily.

A Use the Microscope (p. 250) to check the following points.

- Has an unneeded program change been input?
- Were any mistakes made in setting the data MIDI channels when Program Change messages were input?

Q Data supposed to be present does not appear in microscope.

A Check the following points.

- In View Select (p. 252), is any data set not to be displayed?

Q After using a MIDI sequencer to play a song, sounds stopped playing, and no sound is played even when Program Changes are sent.

A It could be that a Bank Select in the song data that is not specified by the Fantom-G was encountered in the song. No sound is played if the tone group is not one designated by the Fantom-G with Bank Select MSB/LSB. Note that if you omit the Bank Select, and send only the Program Change, the tone in the currently selected group that has the specified Program Change number will play. Try resettling the tone using the panel controls. Furthermore, when selecting tones from an external MIDI device, be sure to send the Bank Select MSB/LSB and the Program Change as a single set for reliable reproduction. First sending the MSB and LSB (the order in which these are sent does not matter), followed by the Program Change.

In some cases, you may be unable to hear any sound after playing the last song that was faded-out. This may be because the volume has been lowered by volume messages or expression messages. Check the value of these messages, and set them to appropriate values.

Q Performances are sluggish, or have interruptions.

A Problems of sluggish and interrupted performances can crop up very easily when the sequencer or sound generator used for the performance has to handle heavy data loads.

Main causes and possible corrective measures are considered below.

- Are more than 128 voices playing simultaneously?
  Reduce the number of voices. With certain sounds like continuous sounds with long releases, even though the actual sound may not be audible to you, processing for playing the sound is still underway, so in these cases as well, the performance data can differ from the actual number of voices being played.

  TIP

  In the Part Information window you can check the number of notes for which sound is actually being processed (p. 132).
- Are you using a Patch that uses a lot of LFO?
  Try changing to a different Patch. LFO processing invariably places a big load on the machine, so heavy use of the LFO slows down processing for the Fantom-G overall, which can end up having affecting the expression of sounds themselves.
- Is the data concentrated at the beginning of the beats in the sequence data?
  Avoid overlapping data with the same timing by setting an offset of 1–2 tick instead. Data may easily become concentrated at the beginning of the beats in the song data when, for example, the song data is input using Step Recording, or if the data is quantized after being input with a keyboard in real time. Because of this, large amounts of data are sent to the Fantom-G, and the processing for expressing sounds becomes bogged down.

- Is there a Program Change at the point where the song performance is sluggish?
  Change the position of the Program Change. When Program Changes are inserted in songs, processing time for switching patches increases, which may then cause the performance to become sluggish.
- Is there a System Exclusive message at the point where the song performance is sluggish?
  Move the location of the data. System Exclusive messages contain large amounts of data, thus placing a heavy burden on sequencers and sound modules. Try repositioning data and changing System Exclusive messages to Control Changes for any data for which Control Changes can be substituted.
- Is there an Aftertouch or other such large Control Change at the point where the song performance is sluggish?
  If the data is no longer needed, delete the data. In some cases, when using a keyboard that features aftertouch to input data, you may end up inputting huge amounts of data before realizing this is happening. Such large amounts of data can place an excessive load on your sequencer and sound module.

TIP

You can use the Phrase Modify operation Data Thin (p. 249) to thin out unwanted messages.

Issues Related to MIDI and External Devices

Q No Sound from connected MIDI device.

A Check the following points.

- **In Live/Studio Mode**
  KBD switch (p. 61, p. 69)

* *Could the Keyboard Switch be turned off for the external part that is transmitting data to your external MIDI device? (p. 135)*

Q Exclusive messages are not received.

A Check the following points.

- Is the instrument set to receive Exclusive messages?
  Set the Rx Exclusive parameter to "ON" (p. 299).
- Does the Device ID number of the transmitting device match the Device ID number of the Fantom-G?
  Check the Device ID parameter (p. 299).

Q I connected an external sequencer or MIDI keyboard to the MIDI IN connector, and attempted to play a Fantom-G rhythm set, but there was no sound. Why?

