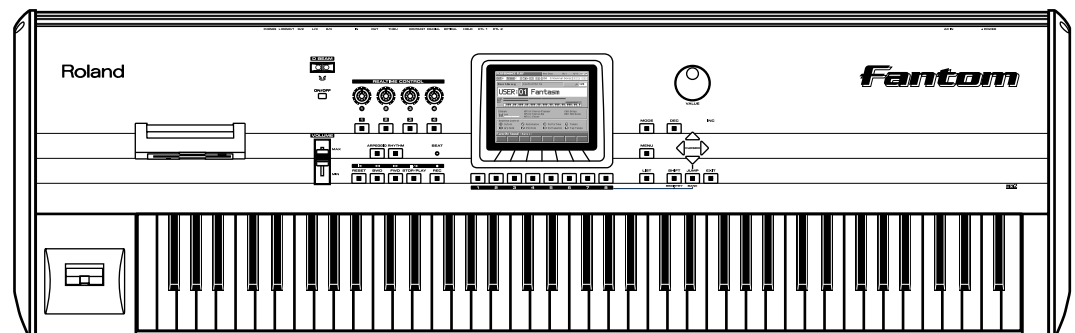


Fantom

OWNER'S MANUAL

Thank you, and congratulations on your choice of the Roland *Fantom* (FA-76).



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



Copyright © 2001 ROLAND CORPORATION

All rights reserved. No part of this publication may be reproduced in any form without the written permission of ROLAND CORPORATION.

Download from www.Softmanualse.com. All Manuals Search And Download.

	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 damp 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. When 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. Never use with a cart, stand, tripod, bracket, or table except as 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.







USING THE UNIT SAFELY

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

About  WARNING and  CAUTION Notices









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

About the Symbols









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

ALWAYS OBSERVE THE FOLLOWING

WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual. 
- Do not open or perform any internal modifications on the unit. (The only exception would be where this manual provides specific instructions which should be followed in order to put in place user-installable options; see p. 196.) 
- 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 rack or stand that is recommended by Roland. 
- When using the unit with a rack or stand recommended by Roland, the rack or stand must be carefully placed so it is level and sure to remain stable. If not using a rack or 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. 

WARNING

- Use only the attached power-supply cord. 
- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards! 
- This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist. 
- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit. 

- 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. 

USING THE UNIT SAFELY

⚠ WARNING

- 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 (SR-JV80/SRX Series; Quick Start p. 3-4).



⚠ 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 keyboard stand KS-12. Use with other stands 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.



- 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.



⚠ CAUTION

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



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



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



- Before cleaning the unit, turn off the power and unplug the power cord from the outlet (Quick Start p. 5).



- 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) (SR-JV80/SRX Series). Remove only the specified screws (p. 196, p. 198).



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



IMPORTANT NOTES

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

Power Supply

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

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.

- Observe the following when using the unit's floppy disk drive. For further details, refer to "Before Using Floppy Disks."
 - Do not place the unit near devices that produce a strong magnetic field (e.g., loudspeakers).
 - Install the unit on a solid, level surface.
 - Do not move the unit or subject it to vibration while the drive is operating.
- 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.
- To avoid possible breakdown, do not use the unit in a wet area, such as an area exposed to rain or other moisture.
- 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.

Maintenance

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

Additional Precautions

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

Before Using Floppy Disks

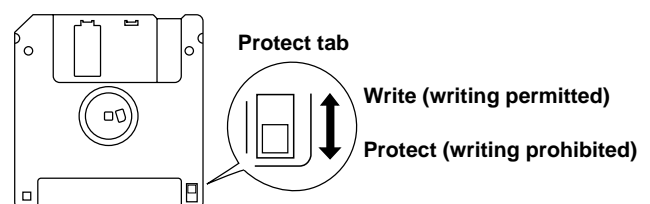
Handling the Floppy Disk Drive

- Install the unit on a solid, level surface in an area free from vibration. If the unit must be installed at an angle, be sure the installation does not exceed the permissible range: upward, 2°; downward, 18°.
- Avoid using the unit immediately after it has been moved to a location with a level of humidity that is greatly different than its former location. Rapid changes in the environment can cause condensation to form inside the drive, which will adversely affect the operation of the drive and/or damage floppy disks. When the unit has been moved, allow it to become accustomed to the new environment (allow a few hours) before operating it.

- To insert a disk, push it gently but firmly into the drive—it will click into place. To remove a disk, press the EJECT button firmly. Do not use excessive force to remove a disk which is lodged in the drive.
- Never attempt to remove a floppy disk from the drive while the drive is operating (the indicator is lit); damage could result to both the disk and the drive.
- Remove any disk from the drive before powering up or down.
- To prevent damage to the disk drive's heads, always try to hold the floppy disk in a level position (not tilted in any direction) while inserting it into the drive. Push it in firmly, but gently. Never use excessive force.
- To avoid the risk of malfunction and/or damage, insert only floppy disks into the disk drive. Never insert any other type of disk. Avoid getting paper clips, coins, or any other foreign objects inside the drive.

Handling Floppy Disks

- Floppy disks contain a plastic disk with a thin coating of magnetic storage medium. Microscopic precision is required to enable storage of large amounts of data on such a small surface area. To preserve their integrity, please observe the following when handling floppy disks:
 - Never touch the magnetic medium inside the disk.
 - Do not use or store floppy disks in dirty or dusty areas.
 - Do not subject floppy disks to temperature extremes (e.g., direct sunlight in an enclosed vehicle). Recommended temperature range: 10 to 50° C (50 to 122° F).
 - Do not expose floppy disks to strong magnetic fields, such as those generated by loudspeakers.
- Floppy disks have a "write protect" tab which can protect the disk from accidental erasure. It is recommended that the tab be kept in the PROTECT position, and moved to the WRITE position only when you wish to write new data onto the disk.



- The identification label should be firmly affixed to the disk. Should the label come loose while the disk is in the drive, it may be difficult to remove the disk.
- Store all disks in a safe place to avoid damaging them, and to protect them from dust, dirt, and other hazards. By using a dirty or dust-ridden disk, you risk damaging the disk, as well as causing the disk drive to malfunction.

How To Use This Manual

This owner's manual is organized as follows. Before you start reading it, we'd like to suggest going through the Quick Start manual. For parameter lists, sound lists, and MIDI implementation, refer to the separate "Sound/Parameter List." In addition, the separate "Q&A" provides answers for frequently asked questions about the Fantom, and example applications for your reference.

Overview of the Fantom

This explains the structure of the Fantom, and basic operation. Reading it is essential for understanding Fantom operational procedures.

Playing in Patch Mode

This explains how to play the Fantom in Patch mode. Reading it is essential for understanding Fantom operational procedures.

Creating a Patch

This chapter explains how to create patches, and describes what the patch parameters do and how they are composed. Read this chapter when you wish to create patches.

Creating a Rhythm Set

This chapter explains how to create rhythm sets, and describes what the rhythm set parameters do and how they are composed. Read this chapter when you wish to create rhythm sets.

Playing in Performance Mode

This explains how to play the Fantom in Performance mode. Reading it is essential for understanding Fantom operational procedures.

Creating a Performance

This chapter explains how to create performances, and describes what the performance parameters do and how they are composed. Read this chapter when you wish to create performances.

Playing in Multitimbre Mode

This explains how to play the Fantom in Multitimbre mode. Reading it is essential for understanding Fantom operational procedures.

Creating a Multitimbre

This explains how to create a multitimbre, and the functions and structure of the multitimbre parameters. Read this when you wish to create a multitimbre.

Playing Back a Song

This explains how to play back a song using the Fantom's sequencer. Reading it is essential for understanding Fantom operational procedures.

Recording a Song

This explains how to record a song using the Fantom's sequencer. Reading it is essential for understanding Fantom operational procedures.

Editing a Song

This chapter explains song editing and song settings in detail. Read this when you wish to edit a song that you've recorded.

Playing Phrase with One Finger (RPS Function)

This explains the settings of the RPS (Realtime Phrase Sequence) function, and how to use it for performance. Read this chapter when you wish to use the RPS.

Changing Tones in Realtime

This explains how to use the D Beam controller and realtime controllers to modify the sound, and how to make the necessary settings. Read this when you want to modify the sound in realtime.

Applying Effects

This chapter explains how to make settings for the Fantom's onboard effects, and describes the type and operation of each effect. Be sure to read this when adding effects to patches and performances.

Settings Common to All Modes (System Function)

This chapter describes how the System parameters that determine the Fantom's operation environment work and how these parameters are organized. Read it as necessary.

Disk-Related Functions (Disk Utility)

This chapter covers disk-related operations such as saving data to disk and loading data from disk. Read it as necessary.

Transmitting Sound Settings/ Restoring the Factory Settings

This explains how to transmit data to an external MIDI device or to the Fantom (Data Transfer), and how to restore all data of the Fantom to the factory settings (Factory Reset). Read it as necessary.

Installing the Wave Expansion Board

This explains how to install a Wave Expansion Board (sold separately). Read it as necessary.

Notation Used in This Owner's Manual

To make operation procedures easy to understand, the following notation system is adopted:

Characters and numbers in square brackets [] indicate buttons and knobs on the front panel. For example, [MODE] indicates the MODE button, and [CURSOR] indicates the cursor buttons

(▲, ▼, ◀, ▶).

(p. **) refers to pages within the manual.

In this manual, when any particular parameter is referred to, the name of the parameter is given, and this is then followed (in parenthesis) by information detailing its mode/edit group. For example: Mono/Poly parameter (PATCH/General).

Below are the meanings of the symbols preceding certain sentences in the text.



These are notes. Be sure to read them.



These are reference memos. Read it as necessary.



These are hints for operating the Fantom. Read it as necessary.



These provide information from related reference pages. Read it as necessary.



The display screens printed in this owner's manual are based on the factory settings. However, please be aware that in some cases they may differ from the actual factory settings.

Contents

IMPORTANT NOTES	4
How To Use This Manual.....	6
Notation Used in This Owner's Manual.....	7
Main Features.....	14
Panel Descriptions.....	16
Front Panel.....	16
Rear Panel.....	18
Overview of the Fantom	19
How the Fantom Is Organized.....	19
Basic Structure	19
Classification of Fantom Sound Types.....	19
About Simultaneous Polyphony.....	21
About Memory.....	22
Temporary Memory.....	22
Rewritable Memory	22
Non-Rewritable Memory.....	22
About the Onboard Effects	23
Effect Types.....	23
How Effects Units Work in Different Modes.....	23
About the Sequencer.....	24
What Is a Song?	24
What Is a Track?	24
Songs and the Sound Generator Mode	25
How Phrase Tracks, Parts and MIDI Channels Interact.....	25
Positions for Storing a Song.....	26
Basic Operation of the Fantom	27
Switching the Sound Generator Mode ([MODE]).....	27
Switching Screens from the Menu ([MENU])	28
Viewing a List of Patches or Other Data ([LIST])	28
About the [1]-[8] Buttons.....	28
Moving the Cursor.....	29
Modifying a Value	29
Assigning a Name.....	30
Playing in Patch Mode.....	31
About the PATCH PLAY Screen.....	31
Displaying PATCH PLAY Screen.....	31
Selecting a Patch	32
Selecting Favorite Patches (Favorite Sound)	33
Selecting Patches from the List.....	33
Auditioning Patches (Phrase Preview)	34
Selecting Patches by Category (Patch Finder)	34
Transposing the Keyboard in Octave Units (Octave Shift)	35
Transposing the Keyboard in Semitone Steps (Transpose).....	36
Selecting the Tones That Will Sound (Tone On/Off).....	36
Playing Single Notes (Mono).....	37
Creating Smooth Pitch Changes (Portamento)	37
Playing Arpeggios (Arpeggiator).....	38
Holding an Arpeggio.....	38
Simulating a Rhythm Guitar	38
Using an External MIDI Keyboard to Play Arpeggios	39
Making Arpeggiator Settings	39