A Check to make sure that the MIDI Transmit channel of the external MIDI device and the Fantom-G's MIDI Receive channel are matched.

Q When the Bend Range for a Patch is increased (48), the pitch does not rise sufficiently, even when a MIDI Pitch Bend message is received.

A While Patch Bend Ranges can be set anywhere between 0 and 48, when certain Waves in which the pitch is raised (in the + direction) are used, the pitch may stop rising at a fixed point, rather than continuing to go up. Although a value of 12 is ensured for the upper limit of raised pitches, use caution when setting the Bend Range above this figure.

Issues Related to Sampling

Q External input sound cannot be heard/volume is too low.

A Check the following points.

- Could [MIX IN] be unlit?
  Press [MIX IN] so it is lit.
- The level of the external input may be lowered.
  When you sample, use the EXT SOURCE "VOLUME" knob to adjust the level appropriately.
  Hold down [SHIFT] and press [MIX IN] to access the Input Setting screen, and check the Level settings.
- The volume of the device connected to AUDIO INPUT may be lowered.
  Adjust it to an appropriate level.
- Are the audio cables connected correctly?
  Check the connections.
- An audio cable may be broken.
- Could you be using an audio cable with a built-in resistor?
  Use a connection cable that does not contain a resistor (e.g., Roland PCS series).

Q External input sound is not stereo/is not monaural.

A Check the following points.

- Stereo Switch parameter (p. 260) may be set to monaural.
- Hold down [SHIFT] and press [MIX IN] to access the Input Setting screen. Could the Input Select parameter be set to "LINE IN L," or "Microphone"?

Q Mic sound is not output/is too weak.

A Check the following points.

- Is the mic cable connected correctly?
  Check the connection.
- The mic cable may be broken.
- The input source may be set to something other than mic.
  Hold down [SHIFT] and press [MIX IN] to access the Input Setting screen, and set "Input Select" to "Microphone."
- The mic level may have been lowered.
  When sampling, use the EXT SOURCE "LEVEL" knob to adjust the level appropriately.

- Could you have connected a condenser mic?
  If you're using a condenser mic, you'll need to provide phantom power.
  Turn the MIC/GUITAR switch "PHANTOM ON." (p. 24)
- Could the MIC/GUITAR switch be in a position "GUITAR"?
  Set the INPUT gain select switch to "PHANTOM ON" or "PHANTOM OFF." (p. 24)

Q Can't record a sample.

A Check the following points.

- Is there enough memory capacity?
  If there is insufficient sample memory, a message of "Sample Memory Full!" will appear when you attempt to sample. (p. 264)
  Erase unneeded samples to increase the amount of free space. If there is still not enough, install additional memory (DIMM modules). (p. 312, p. 314)

Q Sampled sound contains excessive noise or distortion.

A Check the following points.

- Is the input level appropriate?
  If the input level is too high, the sampled sound will be distorted. If it is too low, noise will be heard. When sampling, turn the LEVEL knob in the Sampling Standby screen (p. 260) to adjust the level while watching the level meter displayed in the upper part of the display. Adjust the level so that the "CLIP" indication in the upper right of the display does not appear.
- Are the effect settings appropriate?
  Some types of effect may increase the level louder than the original sample, or may intentionally distort the sound. Some effects will also cause noise to be emphasized.
  Temporarily turn off effects, and check whether the sample itself contains noise or distortion. Then adjust the effect settings appropriately.
- Are multiple samples being played simultaneously?
  Even if the level of each individual sample is appropriate, simultaneously playing multiple samples may cause the overall level to be excessively high, causing distortion. Lower the level of each sample so that the sound is not distorted.

Q Can't save sampled data.

A Check the following points.

- It may be that there is insufficient space in internal memory or USB memory.

Issues Related to a USB memory

Q USB memory is not detected.
The files are not shown.

A Check the format of your USB memory. (p. 284)

- The Fantom-G can use USB memory that has been formatted as FAT.
  If your USB memory was formatted using any other method, please re-format it using FAT.