Playing Percussion Instruments.....	40
Selecting a Rhythm Set.....	40
Playing a Rhythm Set	41
Playing Rhythm Patterns from the Keyboard.....	41
Holding the Playback of a Rhythm Pattern	41
Making Rhythm Pattern Settings.....	41
Creating a Patch.....	42
How to Make the Patch Settings	42
Initializing Patch Settings (Init).....	43
Copying Patch Settings (Copy)	43
Cautions When Selecting a Waveform	44
Saving Patches You've Created (Write)	45
Auditioning the Save-Destination Patch (Compare)	46
Registering a Favorite Patch (Favorite Sound)	46
Functions of Patch Parameters	47
Settings Common to the Entire Patch (General).....	47
Arpeggiator Settings (Arpeggio)	51
Realtime Controller / D Beam Controller Settings (Controller)	52
Setting Effects for a Patch (Effects/MFX/MFX Control/Chorus/Reverb).....	53
Matrix Control Settings (Matrix Ctrl).....	54
Changing How a Tone Is Sounded (TMT)	56
Modifying Waveforms (Wave)	59
Modifying Pitch (Pitch)	60
Modifying the Brightness of a Sound with a Filter (TVF).....	62
Adjusting the Volume (TVA)	64
Modulating Sounds (LFO).....	66
Creating a Rhythm Set	69
How to Make the Rhythm Set Settings	69
Initializing Rhythm Set Settings (Init).....	69
Copying Rhythm Set Settings (Copy)	70
Cautions When Selecting a Waveform	71
Saving Rhythm Sets You've Created (Write)	72
Auditioning the Save-Destination Rhythm Set (Compare)	73
Registering Favorite Rhythm Sets (Favorite Sound).....	73
Functions of Rhythm Set Parameters	74
Settings Common to the Entire Rhythm Set (General)	74
Rhythm Pattern Settings (Rhythm Ptn)	75
Realtime Controller / D Beam Controller Settings (Controller)	76
Setting Effects for a Rhythm Set (Effects/MFX/MFX Control/Chorus/Reverb)	77
Changing How a Rhythm Tone Is Sounded (WMT)	77
Modifying Pitch (Pitch)	79
Modifying the Brightness of a Sound with a Filter (TVF).....	80
Adjusting the Volume (TVA)	82
Playing in Performance Mode.....	84
About the PERFORMANCE PLAY Screen.....	84
Displaying PERFORMANCE PLAY Screen.....	84
Selecting a Performance.....	85
Selecting Favorite Performances (Favorite Sound)	86
Selecting Performances from the List.....	86
Combining and Playing Sounds Together (Layer).....	87
Playing Different Sounds in Different Areas of the Keyboard (Split)	87
Playing Arpeggios in a Specific Region of the Keyboard.....	88
Playing Rhythm Patterns in a Specific Region of the Keyboard	89

Using the Fantom As a Master Keyboard.....	90
Changing the Connections between Keyboard and Sound Generator (Zone)	90
Confirming MIDI Information for Each Part (Part Information)	90
Creating a Performance	91
How to Make the Performance Settings.....	91
Initializing Performance Settings (Init)	91
Copying Performance Settings (Copy)	92
Saving Performance You've Created (Write)	93
Registering a Favorite Performance (Favorite Sound)	93
Functions of Performance Parameters.....	94
Settings Common to the Entire Performance (General)	94
Arpeggiator Settings (Arpeggio)	95
Rhythm Pattern Settings (Rhythm Ptn)	96
Realtime Controller / D Beam Controller Settings (Controller)	97
Zone Settings (Zone).....	98
Making Settings for Each Part (Part)	100
Making Settings for Receiving MIDI (MIDI).....	103
Setting Effects for a Performance (Effects/MFX/MFX Control/Chorus/Reverb)	104
Scale Tune Settings (Scale Tune).....	104
Changing the Settings of the Patch Assigned to a Part.....	105
Playing in Multitimbre Mode	106
About the MULTITIMBRE PLAY screen	106
Displaying the MULTITIMBRE PLAY screen	106
Selecting a Multitimbre.....	107
Selecting Multitimbres from a List	107
Playing Back a Song	108
Selecting a Part to Play from the Keyboard (Current Part).....	108
Selecting a Part to Play Individually (Solo)	108
Silencing the Playback of a Specific Part (Mute).....	109
Assigning a Different Patch to a Part	109
Adjusting the Volume and Pan of Each Part.....	109
Recording an Arpeggio Performance.....	110
Recording the Performance of a Rhythm Pattern.....	110
Confirming MIDI Information for Each Part (Part Information)	111
Creating a Multitimbre	112
How to Make the Multitimbre Settings.....	112
Initializing Multitimbre Settings (Init)	112
Copying Multitimbre Settings (Copy)	113
Saving Multitimbre You've Created (Write)	114
Functions of Multitimbre Parameters.....	115
Settings Common to the Entire Multitimbre (General)	115
Making Settings for Each Part (Part)	115
Making Settings for Receiving MIDI (MIDI).....	118
Setting Effects for a Multitimbre (Effects/MFX/MFX Control/Chorus/Reverb)	120
Scale Tune Settings (Scale Tune).....	120
Changing the Settings of the Patch Assigned to a Part.....	121

Playing Back a Song.....	122
Playing a Song Immediately from Disk (Quick Play)	122
Playing Back Songs Consecutively (Chain Play)	122
Creating a Chain.....	122
Saving a Chain to Disk (Save)	123
Loading a Chain from Disk (Load).....	124
Playing a Chain	124
Various Playback Methods	124
Fast-Forward and Rewind During Playback	124
Playing Back Correctly from the Middle of the Song (MIDI Update).....	124
Muting the Playback of a Specific Instrument.....	125
Changing the Playback Tempo of a Song.....	125
Playing a Song Back at a Fixed Tempo (Muting the Tempo Track)	125
Playing Back a S-MRC Format Song	125
Playing Back a Song Repeatedly (Loop Play)	125
Using the D Beam Controller to Start/Stop Song Playback	126
 Recording Songs	 127
Two Recording Methods.....	127
Before You Record a New Song	127
Select the Sound to be Used for Recording	127
Erasing the Song from Internal Memory (Song Initialize).....	127
Specify the Time Signature	128
Recording Your Performance as You Play It (Realtime Recording)	129
Basic Operation for Realtime Recording	129
Recording Tempo Changes in a Song (Tempo Recording).....	130
Loop Recording and Punch-In Recording.....	130
Correct the Timing of Your Playing as You Record (Recording Quantize)	131
Selecting the Sequencer Data that will Be Recorded (Recording Select)	131
Erasing Unwanted Data While You Record (Realtime Erase).....	132
Auditioning Sounds or Phrases While Recording (Rehearsal Function).....	132
Inputting Data One Step at a Time (Step Recording).....	132
Inputting Notes and Rests	132
Assigning a Pattern to a Phrase Track	134
Saving a Recorded Song on Disk	135
 Editing Songs.....	 136
Loading the Song You Want to Edit	136
Using Different Sound Generators for Each Track	136
Silencing the Playback of a Track (Mute)	137
Overall Settings for the Song	137
Assigning a Name to a Song (Song Name)	137
Assigning a Name to a Pattern (Pattern Name)	138
Assigning Markers (Locate Positions) to a Song	138
Specifying the Area of a Song that will Repeat (Loop Points).....	139
Editing Sequencer Data Over the Specified Range (Track Edit)	139
Basic Operation for Track Editing	139
Aligning a Song's Timing (Quantize)	140
Erasing Unwanted Performance Data (Erase)	142
Deleting Unwanted Measures (Delete).....	143
Copying Phrases (Copy)	143
Inserting a Blank Measure (Insert Measure)	145
Transpose the Key (Transpose).....	145
Changing the Velocity (Volume) (Change Velocity)	146
Changing the MIDI Channel (Change Channel)	147
Modifying the Length of Notes (Change Gate Time)	147
Combining Two Phrase Tracks or Patterns into One (Merge)	148

Extracting and Moving a Part of Sequencer Data (Extract)	149
Shifting Performance Data Forward and Back (Shift Clock)	150
Thinning Out the Sequencer Data (Data Thin)	151
Swapping Two Phrase Tracks or Patterns (Exchange)	152
Adjusting the Song's Playback Time (Time Fit)	152
Deleting Blank Measures (Truncate)	153
Editing Individual Items of Sequencer Data (Micro Edit)	153
Viewing Sequencer Data (in the Microscope Window)	153
Sequencer Data Handled by a Phrase Track/Pattern	154
Viewing sequencer data (View)	155
Editing the Sequencer Data	155
Inserting Sequencer Data (Create)	156
Erasing Sequencer Data (Erase)	156
Moving Sequencer Data (Move)	157
Copying Sequencer Data (Copy)	157
Changing the Tempo Midway Through the Song	158
Changing the Time Signature Midway Through the Song	158
Playing a Phrase at the Touch of a Finger (RPS Function)	159
Before You Use the RPS Function	159
Record a Pattern	159
Settings for the RPS Function	159
Using the RPS Function While You Perform	160
Performing with the RPS Function from an External MIDI Keyboard	161
Recording a Performance Using the RPS Function	161
Modifying the Sound in Real Time	162
Waving Your Hand Over the D Beam to Modify the Sound (D Beam Controller)	162
Making Settings for the D Beam Controller	162
Using Knobs or Buttons to Modify the Sound (Realtime Controller)	163
Making Realtime Controller Settings	163
Using a Pedal to Modify the Sound (Control Pedal)	164
Making Control Pedal Settings	164
Adding Effects	165
Turning Effects On and Off	165
Applying Effects in Patch Mode	165
Specifying How the Sound Will Be Output (Effects)	165
Signal Flow Diagram and Parameters	166
Applying Effects in Performance Mode or Multitimbre Mode	170
Specifying How the Sound Will Be Output (Effects)	170
Signal Flow Diagram and Parameters	171
Making Multi-Effects Settings (MFX/MFX Control)	174
Setting Procedure	174
Functions of Parameters	175
Making Chorus Settings (Chorus)	176
Setting Procedure	176
Functions of Parameters	176
Making Reverb Settings (Reverb)	177
Setting Procedure	177
Functions of Parameters	177

Settings Common to All Modes (System Function)	178
How to Make the System Function Settings.....	178
Initializing the System Settings (Init)	178
Saving the System Settings (Write)	178
Functions of System Parameters	179
Settings Common to the Entire System (General).....	179
Sequencer Settings (Sequencer).....	180
MIDI Settings (MIDI).....	182
Controller Settings (Controller)	184
Equalizer settings (EQ).....	185
Phrase Preview Settings (Preview).....	185
Scale Tune settings (Scale Tune)	186
Disk-Related Functions (Disk Utility)	187
About Disk Utility	187
Basic Disk Utility Operations.....	187
Selecting the Type of Files Displayed in the File List (View).....	188
Loading a File from Disk into the Fantom (Load)	188
Loading Individual Tracks/Patterns of Song Data.....	188
Loading Individual Items of Sound Data.....	189
Saving Data on Disk (Save).....	189
Copying a File to Another Name (Copy).....	190
Renaming a File (Rename)	191
Deleting Unwanted Files (Delete).....	191
Executing Disk-Related Functions (Tools).....	191
Preparing a Disk for Use by the Fantom	191
Modifying the Name of the Disk	192
Checking Files Recorded on Disk.....	192
Creating a Duplicate Disk.....	193
Transmitting Sound Settings/Reset to Default Factory Settings ...	194
Transmitting Sound Settings (Data Transfer)	194
Transmitting Data to an External MIDI Device.....	194
Transmitting Data to User Memory	195
Reset to Default Factory Settings (Factory Reset).....	195
Installing the Wave Expansion Board.....	196
Cautions When Installing an Wave Expansion Board	196
How to Install a Wave Expansion Board	196
Checking the Installed Wave Expansion Boards	197
Installation de la carte d'expansion Wave	
(French language for Canadian Safety Standard)	198
Précautions à prendre lors de l'installation d'une carte d'expansion Wave	198
Installation d'une carte d'expansion Wave	198
Vérification des cartes d'extension audio après installation.....	199
Specifications.....	200

Main Features

● A synthesizer with the operability and playability of a musical instrument

The category of synthesizers known as “workstations”—consisting of a sound generator section that creates the sound, a controller section, and a sequencer section to produce music—has taken its own evolutionary path, adding various new functionality that opens up new possibilities of musical expression and creation. On the other hand, access to such functionality has generally been provided through a restrictive, complex interface, which has all too often hampered the creativity of the musician.

The Fantom not only features superb operability for performance, but also is comprehensively designed to support the musician's creativity in every area, including composition. It lets you work seamlessly through every aspect of the music production process, from performance to composition, allowing you to hold onto your inspiration.

● Consolidated interface design with large graphic LCD

The Fantom features a large quarter-VGA sized LCD. The graphical display uses four levels of grayscale to simultaneously show all relevant settings for sounds or sequencer operations, guaranteeing smooth operation.

Since a large amount of data can be displayed at once, buttons and knobs are laid out simply, letting you access a desired parameter with a minimum of operation. The interface is designed with your creativity as the first priority.

● Top-level sound generator for maximum expressive power

The Fantom contains the same type of 64-voice/16-part multitimbral sound generator as on the XV-5080, acclaimed by music production professionals. The total of 896 preset patches include new patches that have been tuned specifically for the Fantom to take advantage of its keyboard, knobs, and other realtime controllers.

Four-level velocity switching lets you move between four stereo waves, for the same amazing expressive power as on the XV-5080. The spaciousness of the sound field, tonal changes controlled by velocity, and endless details of expressive nuance are at your fingertips. Matrix Control lets you vary large numbers of parameters at once, and can be controlled using realtime controllers such as the knobs and D Beam control. The Fantom's dynamic expressive power can be controlled by simple operations.