Q Can't save to USB memory.

A Check the following points.

- Could the USB memory be write protected?
- Is there sufficient free space on the USB memory?

Issues Related to a USB connection

Q The Fantom-G is not recognized by my computer.

A You must connect the Fantom-G to a computer whose USB port supports USB 2.0 Hi-Speed connections.

Error Messages

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	Action
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.
File Name Duplicate	A file with the same name already exists.	Delete the file bearing the same name from the disk, and if overwriting and saving the data, merely save the file. If you do not want to delete the file with the same name from the disk, either save the file with a different name.
File Not Found!	The file was not found in USB memory.	Save the file once again in USB memory.
Illegal File!	The Fantom-G cannot use this file.	—
Memory Damaged!	The contents of internal memory may have been damaged.	Please perform the Factory Reset operation. If this does not resolve the problem, please contact your dealer or the nearest Roland Service Center.
Memory Full!	Saving is not possible because there is insufficient space in the internal memory or USB memory.	Delete unneeded data.
MIDI Buffer Full!	An unusually large amount of MIDI data was received, and could not be processed.	Reduce the amount of MIDI messages that are being transmitted.
MIDI Offline!	The MIDI IN connection was broken.	Check that there is no problem with the MIDI cable connected to the Fantom-G's MIDI IN, and that the MIDI cable was not disconnected.
No More Phrase Numbers!	No more phrases can be saved. One project can handle a maximum of 2,000 phrases.	Please delete unneeded phrases.
No More Sample Numbers!	The sample cannot be divided any further.	Erase unneeded samples in order to allocate 256 or more consecutive sample numbers.
	Since fewer than 256 consecutive sample numbers are vacant, no further sampling is possible.	
No More Song Numbers!	No more songs can be saved. One project can handle a maximum of fifty songs.	Please delete unneeded songs.
Now Playing!	Since the Fantom-G is playing, this operation cannot be executed.	Stop playback before you execute the operation.
Permission Denied!	The file is protected.	—
Playback Tempo Range Over	Tempo values exceed the allowable limit, and data is created in which the closest time available within the allowable range is specified.	—
Read Error!	Failed to load data from USB memory.	Make sure that USB memory is correctly connected.
	It may be that the file is damaged.	Do not use this file.
	This file cannot be loaded since its format is incorrect.	Do not use this file.
Rec Length Too Short!	The recording length is too short.	Lengthen the duration of the recording.
Rec Over Flow	Since a large amount of recorded data was input all at once, it could not be processed correctly.	Reduce the amount of recorded data.
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.
Song Format Error	This song is damaged.	This song cannot be used.
Song Full	Since the maximum number of notes that can be recorded in a song or phrase has been exceeded, no further recording/editing is possible.	Use the phrase edit Delete or Erase commands to remove unneeded data from the song/phrase that you are recording/editing.
Song Not Found	The selected song cannot be found.	—
System Memory Damaged!	It is possible that the contents of system memory have been damaged.	Please execute a Factory Reset. If this does not resolve the problem, contact your dealer or a nearby Roland service center.
USB Memory Not Ready!	USB memory is not connected.	Connect USB memory.
USB Offline!	The USB cable is not connected.	Check that there is no problem with the USB cable connected to the Fantom-G, and that the USB cable was not disconnected.
Write Error!	Failed to write data to USB memory.	Make sure that USB memory is correctly connected.
	The file or the USB memory itself is write protected.	Make sure that the file or the USB memory is not write protected.
You Cannot Erase This Message	This message cannot be erased.	—
You Cannot Move This Message	This message cannot be moved.	—

About MIDI

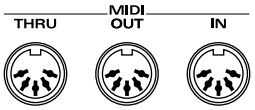
MIDI (Musical Instruments Digital Interface) is a standard specification that allows musical data to be exchanged between electronic musical instruments and computers. MIDI With a MIDI cable connecting MIDI devices that are equipped with MIDI connectors, you can play multiple instruments with a single keyboard, have multiple MIDI instruments perform in ensemble, program the settings to change automatically to match the performance as the song progresses, and more.

If you mainly use the Fantom-G as a standalone keyboard instrument, you may really not need to know much at all about MIDI.

However, the following MIDI-related information is provided so you can play the Fantom-G using an external MIDI device, or master other advanced techniques.

About MIDI Connectors

The Fantom-G is equipped with the three types of MIDI connectors, each which works differently.



MIDI IN Connector

This connector receives MIDI messages that are transmitted from external MIDI devices. The Fantom-G can receive these messages to play notes or select sounds, etc.

MIDI OUT Connector

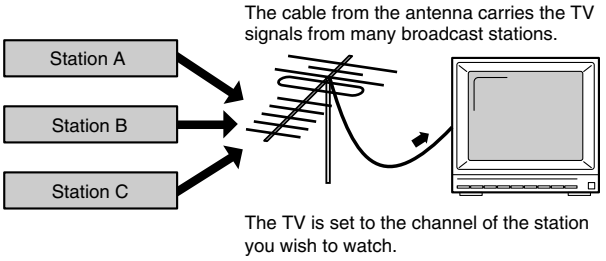
This connector transmits MIDI messages to external MIDI devices. The Fantom-G's MIDI OUT connector is used for sending the performance data of the keyboard controller section as well as data used for saving various settings and patterns.

MIDI THRU Connector

MIDI messages received at MIDI IN are re-transmitted without change from this connector to an external MIDI device. Use this in situations such as when you use multiple MIDI devices simultaneously.

MIDI Channels and Multi-timbral Sound Generators

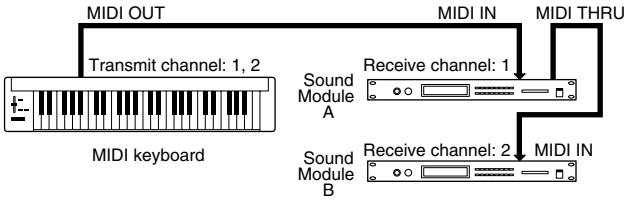
MIDI transmits many types of data over a single MIDI cable. This is made possible by the concept of **MIDI channels**. MIDI channels allow messages intended for a given instrument to be distinguished from messages intended for another instrument. In some ways, MIDI channels are similar to television channels. By changing the channel on a television set, you can view the programs that are being broadcast by different stations. In the same way, MIDI also allows a device to select the information intended for that device out of the variety of information that is being transmitted to it.



MIDI uses sixteen channels; 1 through 16. Set the receiving device so that it will receive only the channel that it needs to receive.

Example:

Set the Fantom-G to send Channel 1 and Channel 2, then set sound module A to receive only Channel 1 and sound module B only Channel 2. With this setup, you can get an ensemble performance, with, for example, a guitar sound from sound module A and bass from sound module B.



When used as a sound module, the Fantom-G can receive on up to sixteen MIDI channels. Sound modules like the Fantom-G which can receive multiple MIDI channels simultaneously to play different sounds on each channel are called **multi-timbral sound modules**.

General MIDI

General MIDI is a set of recommendations which seeks to provide a way to go beyond the limitations of proprietary designs, and standardize the MIDI capabilities of sound generating devices. Sound generating devices and music files that meet the General MIDI standard bear the General MIDI logo (GENERAL MIDI). Music files bearing the General MIDI logo can be played back using any General MIDI sound generating unit to produce essentially the same musical performance.

General MIDI 2

The upwardly compatible General MIDI 2 (GENERAL MIDI2) recommendations pick up where the original General MIDI left off, offering enhanced expressive capabilities, and even greater compatibility. Issues that were not covered by the original General MIDI recommendations, such as how sounds are to be edited, and how effects should be handled, have now been precisely defined. Moreover, the available sounds have been expanded. General MIDI 2 compliant sound generators are capable of reliably playing back music files that carry either the General MIDI or General MIDI 2 logo.

In some cases, the conventional form of General MIDI, which does not include the new enhancements, is referred to as "General MIDI 1" as a way of distinguishing it from General MIDI 2.