Wave Expansions Boards can also be installed to freely customize your Fantom for your favorite musical styles or applications. Two slots for the SRX series expansion boards allow the addition of high-quality sounds using a maximum of 64 M bytes of high-quality wave memory, and another slot lets you install one of the wide selection of SR-JV80 series expansion boards.

In addition to four parallel outputs, which can be used as two stereo pairs, S/P DIF digital out (both optical and coaxial) is also provided. The Fantom is a great match for any digital recording system.

● Power effects including COSM effects

The effects indispensable for synthesizer sound creation are provided—in studio quality.

For reverb, a DSP equivalent to SRV-3030 quality is built-in, delivering clear reverb with smooth decays.

The total of 90 types of multi-effects (M-FX) include not only effects such as RSS, 3D delay, and slicer, but also effects that use Roland's proprietary COSM modeling technology, such as guitar amp simulations, guitar multi's, bass multi's, and keyboard multi's.

In Multitimbre mode and Performance mode, three types of M-FX can be used simultaneously, letting you use different M-FX effects on a desired part. What's more, a two-band EQ is provided for each output jack.

● Comprehensive music production with a superior performance sequencer based on the MRC-Pro

The Fantom contains a 16-track sequencer based on the MRC-Pro sequencer, delivering high resolution that captures every expressive detail of your performance, and providing speedy data entry and editing for both realtime and step recording. In conjunction with the power sound generator, the Fantom is a serious music production environment in a single package.

In addition, the Fantom lets you start recording immediately from any mode (whether you are editing sounds or performing), simply by pressing the [REC] button. You can record your improvisations in real time, and create songs based on your captured inspirations.

It goes without saying that you can use Micro editing to edit your recorded data in every detail. Since the large display lets you view 16 tracks of recorded data at once, editing can be performed faster, more efficiently, and in greater detail than on previous workstations. Sequencer data can be saved and loaded in the native MRC format or as SMF. The built-in floppy disk drive makes it easy to exchange data with another sequencer or computer.

The Fantom boasts a new Multitimbre mode. By displaying 16 parts simultaneously, this lets you quickly create orchestrations, and makes song arrangements simple and intuitive.

● Functions that stimulate your creativity

The Fantom provides numerous functions that enhance its playability for realtime performance, and let you develop this into musical productions.

Numerous drum patterns based in actual professional drum playing are built in. Twelve types of pattern variations including fills are assigned to an octave of the keyboard, allowing you to perform the drum part in real time. In addition, the drums can be made to play at a steady, natural tempo, regardless of the timing at which you press the keys.

A newly developed arpeggiator is also built-in. In addition to complex phrases that would be impossible to play by hand, you can also use the arpeggiator to play phrases that are similar to actual performance. Furthermore, the D Beam and other realtime controllers can be used to modify the arpeggio style. This not only makes for a dramatic leap in expressive potential during a live performance, but also supports your own playing.

Phrases played by rhythm patterns or the arpeggiator can be recorded on the sequencer just as they are played. Your realtime performance can be saved instantly as song data, or even used as a template for a step-recorded phrase.

In addition, patterns created on the sequencer can be triggered by the keyboard and played by the RPS (Realtime Phrase Sequence) function. Rhythm patterns and complex phrases created using the arpeggiator can be recorded on the sequencer, and then played in real time, for amazing live performance possibilities.


● Designed to be a true musical instrument

In a departure from the straight-line design of previous workstations, the Fantom features a distinctive design, which proclaims its worthiness as a true musical instrument, while at the same time projecting a sense of quiet dignity.


● General MIDI- and General MIDI 2- Compatible

The Fantom is compatible with both General MIDI and General MIDI 2 standards. Any General MIDI and/or General MIDI 2 compatible music data (GM score) can be played back on the Fantom.

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 (). 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.

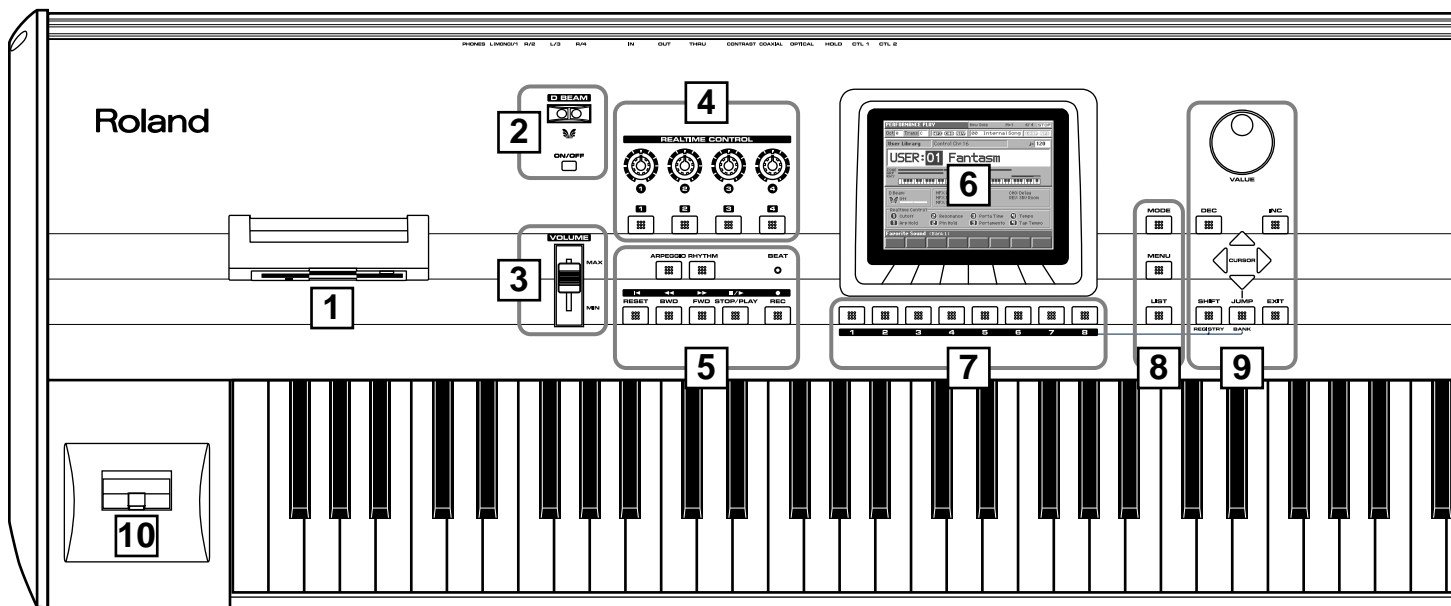
General MIDI 2

The upwardly compatible General MIDI 2 () 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.

Panel Descriptions

Front Panel



1

Floppy Disk Drive

3.5" 2DD/2HD floppy disks can be used. To remove the disk, press the eject button located at the right of the disk drive.

MEMO

Subsequently, this manual will abbreviate "floppy disk" as "disk."

2

D BEAM

You can apply a variety of effects to sounds simply by moving your hand. → (p. 162)

[ON/OFF]

Switches the D Beam controller on/off.

3

Volume Slider

Adjusts the overall volume that is output from the rear panel OUTPUT jacks and PHONES jack. → (Quick Start; p. 4)

4

REALTIME CONTROL

You can assign a variety of parameters and functions to the four knobs and four buttons, and use them to modify the sound in realtime. → (p. 163)

[1]-[4]

The operation will depend on the parameter or function that is assigned.

[1]-[4]

The operation will depend on the parameter or function that is assigned.

5

Perform functions related to the arpeggiator, rhythm pattern function, and sequencer playback and recording.

[ARPEGGIO]

Switches the Arpeggiator on/off.

[RHYTHM]

Switches Rhythm pattern function on/off.

[RESET]

Moves the song position to the first measure. → (p. 124)

[BWD]

Moves the song position to the first beat of the previous measure. → (p. 124)

[FWD]

Moves the song position to the first beat of the next measure. → (p. 124)

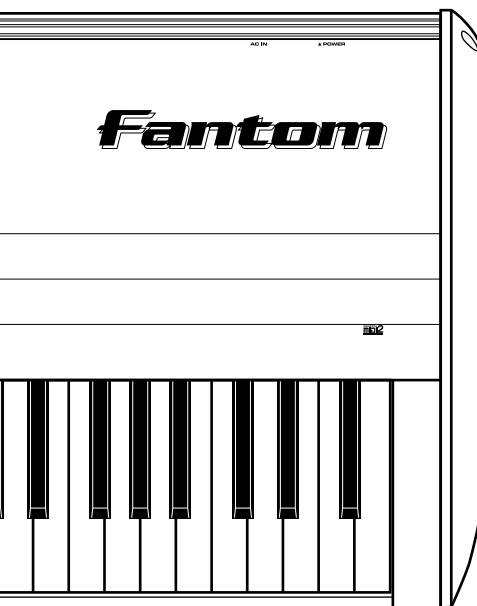
[STOP/PLAY]

Controls sequencer stop/play.

While stopped, you can hold down [SHIFT] and operate this to perform MIDI Update. → (p. 124)

[REC]

The display changes to the Recording Standby window. → (p. 129)



[BEAT] (Beat Indicator)

This blinks in sync with the tempo and beat of the song.

6

Display

This displays information regarding the operation you are performing

7

[1]-[8]

These buttons let you select/register your favorite patches or performances. The lower part of the screen will show the names of the favorite sounds you've registered. → (p. 28)

During editing, these buttons execute a variety of functions, and their function will differ depending on the screen. → (p. 28)

8

[MODE]

Opens the MODE window. → (p. 27)

[MENU]

Opens the MENU window. The contents of the menu will depend on the current mode. → (p. 28)

[LIST]

Opens the LIST window. The contents of the list will depend on the current location of the cursor. → (p. 28)

9

VALUE Dial

This is used to modify values. If you hold down [SHIFT] as you turn the VALUE dial, the value will change in greater increments. → (p. 29)

[DEC], [INC]

This is used to modify values. If you keep on holding down one button while pressing the other, the value change accelerates. If you press one of these buttons while holding down [SHIFT], the value will change in bigger increments. → (p. 29)

[CURSOR]

Moves the cursor location up/down/left/right. → (p. 29)

[SHIFT]/[REGISTRY]

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

REGISTRY: By holding down this button and pressing [1]-[8], you can register a favorite sound. → (p. 46, p. 73, p. 94)

[JUMP]/[BANK]

JUMP: This button is used in conjunction with the cursor buttons to jump the cursor location.

BANK: By holding down this button and pressing [1]-[8], you can select the favorite sound bank. → (p. 33, p. 86)

[EXIT]

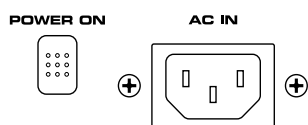
Return to the PLAY screen, or close the currently open window. In some screens, this causes the currently executing function to be aborted.

10

Pitch Bend/Modulation Lever

This allows you to control pitch bend or apply vibrato. → (Quick Start; p. 27)

Rear Panel

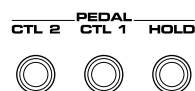


POWER ON Switch

Press to turn the power on/off. → (Quick Start; p. 4)

AC Inlet

Connect the included power cord to this inlet. → (Quick Start; p. 3)



CTL 1, CTL 2 PEDAL Jack

You can connect optional expression pedals (EV-5, 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. You can also connect optional pedal switches (DP-2, DP-6, etc.) to sustain sound. → (Quick Start; p. 29)

HOLD PEDAL Jack

An optional pedal switch (DP-2, DP-6, etc.) can be connected to this jack for use as a hold pedal. → (Quick Start; p. 28)

This can also be set so it supports the use of half-pedaling techniques. So, after connecting an optional expression pedal (EV-5, etc.), you can employ pedal work to achieve even finer control in performances in which piano tones are used. → (p. 184)



DIGITAL OUT Connectors (S/P DIF OPTICAL, S/P DIF COAXIAL)

The Fantom features both optical and coaxial digital out connectors (conforming to S/P DIF).

These connectors output a digital audio signal (stereo). The output signal is identical to the signal that is output from the OUTPUT A (MIX) jacks.



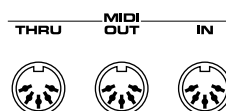
S/P DIF is a digital interface format used for consumer digital audio devices.

CONTRAST



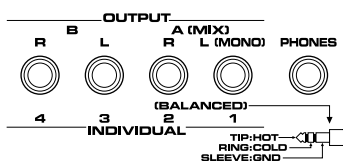
CONTRAST Knob

Adjusts the display contrast. → (Quick Start; p. 5)



MIDI Connectors (IN, OUT, THRU)

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



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. → (Quick Start; p. 3)

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. 168, p. 172).