(Sound Generator Section)
Model Fantom-G6/G7/G8

MIDI Implementation Chart

Date : Feb. 1, 2008
Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic	Default	1–16	1–16	
Channel	Changed	1–16	1–16	
Mode	Default	Mode 3	Mode 3	
	Messages	Mono, Poly	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	O	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 *1	Modulation
	5	O	O	Portamento time
	6, 38	O	O	Data entry
	7	O	O *1	Volume
	10	O	O *1	Panpot
	11	O	O *1	Expression
	64	O	O *1	Hold 1
	65	O	O	Portamento
	66	O	O	Sostenuto
	67	O	O	Soft
	68	O	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
	76	O	O	Vibrato rate
	77	O	O	Vibrato depth
	78	O	O	Vibrato delay
	80	O	O (Tone 1 Level)	General purpose controller 5
	81	O	O (Tone 2 Level)	General purpose controller 6
	82	O	O (Tone 3 Level)	General purpose controller 7
	83	O	O (Tone 4 Level)	General purpose controller 8
	84	O	O	Portamento control
	91	O	O (Reverb)	General purpose effects 1
	93	O	O (Chorus)	General purpose effects 3
	1–31, 33–95	O	O	General purpose controller
	96, 97	X	X	Increment, Decrement
	98, 99	X	X	NRPN LSB, MSB
	100, 101	X	O	RPN LSB, MSB
	102–119	X	X	Undefined
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	X	
	: Commands	X	X	
Aux Messages	: All Sound Off	X	O	
	: Reset All Controllers	X	O	
	: Local On/Off	X	X	
	: All Notes Off	X	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.		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

(Sequencer Section) Date : Feb. 1, 2008

Model Fantom-G6/G7/G8 **MIDI Implementation Chart** Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic	Default	All channel	All channel	There is no specific basic channel.
Channel	Changed	X	1–16	
Mode	Default	X	X	
	Messages	X	X	
	Altered	**********		
Note Number :	True Voice	0–127 **********	0–127 0–127	
Velocity	Note On	O	O	
	Note Off	O	O	
After Touch	Key's	O	O *1	
	Channel's	O	O *1	
Pitch Bend		O	O *1	
Control Change	0–119	O	O *1	
Program Change	: True Number	O **********	O *1 0–127	
System Exclusive		O	O *1	
System Common	: Quarter Frames	O *1	O *2	
	: Song Position	O *1	O *1	
	: Song Select	X	X	
	: Tune Request	O	O	
System Real Time	: Clock	O *1	O *1	
	: Commands	O *1	O *1	
Aux Messages	: All Sound Off	O	O	
	: Reset All Controllers	O	O	
	: Local On/Off	X *2	X	
	: All Notes Off	O *3	O (123–127) *3	
	: Active Sensing	O	O	
	: System Reset	X	X	
Notes		*1 O X is selectable. *2 Not stored/transmitted when received, but can be created and transmitted using Microscope. *3 Mode Messages (123–127) are recorded and transmitted, after all currently sounding notes are turned off. The All Note Message itself is not recorded or transmitted. However, it can be created in Microscope and transmitted.		

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO O : Yes

Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO X : No

Specifications

Fantom-G6/G7/G8:
Synthesizer Keyboard (Conforms to General MIDI 2 System)

Keyboard

[G6] 61 keys (with velocity and channel aftertouch)
[G7] 76 keys (with velocity and channel aftertouch)
[G8] 88 keys (Progressive Hammer action II Mechanism, Ivory feel, and channel aftertouch)

Sound Generator Section

Maximum Polyphony

128 voices (shared with the sampling section)

Parts

16 parts (Internal) + 16 parts (External) + 2 parts (ARX) + 24 parts (Audio Track)

Wave Memory

256 M bytes (16-bit linear equivalent)

Waveforms

2,230

Preset Memory

Patches: 1,668 + 256 (GM2)
Rhythm Sets: 64 + 9 (GM2)
Live Sets: 512
Studio Sets: 8

User Memory (per 1project)

Patches: 512
Rhythm Sets: 64
Sample Sets: 128
Live Sets: 512
Studio Sets: 128

Effects

Patch Multi-Effects (PFX): 16 systems, 76 types
Multi-Effects (MFX): 2 systems, 78 types
Chorus: 1system, 3 types
Reverb: 1system, 10 types
Input Effects: 1system, 6 types
Mastering Effects: 1system, 3-band compressor

Sampling Section

Data Format

16-bit linear (File Type: .WAV/.AIFF)

Sampling Frequency

44.1 kHz (fixed)

Maximum Sampling Time

- When sampling memory isn't expanded (32 MB)
  mono: 360 sec. approx., stereo: 180 sec. approx.
- When sampling memory is expanded with DIMM (1 GB)
  mono: 202 min. approx., stereo: 101 min. approx.

Number of Samples (per 1project)

2,000

Sequencer Section

Tracks

MIDI tracks (Internal/External/ARX): max.128
Audio tracks: max.24
Tempo track: 1
Beat track: 1

Resolution

480 TPQN

Tempo

5.00–300.00

Song (per 1project)

50

Phrase (per 1project)

2,000

Note Capacity (per 1project)

approx. 1,000,000 notes

Song Length

9,998 measures

Recording Method

Realtime recording, Step recording

Others

Arpeggiator

128

Arpeggio Sets

128

RPS Sets

64

Rhythm Pattern Sets

64

Chord Memory

128

Chord Memory Sets

128

Display

Graphic Type, 8.5inch, TFT Wide VGA(800 x 480 dots), backlit LCD (Color)

Pads

16 pads, Velocity and Polyphonic Aftertouch sensitive

Controllers

Pitch Bend/Modulation Lever
Control Knob x 4
Control Slider x 8
Assignable Switch x 2
D Beam Controller

Connectors

Headphones Jack: stereo 1/4 inch phone type
A (MIX) Output Jacks (L/MONO, R): 1/4 inch TRS phone type
B Output Jacks (L, R): 1/4 inch phone type
Input Jacks (L/MONO/MIC, R): 1/4 inch phone type
Mic./Guitar Input Jacks: 1/4 inch phone type/XLR type (Phantom power) (Hi-Z)
Hold Pedal Jack (Half Pedal recognition)
Control Pedal Jack (assignable) x 2
MIDI Connectors (IN, OUT, THRU)
USB Computer Connector (supports file transfer (mass storage class) and Audio/MIDI)
USB Mouse Connector
Digital Audio Interface (COAXIAL INPUT/OUTPUT)
AC Inlet

Expansion Slots

- Expansion of sound generator
  ARX expansion boards: 2 slots
- Expansion of sampling memory
  DIMM: 1 slot (supports Unbuffered (non-Registered), PC133, CL=2/3, 128 MB, 256 MB, 512 MB, 1 GB (3.3 V))

External Storage Device

USB Flash Memory

Power Supply

AC 117 V, AC 230 V, AC 240 V (50/60 Hz)
AC 220 V (60 Hz)

Power Consumption

30 W

Dimensions

[G6] 1,066 (W) x 411 (D) x 142 (H) mm
42 (W) x 16-3/16 (D) x 5-5/8 (H) inches

[G7] 1,278 (W) x 411 (D) x 142 (H) mm
50-3/8 (W) x 16-3/16 (D) x 5-5/8 (H) inches

[G8] 1,396 (W) x 502 (D) x 183 (H) mm
55 (W) x 19-13/16 (D) x 7-1/4 (H) inches

Weight

[G6] 14.5 kg / 32 lbs
[G7] 16.6 kg / 36 lbs 10 oz
[G8] 33.6 kg / 74 lbs 2 oz

Accessories

Owner's Manual
Quick Start Guide
Sound List
Driver Installation Guide
CD-ROM (Editor, USB MIDI driver)
Power Cord

Options

Expansion Board: ARX Series
Keyboard Stand: KS-18Z (Fantom-G6/G7/G8), KS-G8 (Fantom-G8)
Pedal Switch: DP series
Foot Switch: BOSS FS-5U
Expression Pedal: EV-5
USB Memory: M-UF1G
Microphone: DR series
Headphone: RH-200

* *In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.*

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For the USA

DECLARATION OF CONFORMITY
Compliance Information Statement

Model Name : Fantom-G6/G7/G8
Type of Equipment : Synthesizer Keyboard
Responsible Party : Roland Corporation U.S.
Address : 5100 S. Eastern Avenue, Los Angeles, CA 90040-2938
Telephone : (323) 890-3700

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.