PHONES Jack

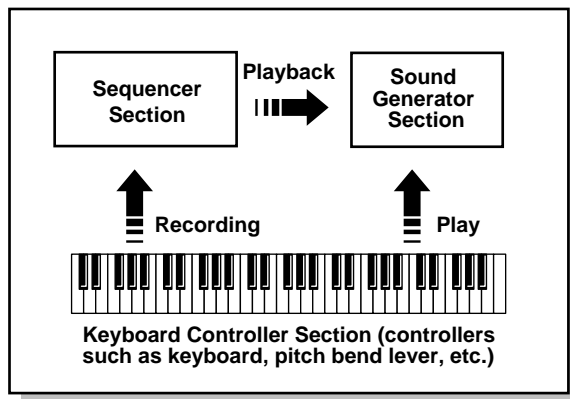
This is the jack for connecting headphones (sold separately). → (Quick Start; p. 3)

Overview of the Fantom

How the Fantom Is Organized

Basic Structure

Broadly speaking, the Fantom consists of a **keyboard controller section**, a **sound generator section**, and a **sequencer section**. These sections are internally connected via MIDI.



Keyboard Controller Section

This section consists of the keyboard, pitch bend/modulation lever, panel knobs and buttons, and D Beam controller. It also includes any pedals that may be connected to the rear panel. The performance information generated when you do things such as press/release a key, or depress the hold pedal is converted into MIDI messages and sent to the sound generator section, sequencer section, and/or an external MIDI device.

Sound Generator Section

The sound generator section produces the sound. It receives MIDI messages from the keyboard controller section and sequencer section and/or from an external MIDI device, generates musical sound according to the MIDI messages that were received, and outputs the sound as an analog signal from the output jacks or headphone jack.

Sequencer Section

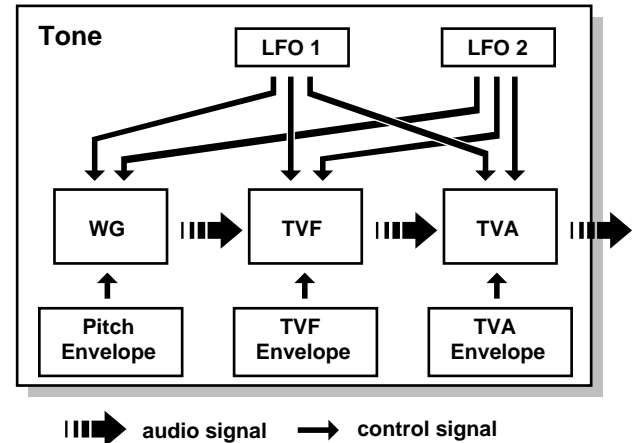
This section records operations of the keyboard controller section as MIDI messages, and transmits the recorded MIDI messages to the sound generator section. MIDI messages recorded on the sequencer can also be transmitted from the MIDI OUT connector to allow the Fantom to also control external MIDI devices.

Classification of Fantom Sound Types

When using the Fantom, you will notice that a variety of different categories come into play when working with sounds. What follows is a simple explanation of each sound category.

Tones

On the Fantom, the tones are the smallest unit of sound. However, it is not possible to play a tone by itself. The patch is the unit of sound which can be played, and the tones are the basic building blocks which make up the patch.



Tones consist of the following five components.

WG (Wave Generator)

Specifies the PCM waveform (wave) that is the basis of the sound, and determines how the pitch of the sound will change. The Fantom has 1,083 different waveforms. All patches built into the Fantom consist of combinations of tones which are created based on these waveforms.

NOTE

There are four wave generators for each rhythm tone (percussion instrument sounds).

TVF (Time Variant Filter)

Specifies how the frequency components of the sound will change.

TVA (Time Variant Amplifier)

Specifies the volume changes and the sound's position in a stereo soundfield.

Envelope

You use Envelope to initiate changes to occur to a sound over time. There are separate envelopes for Pitch, TVF (filter), and TVA (volume). For example if you wish to modify the way in which the sound attacks or decays over time, you would adjust the TVA envelope.

LFO (Low Frequency Oscillator)

Use the LFO to create cyclic changes (modulation) in a sound. The Fantom has two LFOs. Either one or both can be applied to effect the WG (pitch), TVF (filter) and/or TVA (volume). When an LFO is applied to the WG pitch, a vibrato effect is produced. When an LFO is applied to the TVF cutoff frequency, a wah effect is produced. When an LFO is applied to the TVA volume, a tremolo effect is produced.

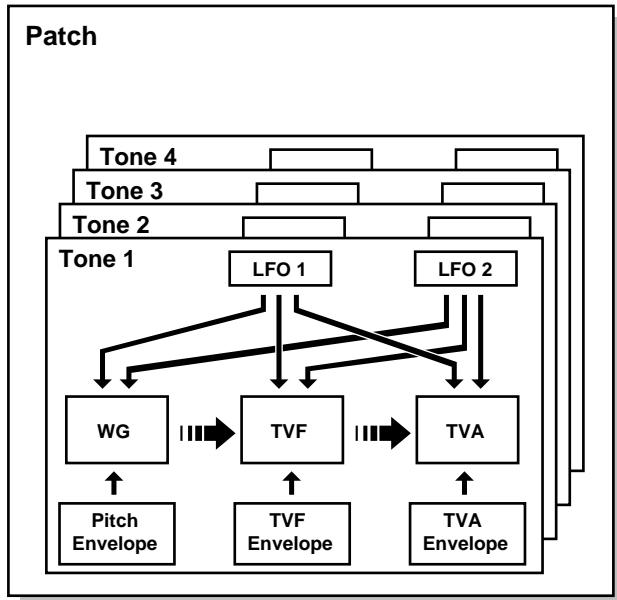
NOTE

LFO is not included in the rhythm tones (percussion instrument sounds).

Overview of the Fantom

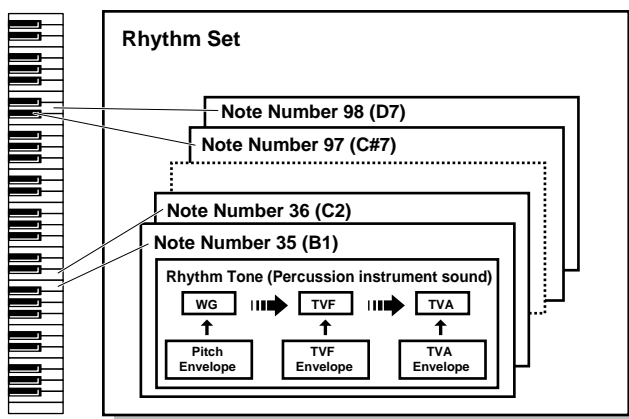
Patches

Patches are the basic sound configurations that you play during a performance. Each patch can be configured by combining up to four tones. How the four tones are combined is determined by the Structure Type parameter (PATCH/TMT) (p. 56).



Rhythm Sets

Rhythm sets are groups of a number of different percussion instrument sounds. Since percussion instruments generally do not play melodies, there is no need for a percussion instrument sound to be able to play a scale on the keyboard. It is, however, more important that as many percussion instruments as possible be available to you at the same time. Therefore, each key (note number) of a rhythm set will produce a different percussion instrument.



Each percussion instrument consists of the following four elements. (For details, refer to the explanations for "Tones.")

WG (Wave Generator)

TVF (Time Variant Filter)

TVA (Time Variant Amplifier)

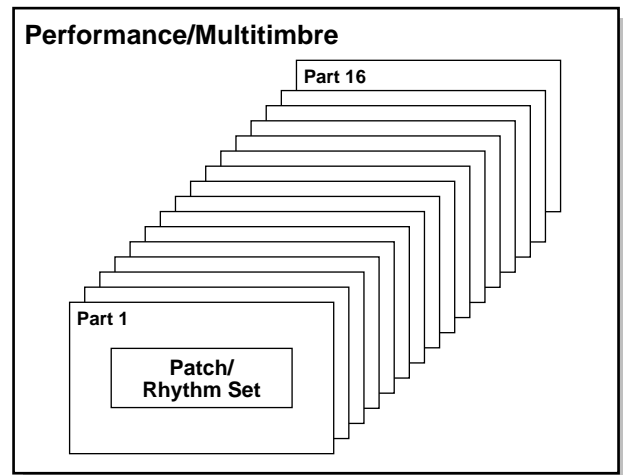
Envelope

Multitimbre

A multitimbre consists of a patch or rhythm set assigned to each of the 16 parts, and can simultaneously handle 16 sounds. This allows you to create a set of sounds for use with a song you create on the sequencer, or to enjoy ensemble performance. From the keyboard, you can play only the currently selected part (the "current part"). Because the Fantom sound generator can control multiple sounds (instruments) it is called a **Multi-timbral sound generator**.

Performances

A performance is like a multitimbre in that it also has a patch or rhythm set assigned to each of the 16 parts, and can simultaneously handle 16 sounds. However, unlike a multitimbre, you can play multiple parts simultaneously from the keyboard, allowing you to play multiple patches simultaneously (Layer) or in separate regions of the keyboard (Split).



Part

A part is the place to which a patch or rhythm set is assigned when using the Fantom in Multitimbre mode or Performance mode. A single multitimbre/performance comprises sixteen parts, with a patch or rhythm set being assigned to each part.

About Simultaneous Polyphony

The Fantom can play a maximum of 64 sounds simultaneously. The following paragraphs discuss what this means, and what will happen when more than 64 simultaneous voices are requested from the Fantom.

Calculating the Number of Voices Being Used

The Fantom is able to play up to 64 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)

For example, with a patch combining four tones, each of which uses two Waves, the actual number of sounds being played comes to 8. Also, when playing in Multitimbre mode or Performance mode, the number of sounds for each part is counted to obtain the total number of sounds for all parts.

How a Patch Sounds

When the Fantom is requested to play more than 64 voices simultaneously, currently sounding notes will be turned off to make room for newly requested notes. The note with the lowest priority will be turned off first. The order of priority is determined by the **Voice Priority** setting (p. 47).

Voice Priority can be set either to "LAST" or "LOUDEST." When "LAST" is selected, a newly requested note that exceeds the 64 voice limit will cause the first-played of the currently sounding notes to be turned off. When "LOUDEST" is selected, the quietest of the currently sounding notes will be turned off. Usually, "LAST" is selected.

Note Priority in Multitimbre/ Performance Mode

Since Multitimbre/Performance mode is usually used to play an ensemble consisting of several patches, it is important to decide which parts take priority. Priority is specified by the **Voice Reserve** settings (p. 47). When a note within a patch needs to be turned off to make room for a new note, the **Voice Priority** setting of the patch will apply.

Voice Reserve

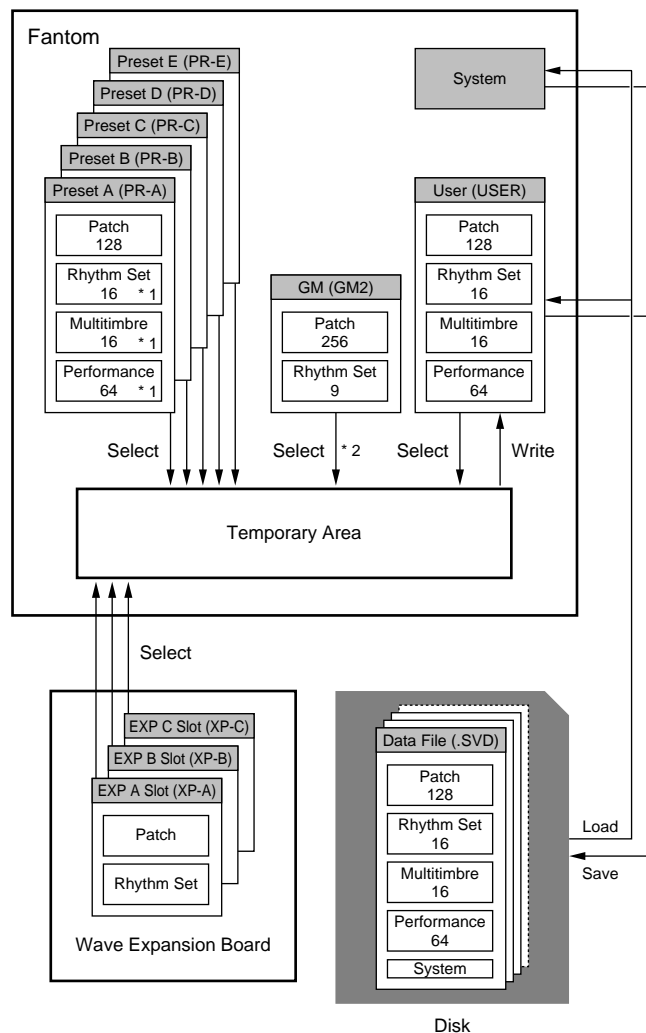
The Fantom has a **Voice Reserve** function that lets you reserve a minimum number of notes that will always be available for each part. For example if Voice Reserve is set to "10" for part 16, part 16 will always have 10 notes of sound-producing capacity available to it even if a total of more than 64 notes (total for all parts) are being requested. When you make Voice Reserve settings, you need to take into account the number of notes you want to play on each part as well as the number of tones used by the selected patch (p. 102, p. 118).