For EU Countries

UK This symbol indicates that in EU countries, this product must be collected separately from household waste, as defined in each region. Products bearing this symbol must not be discarded together with household waste.

DE Dieses Symbol bedeutet, dass dieses Produkt in EU-Ländern getrennt vom Hausmüll gesammelt werden muss gemäß den regionalen Bestimmungen. Mit diesem Symbol gekennzeichnete Produkte dürfen nicht zusammen mit den Hausmüll entsorgt werden.

FR Ce symbole indique que dans les pays de l'Union européenne, ce produit doit être collecté séparément des ordures ménagères selon les directives en vigueur dans chacun de ces pays. Les produits portant ce symbole ne doivent pas être mis au rebut avec les ordures ménagères.

IT Questo simbolo indica che nei paesi della Comunità europea questo prodotto deve essere smaltito separatamente dai normali rifiuti domestici, secondo la legislazione in vigore in ciascun paese. I prodotti che riportano questo simbolo non devono essere smaltiti insieme ai rifiuti domestici. Ai sensi dell'art. 13 del D.Lgs. 25 luglio 2005 n. 151.

ES Este símbolo indica que en los países de la Unión Europea este producto debe recogerse aparte de los residuos domésticos, tal como esté regulado en cada zona. Los productos con este símbolo no se deben depositar con los residuos domésticos.

PT Este símbolo indica que nos países da UE, a recolha deste produto deverá ser feita separadamente do lixo doméstico, de acordo com os regulamentos de cada região. Os produtos que apresentem este símbolo não deverão ser eliminados juntamente com o lixo doméstico.

NL Dit symbool geeft aan dat in landen van de EU dit product gescheiden van huishoudelijk afval moet worden aangeboden, zoals bepaald per gemeente of regio. Producten die van dit symbool zijn voorzien, mogen niet samen met huishoudelijk afval worden verwijderd.

DK Dette symbol angiver, at i EU-lande skal dette produkt opsamles adskilt fra husholdningsaffald, som defineret i hver enkelt region. Produkter med dette symbol må ikke smides ud sammen med husholdningsaffald.

NO Dette symbolet indikerer at produktet må behandles som spesialavfall i EU-land, iht. til retningslinjer for den enkelte regionen, og ikke kastes sammen med vanlig husholdningsavfall. Produkter som er merket med dette symbolet, må ikke kastes sammen med vanlig husholdningsavfall.

SE Symbolen anger att i EU-länder måste den här produkten kasseras separat från hushållsavfall, i enlighet med varje regions bestämmelser. Produkter med den här symbolen får inte kasseras tillsammans med hushållsavfall.

FI Tämä merkintä ilmaisee, että tuote on EU-maissa kerättävä erillään kotitalousjätteistä kunkin alueen voimassa olevien määräysten mukaisesti. Tällä merkinnällä varustettuja tuotteita ei saa hävittää kotitalousjätteiden mukana.

HU Ez a szimbólum azt jelenti, hogy az Európai Unióban ezt a terméket a háztartási hulladéktól elkülönítve, az adott régióban érvényes szabályozás szerint kell gyűjteni. Az ezzel a szimbólummal ellátott termékeket nem szabad a háztartási hulladék közé dobni.

PL Symbol oznacza, że zgodnie z regulacjami w odpowiednim regionie, w krajach UE produktu nie należy wyrzucać z odpadami domowymi. Produktów opatrzonych tym symbolem nie można utylizować razem z odpadami domowymi.