MEMO

It is not possible to make Voice Reserve settings that would cause the total of all parts to be greater than 64 voices.

About Memory

Patch and performance settings are stored in what is referred to as **memory**. There are three kind of memory: temporary, rewritable, and non-rewritable.



* 1 Only in PR-A (PRST)

* 2 The selected Patches/Rhythm Sets cannot be changed.

Temporary Memory

Temporary Area

This is the area that holds the data for the patch, multitimbre, or performance that you've selected using the panel buttons.

When you play the keyboard or play back a sequence, sound is produced based on data in the temporary area. When you edit a patch, multitimbre, or performance, you do not directly modify the data in memory; rather, you call up the data into the temporary area, and edit it there.

Settings in the temporary area are temporary, and will be lost when the power is turned off or when you select another patch/multitimbre/performance. To keep the settings you have modified, you must write them into rewritable memory.

Rewritable Memory

System Memory

System memory stores system parameter settings that determine how the Fantom functions.

User Memory

User memory is where you normally store the data you need. USER memory contains 128 patches, 16 rhythm sets, 16 multitimbres, and 64 performances.

Disk (Optional: 3.5" 2DD, 2HD)

Patches, multitimbres, performances, and system settings can be stored on disk together as a single file.

Non-Rewritable Memory

Preset Memory

Data in Preset memory cannot be rewritten. However, you can call up settings from preset memory into the temporary area, modify them and then store the modified data in rewritable memory (except GM2).

Wave Expansion Boards (optional: SR-JV80/SRX Series)

The Fantom can be equipped with up to three Wave Expansion Boards (one SR-JV80 series, two SRX series). Wave Expansion Boards contain Wave data, as well as patches and rhythm sets that use this Wave data, which can be called directly into the temporary area and played.

About the Onboard Effects

Effect Types

The Fantom has three built-in effect units, and you can independently edit each unit's settings.

Multi-Effects

The multi-effects are multi-purpose effects that completely change the sound type by changing the sound itself. Contained are 90 different effects types; select and use the type that suits your aims. In addition to effects types composed of simple effects such as Distortion, Flanger, and other such effects, you can also set up a wide variety of other effects, even connecting effects in series or in parallel. Furthermore, while chorus and reverb can be found among the multi-effects types, the following chorus and reverb are handled with a different system.

Chorus

Chorus adds depth and spaciousness to the sound. You can select whether to use this as a chorus effect or a delay effect.

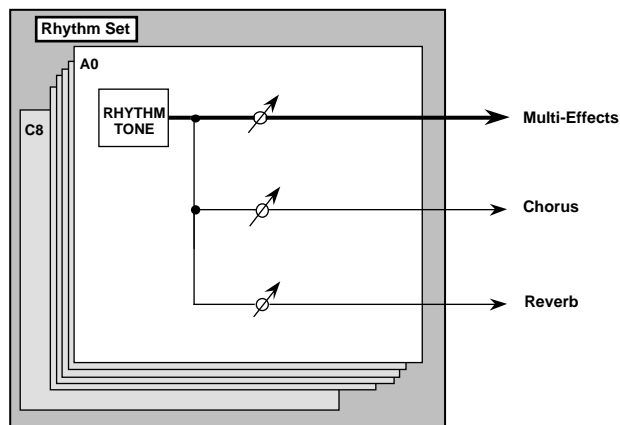
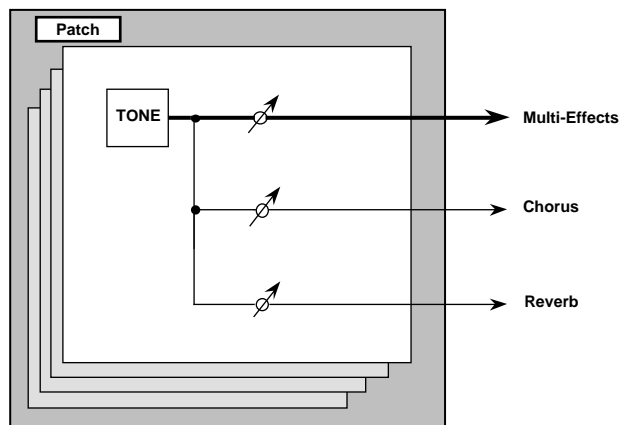
Reverb

Reverb adds the reverberation characteristics of halls or auditoriums. Four different types are offered, so you can select and use the type that suits your purpose.

How Effects Units Work in Different Modes

In Patch Mode

The multi-effects, chorus and reverb effects can be set up individually for each patch/rhythm set. Adjusting the signal level to be sent to each effects unit (Send Level) provides control over the effect intensity that's applied to each tone.



In the Performance Mode or Multitimbre Mode

The multi-effects, chorus and reverb effects can be set individually for each performance and multitimbre. The intensity of each effect will be set for each part (Fig. 1), but the Send Level setting for each tone can also influence effect intensity (Fig. 2).

When you apply effects in Performance mode or Multitimbre mode, the effect settings of the patch or rhythm set assigned to each part will be ignored, and the effect settings of the performance or multitimbre will be used. Thus, the effects for the same patch or rhythm set may differ when played in Patch mode and in Performance/Multitimbre mode. However, depending on the settings, you can have effect settings for a patch or rhythm set assigned to a part applied to the entire performance/multitimbre (p. 173, p. 174). In addition, when using the multi-effects settings of a performance or multitimbre, you can use three different multi-effects simultaneously, depending on the effect type (p. 175).

Fig.1 – When Output Assign parameter is set to “MFX” (the output settings for Tone are ignored)

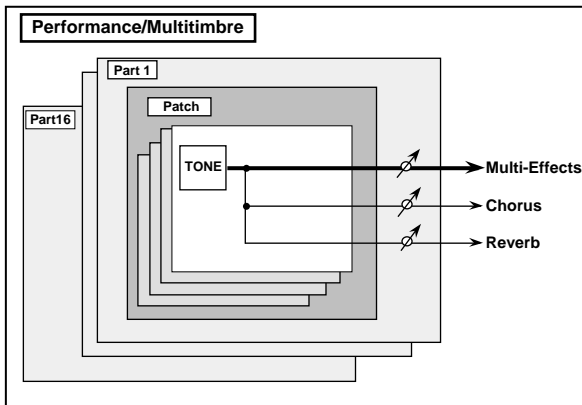
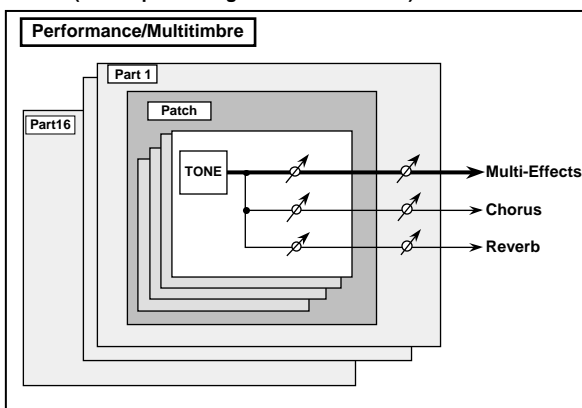


Fig.2 – When Output Assign parameter is set to “PAT” (the output settings for Tone are valid)



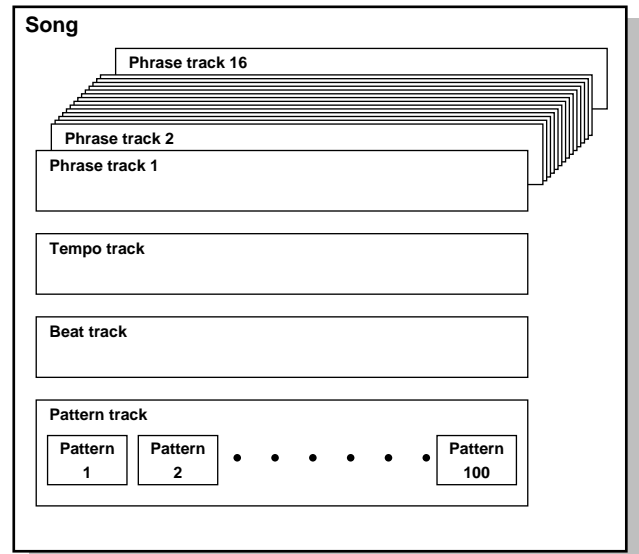
About the Sequencer

A sequencer records keyboard performance and controller movements as MIDI messages (sequencer data). As the data plays back, the recorded MIDI messages are sent to a sound generator which will produce the required sounds. The sequencer actually plays instruments instead of the musician, and since it can record a musical performance, it is a tape recorder as well.

But in reality a sequencer doesn't record sound, but actually the steps that cause the sound generator to produce sound, so it offers several advantages. Sound quality is always excellent, the equivalent of first-generation tape, no matter how many times the data plays back; tempo changes have no effect on pitch; detailed editing is possible, etc.

What Is a Song?

For the Fantom, musical performance data for one song or composition is referred to as a **song**. A song combines sequencer data recorded on Phrase tracks 1–16, a Tempo track, a Beat track and a Pattern track, as discussed below.



What Is a Track?

Each section of a song which stores musical performance data is called a **track**.

Phrase Tracks 1–16

Phrase tracks record the musical performance. Each Phrase track records musical performance data for 16 MIDI channels. Totally, up to 16 tracks x 16 MIDI channels of data can be recorded. It's helpful if you've made decision prior to recording such as recording melody on Phrase track 1, bass on Phrase track 2, drums on Phrase track 10, and accompaniment on the remaining Phrase tracks.

Tempo Track

The Tempo track records tempo changes of a song over time. It can be used for tempo changes during a song. If a song has the same tempo from beginning to end, the Tempo track can be ignored. When a song is first recorded on the Fantom, a tempo setting at the time of recording will be stored at the beginning of the Tempo track. Therefore when song playback starts from the beginning, the song will always play back at this initial tempo. Thus playback tempo is determined by the Tempo track setting. If you modify the tempo during playback, the overall tempo of the song will be controlled by the setting you make.

Beat Track

The Beat track records the time signature of each measure of a song. Set the Beat track when recording a new song, or when you want to change time signature during a song.

Pattern Track

You can also use the Pattern track to record musical passages, separately from the Phrase tracks. Musical data in the Pattern track is regarded as separate Patterns. Up to 100 Patterns can be created, and each Pattern can contain data for 16 MIDI channels, as with Phrase tracks.

Patterns can be assigned to a Phrase track, so if you are using repetitive phrases such as drums and bass, it is convenient to record each musical phrase in a pattern, and then use the MICROSCOPE screen to assign the pattern to the track (p. 134). In this case, the Phrase track contains only the Pattern Call numbers that refer to the desired Pattern, and not the actual Pattern data. Therefore the same Pattern can be used any number of times with a negligible increase in memory used.

The RPS function (p. 159) for immediate playback also applies to Patterns. Patterns are therefore convenient for live performance, if you've recorded necessary sequencer data as Patterns and take them to the gig.

Patterns also make fine scratch-pads for musical ideas.

Songs and the Sound Generator Mode

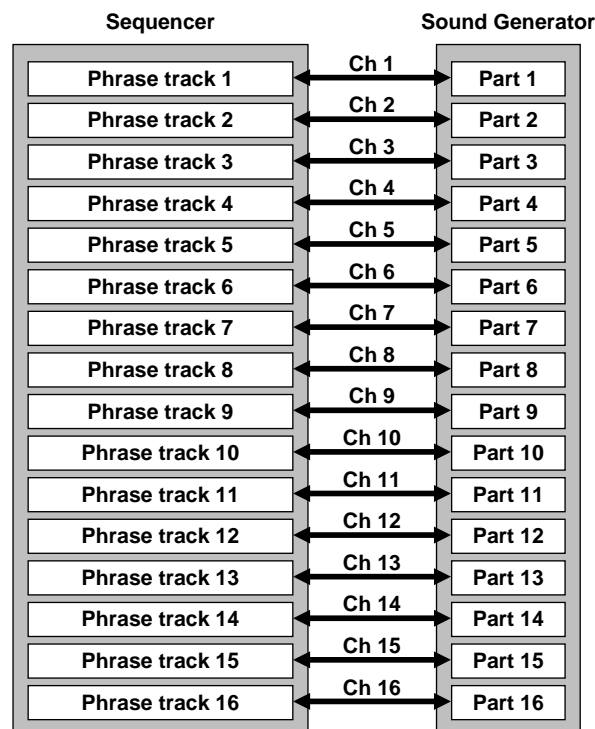
The Fantom's sequencer can be used at any time, regardless of the mode of the sound generator (Patch/Multitimbre/Performance). Normally, when recording or playing back a song, you will put the sound generator in Multitimbre mode. The reason for this is that in this mode, only the sound of the specified MIDI channel will be heard when you record while playing the keyboard of the Fantom, and that when the song is played back, the parts can independently play up to 16 different sounds. Thus, this mode is suitable for recording and playing back a song that uses an ensemble of multiple instruments, such as drums, bass, and piano.