CZ Tento symbol udává, že v zemích EU musí být tento výrobek sbírán odděleně od domácího odpadu, jak je určeno pro každý region. Výrobky nesoucí tento symbol se nesmí vyhazovat spolu s domácím odpadem.

SK Tento symbol vyjadruje, že v krajinách EÚ sa musí zber tohto produktu vykonávať oddelene od domového odpadu, podľa nariadení platných v konkrétnej krajine. Produkty s týmto symbolom sa nesmú vyhadzovať spolu s domovým odpadom.

EE See sümbol näitab, et EL-i maades tuleb see toode olemprügist eraldi koguda, nii nagu on igas piirkonnas määratletud. Selle sümboliga märgitud tooteid ei tohi ära visata koos olmeprügiga.

LT Šis simbolis rodo, kad ES šalyse šis produktas turi būti surenkamas atskirai nuo buitinių atliekų, kaip nustatyta kiekviename regione. Šiuo simboliu paženklinti produktai neturi būti išmetami kartu su buitinėmis atliekomis.

LV Šis simbols norāda, ka ES valstīs šo produktu jāievāc atsevišķi no mājsaimniecības atkritumiem, kā noteikts katrā reģionā. Produktus ar šo simbolu nedrīkst izmest kopā ar mājsaimniecības atkritumiem.

SI Ta simbol označuje, da je treba proizvod v državah EU zbirati ločeno od gospodinjskih odpadkov, tako kot je določeno v vsaki regiji. Proizvoda s tem znakom ni dovoljeno odlagati skupaj z gospodinjskimi odpadki.

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For China

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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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List of Fantom-G shortcut keys

Shortcut	Explanation	Page
Common		
Controllers		
[SHIFT] + D BEAM [PAD TRIGGER]	Accesses the D Beam setting screen.	p. 73
[SHIFT] + D BEAM [SOLO SYNTH]	Accesses the D Beam setting screen.	p. 73
[SHIFT] + D BEAM [ASSIGNABLE]	Accesses the D Beam setting screen.	p. 75
[SHIFT] + knobs1-4	Accesses the setting screen for each knob.	p. 76
[SHIFT] + sliders1-8	Accesses the setting screen for each slider.	p. 76
[SHIFT] + [S1] / [S2]	Accesses the setting screen for each switch.	p. 77
Arpeggio / Chord Memory		
[SHIFT] + [ARPEGGIO]	Accesses the Arpeggio setting screen.	p. 78
[SHIFT] + [CHORD]	Accesses the Chord Memory setting screen.	p. 81
Song		
[SHIFT] + [LOOP]	Accesses the Loop window.	p. 208
[SHIFT] + [JUMP]	Accesses the Marker window.	p. 208
[SHIFT] + [◀◀]	Jumps to the previous marker.	p. 208
[SHIFT] + [▶▶]	Jumps to the next marker.	p. 208
[SHIFT] + [REC]	When in the Phrase Edit screen or MIDI Phrase List screen, initiates step recording.	p. 226
Other		
[SHIFT] + [MIX IN]	Accesses the Input Setting screen.	p. 258
[SHIFT] + [EXIT]	Undo.	p. 217
Song Play screen		
[SHIFT] + [DEC] / [INC]	Changes the number of tracks displayed.	p. 209
[SHIFT] + [◀] / [▶]	Changes the number of measures displayed.	p. 209
Song Edit screen		
[SHIFT] + [▲] / [▼]	Moves the sample / phrase to another track.	p. 233
[SHIFT] + [◀] / [▶]	Moves the sample / phrase in one-measure steps.	p. 233
[SHIFT] + VALUE dial	Moves the sample / phrase in 16th-note steps (120 ticks).	p. 233
[SHIFT] + [DEC] / [INC]	Moves the sample / phrase in one-tick steps.	p. 233
Studio Play / Effects Routing / Part View / Control Setting (Ctrl Switch) screens		
[SHIFT] + [◀] / [▶]	Switches the part group.	p. 67

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