If you wish to record your playing using a layered/split performance, set the sound generator to Performance mode.

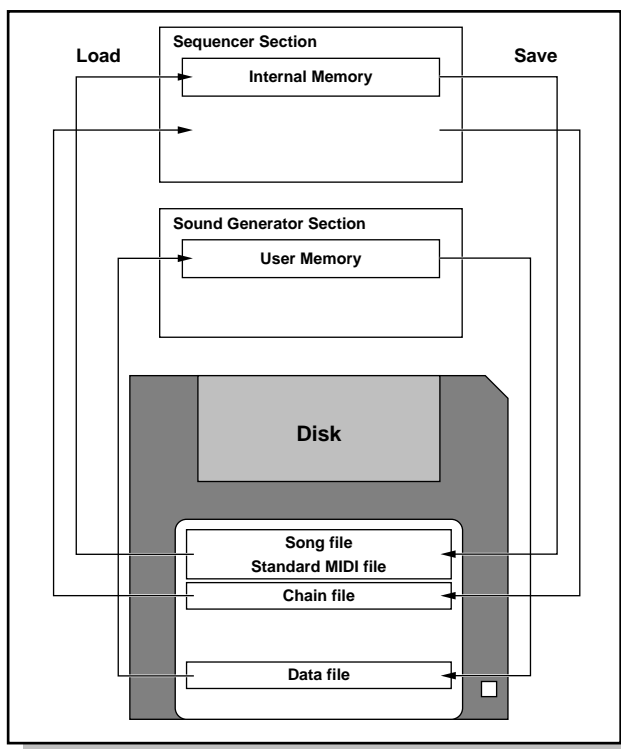
If you wish to record your playing using a single sound, you can set the sound generator to Patch mode.

How Phrase Tracks, Parts and MIDI Channels Interact

When the sound generator is in Multitimbre mode, you will need to be aware of how the phrase tracks, parts, and MIDI channels correspond to one another. Otherwise, you may not hear the sounds you expect, or song editing may be more difficult than it should be. For this reason, we recommend that you always maintain the direct numerical correspondence between Phrase tracks 1–16, parts 1–16, and MIDI channels 1–16. These are the settings that will be in effect when the power is turned on, or after you perform the Song Initialize operation (p. 127).



Positions for Storing a Song



Internal Memory

The sequencer has an area called **internal memory** that can temporarily store one song. So we call this temporary song **Internal Song**.

To play back a song saved to a disk with the Fantom, it doesn't have to be loaded into internal memory. Only when you're going to record a song or edit a song saved to disk, do you have to load it into internal memory. Since only one song can be worked on during recording or editing, all the internal memory has to do is store one song (about 120,000 notes).

The song in internal memory is volatile and will be lost when the power is turned off. To keep a song, you must save it to disk.

Disk

When keeping a recorded or edited song in internal memory, save it to disk as a song file. Up to 99 songs can be saved to a single disk. A disk can contain five file types. The three-letter symbol shown in parentheses () is a **file name extension** that distinguishes the different file types.

Song File (.SVQ)

This file is a song created on the Fantom. It is called an **MRC Pro song**. Other MRC Pro songs include those created on the XP-60/80.

Standard MIDI File (.MID)

Standard MIDI File is a standard file format that allows sequencer data to be exchanged between most musical applications. Fantom files can be saved as Standard MIDI Files. This also allows you to play back commercially available music data (GM scores) that is compatible with the GM/GM2 system.

Chain File (.SVC)

Chain Play is a function that successively plays back songs stored on the disk, in the specified order.

Data File (.SVD)

This file contains Sound Generator and System settings.

Overview of the Fantom

Basic Operation of the Fantom

Switching the Sound Generator Mode ([MODE])

The Fantom has three sound generating modes: Patch mode, Multitimbre mode, and Performance mode. You can select the sound generating mode (state) that is most appropriate for how you are playing the Fantom.

Use the following procedure to switch between these modes.

1. Press [MODE].

The Mode window appears.

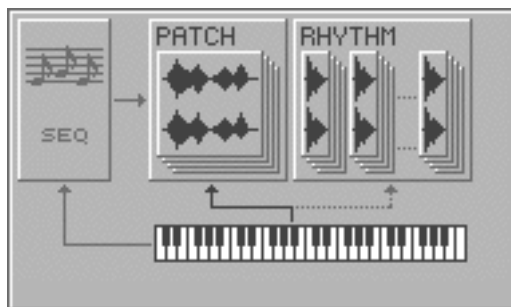


2. Press ▲ or ▼ to select the desired mode, and then press [8 (Select)].

When you select a mode, the PLAY screen of the corresponding mode appears. In each mode, the upper left of the PLAY screen will indicate the mode.



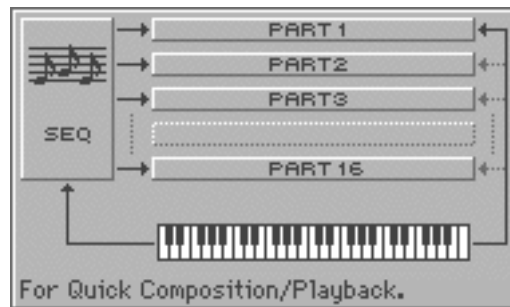
Patch Mode



This mode is used to play individual sounds (patches or rhythm sets) from the keyboard. If a rhythm set is selected, you can play percussion instruments from the keyboard.

The keyboard controller section and the sound generator section are connected by a single MIDI channel (the patch receive channel).

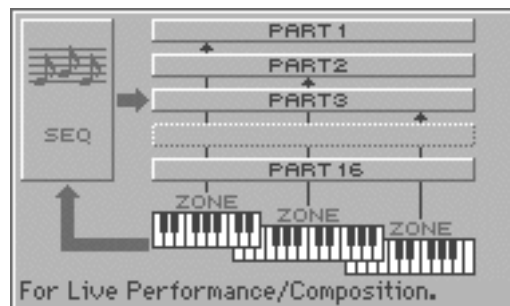
Multitimbre Mode



This mode is suitable when you are using the sequencer to create a song, or when playing song data. When creating songs or playing song data, a different MIDI channel is assigned for each patch used in a part. Such a set of sounds selected for each part to play is called a **multitimbre**.

The keyboard controller section and the sound generator section are connected by a single MIDI channel (the receive channel of the current part).

Performance Mode



This mode allows you to combine multiple sounds (patches or rhythm sets) to create complex setups, or to use the Fantom as a master keyboard. You can play patches together (Layer) or divide the keyboard into two regions and play different patches in each region (Split).

The keyboard controller section and sound generator section are connected according to the zone settings.

Switching Screens from the Menu ([MENU])

The Fantom has a variety of screens and windows in which its numerous functions can be executed, and you can move between these screens as desired.

Use the following procedure to access the desired screen or window.

1. Press [MENU].

The Menu window appears.



2. Press ▲ or ▼ to select the desired screen/window, and then press [8 (Select)].

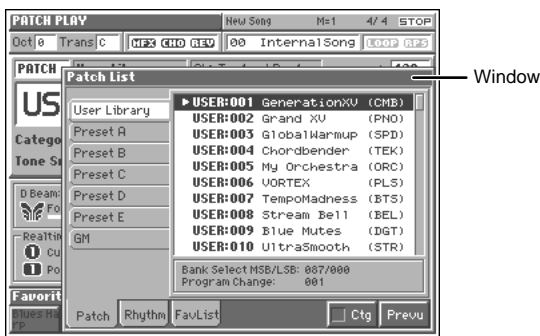
The screen/window for the desired function appears.

MEMO

The screens/windows that can be selected from the Menu window will depend on the mode of the sound generator.

Window

The somewhat smaller screens that appear temporarily on top of the normal screens are called **windows**. Various types of windows appears according to the situation. Some display lists, others allow you to make settings, and still others ask you to confirm an operation.



Press [EXIT] to close the window. Some windows will close automatically when an operation is performed.

Viewing a List of Patches or Other Data ([LIST])

The Fantom can display sound lists and favorite lists. You can select and audition patches from these lists, and register your own favorite patches.

Use the following procedure to display these lists.

1. Use [CURSOR] to move the cursor to the object (e.g., patch number) for which you wish to view a list.

2. Press [LIST].

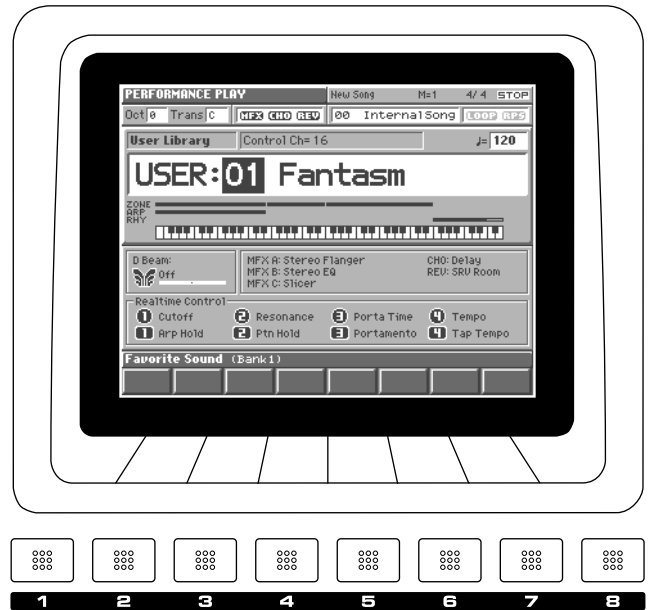
The desired list window appears, according to the cursor location.



About the [1]–[8] Buttons

In the PLAY screen, the eight [1]–[8] buttons located below the display allow you to select/register your favorite patches or performances, and the lower area of the display will show the names of the sounds that are registered as favorite sounds.

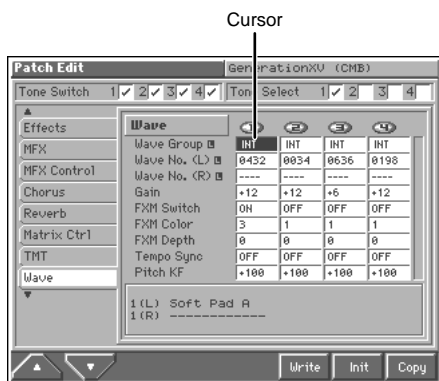
In other screens, these buttons execute various functions, and their operation will differ depending on the screen.



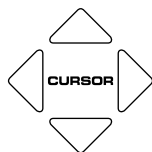
Overview of the Fantom

Moving the Cursor

A single screen or window displays multiple parameters or items for selection. To edit the setting of a parameter, move the cursor to the value of that parameter. To select an item, move the cursor to that item. The cursor is a black rectangle, and the parameter value or item you select with the cursor will be highlighted (displayed in inverse video).



Move the cursor with the ▲, ▼, ◀ and ▶ (cursor buttons).



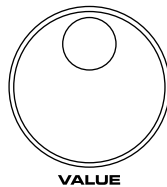
- ▲ : moves the cursor up.
- ▼ : moves the cursor down.
- ◀ : moves the cursor to the left.
- ▶ : moves the cursor to the right.

HINT

- By holding down [SHIFT] and pressing a cursor button, you can make the cursor location jump to the edge of the same block.
- By holding down [JUMP] and pressing a cursor button, you can make the cursor location jump to another block.
- If you hold down one cursor button while you also press the cursor button for the opposite direction, the cursor will move more rapidly in the direction of the first-pressed cursor button.

Modifying a Value

To modify the value, use the VALUE dial or the [INC]/[DEC] buttons.



DEC



INC



HINT

In each screen of the Fantom, you can use the cursor to move the area displayed as black characters on white background, and modify its value.

NOTE

Each parameter has its own range of possible values, so you cannot set any value smaller than the minimum value or greater than the maximum value.

VALUE Dial

Rotating the VALUE dial clockwise increases the value, counterclockwise decreases the value. Holding down [SHIFT] as you move the VALUE dial increases value increments so you can make large value changes faster.

[INC] and [DEC]

Pressing [INC] increases the value, and [DEC] decreases it. Keep the button pressed for continuous adjustment. For faster value increases, keep [INC] pressed down and press [DEC]. For decreasing value faster, keep [DEC] pressed down and press [INC].

If you press [INC] or [DEC] while holding down [SHIFT], the value increments will get bigger.

Assigning a Name

On the Fantom, you can assign names to each patch, rhythm set, multitimbre, performance, Song, and Pattern. The procedure is the same for any type of data.

1. Press [CURSOR] to move the cursor to the location where you wish to input a character.
2. Turn the VALUE dial, or press [INC]/[DEC] to specify the character.

Available characters/symbols are:

space, A-Z, a-z, 0-9, ! " # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ` { | } → ←

NOTE

File names and volume label names may not contain lowercase characters or certain symbols (" * + , . / : ; < = > ? [\] | → ←).

Assigning a Name Using a Name Window

You can use a Name window to assign a name. As the Name window displays a list of characters that can be entered, you can quickly select a desired character.

1. In a naming screen, move the cursor to the text input location, and press [LIST].

The Name window appears.



2. Press ◀ or ▶ to move the cursor to the location where you wish to input a character.
3. Either turn the VALUE dial or use [INC], [DEC], ▲, ▼ to select the character that you wish to input.
To insert a space at the cursor location, press [3 (Insert)].
To delete the character at the cursor position, press [4 (Delete)].
4. Repeat steps 2 and 3 as necessary.
5. Press [8 (OK)] to finalize the name.

Playing in Patch Mode

Patch mode is the mode in which you can play the keyboard using a single sound (patch or rhythm set). If a rhythm set is selected, you can play percussion instruments from the keyboard.

About the PATCH PLAY Screen

Displaying PATCH PLAY Screen

To access the PATCH PLAY screen, use the following procedure.

1. Press [MODE].

The Mode window appears.



2. Press ▲ or ▼ to select a "PATCH," and then press [8 (Select)].

You will enter Patch mode, and the PATCH PLAY screen appears.



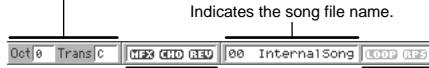
Functions in the PATCH PLAY Screen

Indicates the current sound generating mode.



Indicates the name of the currently selected song, the measure location, the time signature, and the sequencer status.

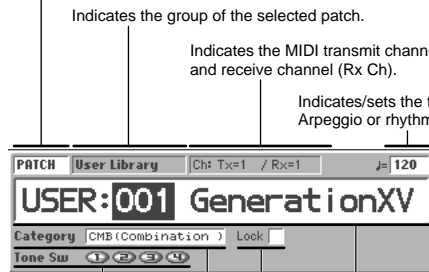
Sets the Octave Shift (Oct) and the Transpose (Trans).



Switches multi-effects (MFX), chorus (CHO), and reverb (REV) on and off. Turns the RPS function on/off (RPS). Turns Loop Play on/off (LOOP).

Patch/rhythm set select switch

Determines whether you will be selecting patches or rhythm sets.



Indicates the group of the selected patch.

Indicates the MIDI transmit channel (Tx Ch) and receive channel (Rx Ch).

Indicates/sets the tempo at which the song, Arpeggio or rhythm pattern is played.

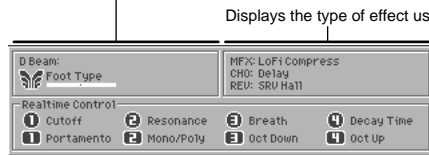
Indicates the tone On/Off status.

Indicates/selects the group, number, and name of the selected patch.

Indicates/selects the patch category.

Selects whether the patch category will be locked.

This indicates the function that is assigned to the D Beam controller, and the response status of the D Beam controller.



Displays the type of effect used.

Indicates the functions that are assigned to each realtime controller knob (●) and button (■). The value will be displayed when you turn the knob.



Indicates the names of the patches or rhythm sets that can be selected by [1]-[8].

Selecting a Patch

The Fantom has six patch groups, including the User group and Preset groups A–E and GM, with each group storing 128 patches (256 in GM), for a total of 1,024 patches. What's more, you can further expand your options by installing up to three optional Wave Expansion Boards (one SR-JV80, two SRX series), enabling you to select from a huge assortment of available patches.

USER

This is the group inside the Fantom which can be rewritten. Patches you yourself create can be stored in this group. The Fantom includes 128 preset patches.

PR-A–E (Preset A–E)

This is the group inside the Fantom which cannot be rewritten. However you may modify the settings of the currently selected patch, and then store the modified patch in User memory. Banks A–E already contain 128 prepared patches each, for a total of 640 patches.

GM (GM2)

This is an internal group 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. Furthermore, settings of currently selected patches from this group cannot be changed. The Fantom includes 256 preset patches.

XP-A–C (Wave Expansion Boards installed in EXP-A–C Slots)

These are groups used when using patches from Wave Expansion Boards installed in the EXP A–C slots, and cannot be rewritten. However you may modify the settings of the currently selected patch, and then store the modified patch in User memory. The number of onboard patches depends on the specific Wave Expansion Boards installed.

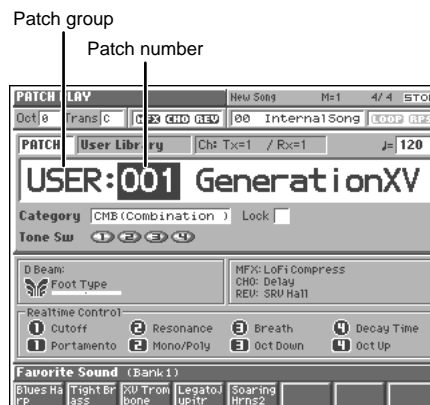
NOTE

XP-A–C patches can be selected only if a Wave Expansion Board is installed in the corresponding slot.

XP-A (EXP A slot): SR-JV80 series (sold separately)

XP-B, C (EXP B, C slots): SRX series (sold separately)

1. Access the PATCH PLAY screen (p. 31).



2. Make sure that the patch/rhythm set select switch is set to "PATCH."
If it is set to "RHYTHM," turn the VALUE dial or press [DEC] to change it to "PATCH."
3. Press [CURSOR] to move the cursor to the patch group.
4. Turn the VALUE dial, or press [INC]/[DEC] to select a patch group.
USER: User
PR-A–E: Preset A–E
GM: GM (GM2)
XP-A–C: Wave Expansion Boards installed in EXP-A–C Slots
5. Press [CURSOR] to move the cursor to the patch number.
6. Turn the VALUE dial, or press [INC]/[DEC] to select a patch number.

Selecting Favorite Patches (Favorite Sound)

You can bring together your favorite and most frequently used patches in one place by registering them in the Favorite sound. By using this function, you can rapidly select favorite patches from internal memory or a Wave Expansion Board.

NOTE

If a patch stored in a Wave Expansion Board has been registered as a Favorite Sound, it cannot be selected unless the corresponding wave expansion board is installed.



For instructions on how to register to the Favorite Sounds, refer to "Registering a Favorite Patch (Favorite Sound)" (p. 46).

Selecting from [1]–[8]

1. Access the PATCH PLAY screen (p. 31).
2. Press [1]–[8] to select a patch.



Press [1]–[8] to select a patch

3. To switch the favorite sound bank, hold down [JUMP] and press [1]–[8].

Selecting from the Favorite List Window

1. In the PATCH PLAY screen, make sure that the cursor is located at the patch group or patch number.
2. While holding down [SHIFT], press [LIST]
The Favorite List window appears.



3. Press ▲ or ▼ to choose the patch.

HINT

By pressing [7 (Prevu)] you can audition the sound of the patch, by means of a phrase preselected as being suitable for that particular type (category) of patch (Phrase Preview).

4. To switch banks, press ◀ to move the cursor to the "Bank 1–8" tab, and press ▲ or ▼ to select the desired bank.
5. After switching the bank, press ▶ to move the cursor within the list, and press ▲ or ▼ to select the patch.
6. When you press [8 (Select)], the patch will be selected, and the Favorite List window will close.

Selecting Patches from the List

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

1. In the PATCH PLAY screen, make sure that the cursor is located at the patch group or patch number.
2. Press [LIST].

The Patch List window appears.



3. Press ▲ or ▼ to choose the patch.
4. To switch patch groups, press ◀ to move the cursor to the patch group tab, and press ▲ or ▼ to select the patch group.
5. After switching the patch group, press ▶ to move the cursor within the list, and press ▲ or ▼ to select the patch.
6. Press [EXIT] to close the Patch List window.

HINT

In the Patch List window, you can press [7 (Ctg)] to add a check mark (✓) and switch to viewing a list organized by category. Here you can select patches by category (p. 34).

Auditioning Patches (Phrase Preview)

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

1. Access the Patch List window (p. 33).



2. Press and hold [8 (Prevu)].
The patch selected in the Patch List window will be sounded.
3. Release your finger from [8 (Prevu)], and the phrase will stop playing.



- If you wish to change the phrase that is played by Phrase Preview, you can edit the Patch Category parameter (PATCH/General) (p. 47).
- If you wish to change how the phrase is played by Phrase Preview, you can edit the Preview Mode parameter (SYSTEM/General) (p. 185).

Selecting Patches by Category (Patch Finder)

The Fantom 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. Access the PATCH PLAY screen (p. 31).
2. Make sure that the patch/rhythm set select switch is set to "PATCH."
If it is set to "RHYTHM," turn the VALUE dial or press [DEC] to change it to "PATCH."
3. Use [CURSOR] to move the cursor to "Category."
4. Turn the VALUE dial, or press [INC]/[DEC] to select the desired category.

5. Press ► to move the cursor to "Lock," and turn the VALUE dial or press [INC] to add a check mark (✓).



Now you can select patches within the category you selected in step 4.

6. Use [CURSOR] to move the cursor to the patch group or patch number, and turn the VALUE dial or use [INC]/[DEC] to select the patch.
When the cursor is located at the Patch group, you can select the group. When the cursor is located at the Patch number, you can specify the number.

Selecting from the Patch List Window

1. Access the Patch List window (p. 33).



2. Press [7 (Ctg)] to add a check mark (✓).
The display will show a list of patches organized by category.



3. Press ◀ to move the cursor to the category tab, and press ▲ or ▼ to select the category.
A list of the patches in the selected category will be displayed.
4. Press ► to move the cursor in the list, and press ▲ or ▼ to select a patch.

HINT

By pressing [8 (Prevu)] you can audition the sound of the patch being played by a phrase suitable for the corresponding type (category) of patch (Phrase Preview).

5. Press [EXIT] to close the Patch List window.

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
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
HIT	Hit&Stab	Orchestra Hit, Hit
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

Transposing the Keyboard in Octave Units (Octave Shift)

The **Octave Shift** function transposes the pitch of the keyboard in 1 octave units (-3- +3 octaves).

For playing a bass part more easily using your right hand, transpose the keyboard down by 1 or 2 octaves.

1. Access the PATCH PLAY screen (p. 31).
2. Use [CURSOR] to move the cursor to "Oct."



3. Either turn the VALUE dial or use [INC]/[DEC] to specify the amount of pitch shift (-3-+3 octaves).

NOTE

There is a single Octave Shift setting (Setup parameter) for the entire Fantom. The changed setting will be remembered even if you switch patches or performances.

HINT

If you assign "OCT UP/DOWN" as a function to be controlled by the realtime control buttons ([1]-[4]), you can easily change the Octave Shift by pressing these buttons.

Transposing the Keyboard in Semitone Steps (Transpose)

Transpose changes keyboard pitch in units of semitones. This function is useful when you play transposed instruments such as trumpet or clarinet following a printed score.

1. Access the PATCH PLAY screen (p. 31).
2. Use [CURSOR] to move the cursor to “Trans.”



3. Either turn the VALUE dial or use [INC]/[DEC] to adjust the Transpose setting (G-F#: -5+6 semitones).

NOTE

There is a single Transpose setting (Setup parameter) for the entire Fantom. The changed setting will be remembered even if you switch patches or performances.

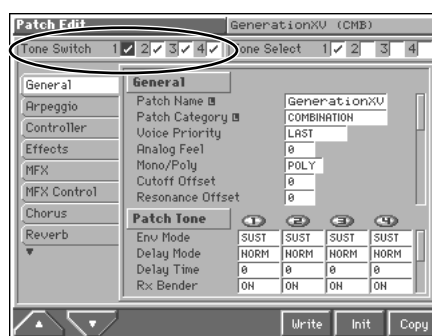
HINT

If you assign “TRNS UP/DOWN” as a function to be controlled by the realtime control buttons ([1]-[4]), you can easily change the Transpose by pressing these buttons.

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. Access the PATCH PLAY screen (p. 31).
2. Press [MENU] to open the Menu window.
3. Press ▲ or ▼ to select a “Patch Edit,” and then press [8 (Select)].
The Patch Edit screen appears.
4. Use [CURSOR] to move the cursor to “Tone Switch.”



5. Turn the VALUE dial or press [INC]/[DEC] to turn each tone on/off. From the left, these are Tone Switches 1–4. Assigning a check mark (✓) will turn the tone on, and removing the check mark will turn it off.

HINT

- 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’s simultaneous voices.
- By holding down [JUMP] and pressing [1]-[4], you can switch a tone on/off.

Playing Single Notes (Mono)

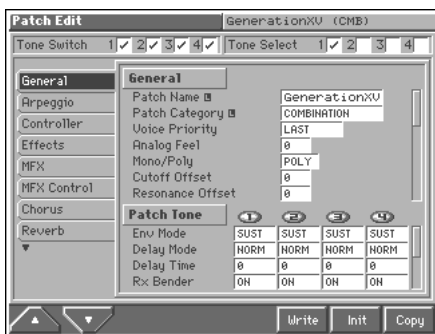
When using a patch for a naturally monophonic instrument such as sax or flute, it is effective to play in mono.

1. Access the PATCH PLAY screen (p. 31).
2. Press [MENU] to open the Menu window.
3. Press ▲ or ▼ to select a “Patch Edit,” and then press [8 (Select)].

The Patch Edit screen appears.

4. Press [1 (▲)] or [2 (▼)] to select the “General” tab.

A screen like the one shown below appears.



5. Use [CURSOR] to move the cursor to “Mono/Poly.”
6. Turn the VALUE dial or press [DEC] to select “MONO.”

Now you can play in mono mode.

HINT

If you assign “MONO/POLY” as a function to be controlled by the realtime control buttons ([1]-[4]), you can easily switch between mono/poly by pressing a button.

Creating Smooth Pitch Changes (Portamento)

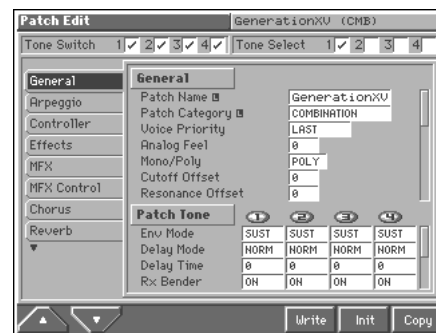
Portamento is an effect which smoothly changes the pitch from the first-played key to the next-played key. By applying portamento when Mono mode is selected (see the preceding item), you can simulate performance effects such as slurring on a violin.

1. Access the PATCH PLAY screen (p. 31).
2. Press [MENU] to open the Menu window.
3. Press ▲ or ▼ to select a “Patch Edit,” and then press [8 (Select)].

The Patch Edit screen appears.

4. Press [1 (▲)] or [2 (▼)] to select the “General” tab.

A screen like the one shown below appears.



5. Use [CURSOR] to move the cursor to “Portamento Switch.”
6. Turn the VALUE dial or press [INC] to select “ON.”
7. When you want to change the portamento setting, edit the following parameters in the screen of step 4.

Portamento Mode, Portamento Type, Portamento Start, Portamento Time



See (p. 48) for each parameter’s functions.

8. Turn the VALUE dial or press [INC]/[DEC] to get the value you want.
9. Press [EXIT] to return to the PATCH PLAY screen and play.

HINT

If you assign “CC65 (Portamento)” as a function to be controlled by the realtime control buttons ([1]-[4]), you can use a button to easily turn portamento on/off.

Playing Arpeggios (Arpeggiator)

The Arpeggiator provides for the play of the various notes in chords. With the **Arpeggiator**, you can play arpeggios that use the component notes of a chord, just by pressing the chord. In addition to normal arpeggios, you can also accurately simulate rhythm guitar or strumming techniques depending on the Arpeggiator settings. The Arpeggiator can in fact be used as a handy automatic arranger.

1. Access the **PATCH PLAY** screen (p. 31).
2. Press **[ARPEGGIO]** to turn the Arpeggiator on.
3. Play a chord on the keyboard.
The Fantom will play an arpeggio, according to the notes forming the chord you have just voiced.
4. To finish playing arpeggios, press **[ARPEGGIO]** again so the indicator turns off.

Holding an Arpeggio

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

1. Hold down **[SHIFT]** and press **[ARPEGGIO]**.
The **[ARPEGGIO]** indicator will begin blinking.
2. Play a chord.
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, hold down **[SHIFT]** and press **[ARPEGGIO]** simultaneously once again.

When Using a Hold Pedal

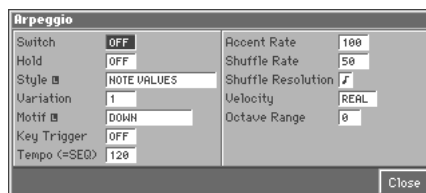
If you play an arpeggio while pressing the hold pedal, the arpeggio will continue to be played even if you release the chord.

1. Connect an optional pedal switch (DP-2, DP-6, etc.) to the **HOLD PEDAL** jack.
2. Press **[ARPEGGIO]** to turn the Arpeggiator on.
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.

Simulating a Rhythm Guitar

You can simulate a rhythm guitar by following the procedure below.

1. Access the **PATCH PLAY** screen, and select a guitar patch (p. 31).
2. Hold down **[JUMP]** and press **[ARPEGGIO]**.
The Arpeggio window appears.



3. Use **[CURSOR]** to move the cursor to "Style."
4. Either turn the **VALUE** dial or use **[INC]/[DEC]** to select the one you want from "AG CUTTING PHR."
5. Press **[ARPEGGIO]** to turn the Arpeggiator on.
6. Play a chord on the keyboard.
Guitar strumming will begin according to the notes in the chord you pressed.

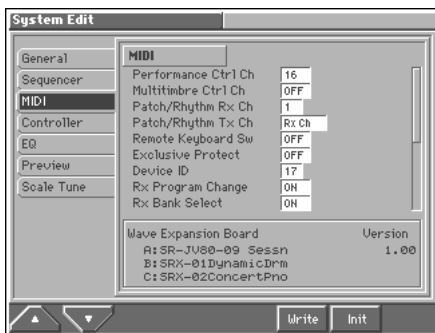
HINT

If you assign Cutoff (CC74) or Resonance (CC71) to the realtime control knobs (p. 163) and turn these knobs while you play, you can apply a wah effect to the guitar strumming.

Using an External MIDI Keyboard to Play Arpeggios

You can also use the keyboard of an external MIDI instrument to play arpeggios.

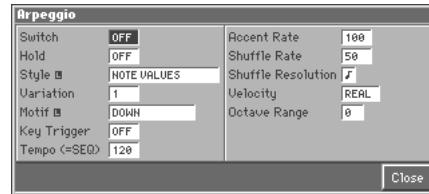
1. Use a MIDI cable to connect the Fantom's MIDI IN connector to the MIDI OUT connector of the external MIDI keyboard.
2. Access the PATCH PLAY screen (p. 31).
3. Press [ARPEGGIO] to turn the Arpeggiator on.
4. Press [MENU] to open the Menu window.
5. Press ▲ or ▼ to select a "System Edit," and then press [8 (Select)].
The System Edit screen appears.
6. Press [1 (▲)] or [2 (▼)] to select the "MIDI" tab.
A screen like the one shown below appears.



7. Use [CURSOR] to move the cursor to "Remote Keyboard Sw."
8. Turn the VALUE dial or press [INC] to select "ON."
9. Play your external MIDI keyboard.

Making Arpeggiator Settings

1. Hold down [JUMP] and press [ARPEGGIO].
The Arpeggio window appears.



In this window you can set the following arpeggiator parameters.

- Switch:** Switches the Arpeggiator on/off.
- Hold:** Switch between Hold On/Hold Off for the Arpeggiator performance.
- Style:** Specify the basic performance style of the arpeggio.
- Variation:** Select the variation (performance pattern) for each arpeggio style.
- Motif:** Specify the order in which the component notes of the chord will be sounded.
- Key Trigger:** Specify the timing at which the arpeggio is to begin playing.
- Tempo (=SEQ):** Specify the tempo of an arpeggio.
- Accent Rate:** Vary the strength and note length of the accents to modify the rhythmic feel (groove) of the performance.
- Shuffle Rate:** Create shuffle rhythms by modifying the timing at which notes are sounded.
- Shuffle Resolution:** Specify the timing of the notes in terms of note value.
- Velocity:** Specify the note strength of the keys you play.
- Octave Range:** Specify the range of the arpeggio performance, in octave units.

HINT

In arpeggio settings, the **Style (Arpeggio Style)** is particularly important. The playback pattern of the arpeggio is determined mainly by this selection.



For details regarding each parameter, refer to "Arpeggiator Settings (Arpeggio)" (p. 51).

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. Press [8 (Close)] to close the Arpeggio window.

HINT

Arpeggiator settings can be saved with each patch as part of the patch settings. This means that you can create patches that contain the most effective settings.

Playing Percussion Instruments

In Patch mode, you can play percussion instruments from the keyboard by selecting a rhythm set. As the rhythm tone assigned to each key varies by the rhythm set selected, you can play a wide range of percussion instruments.

Selecting a Rhythm Set

The Fantom has three rhythm set groups, including the User group, Preset group and GM group, with 16 rhythm sets in the User group, 16 rhythm sets in Preset group, and 9 rhythm sets in GM group, for a total of 41 rhythm sets. What's more, you can further expand your options by installing up to three optional Wave Expansion Boards (one SR-JV80, two SRX series), enabling you to select from a large selection of rhythm sets.

USER

This is the group inside the Fantom which can be rewritten. rhythm sets you yourself create can be stored in this group. The Fantom includes 16 preset rhythm sets.

PRST (Preset)

This is the group inside the Fantom which can be rewritten. However, you can modify the settings of the currently selected rhythm set, and then save the modified settings in User memory. The Fantom contains 16 preset rhythm sets.

GM (GM2)

This is an internal group 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. Furthermore, settings of currently selected rhythm sets from this group cannot be changed. The Fantom includes nine preset rhythm sets.

XP-A-C (Wave Expansion Boards installed in EXP-A-C Slots)

These groups are for when using rhythm sets from a Wave Expansion Board installed in slots EXP A-C, and cannot be rewritten. However, you can modify the settings of the currently selected rhythm set, and then save the modified settings in User memory. The number of onboard rhythm sets depends on the specific Wave Expansion Boards installed.

NOTE

- A Rhythm Set XP-A-C cannot be accessed if the Wave Expansion Board it belongs to has not been installed.
- XP-A (EXP A slot): SR-JV80 series (sold separately)
- XP-B, C (EXP B, C slots): SRX series (sold separately)

1. Access the PATCH PLAY screen (p. 31).
2. Use [CURSOR] to move the cursor to "PATCH."



3. Turn the VALUE dial, or press [INC] to select "RHYTHM."
A screen like the following appears, allowing you to select a rhythm set.



4. Press [CURSOR] to move the cursor to the rhythm set group.
5. Turn the VALUE dial or press [INC]/[DEC] to select the rhythm set group.
USER: User
PRST: Preset
GM: Preset GM (GM2)
XP-A-C: Wave Expansion Boards installed in EXP-A-C Slots
6. Press [CURSOR] to move the cursor to the rhythm set number.
7. Turn the VALUE dial or press [INC]/[DEC] to select the rhythm set number.

HINT

You can select favorite rhythm sets in the same way as when selecting patches. For details on the procedure, refer to "Selecting Favorite Patches (Favorite Sound)" (p. 33).

Playing a Rhythm Set

1. Select the rhythm set that you wish to play.
2. Press a key on the keyboard to play a percussion instrument.

Below the rhythm set name, the screen shows the note name of the key you pressed, and the name of the percussion instrument (rhythm tone name) assigned to that key.



Note name
Rhythm tone name

Playing Rhythm Patterns from the Keyboard

The Fantom contains various Rhythm patterns. Simply by pressing a single key, you can play the Rhythm patterns.

1. Access the PATCH PLAY screen, and select a rhythm set (p. 40).
2. Press [RHYTHM] to make the indicator light.
3. Press a key to which a Rhythm pattern is assigned.
The Rhythm pattern assigned to the key you pressed will sound.
4. To stop playing Rhythm patterns, press [RHYTHM] once again to make the indicator go dark.

Holding the Playback of a Rhythm Pattern

If you perform the following operation, you can play the Rhythm pattern without having to continue holding down the key.

1. Hold down [SHIFT] and press [RHYTHM].
The [RHYTHM] indicator will begin blinking.
2. Press a key to which a Rhythm pattern is assigned.
3. If you press another key while Hold is in effect, the Rhythm pattern will change accordingly.
4. To cancel Rhythm Pattern Hold, hold down [SHIFT] and press [RHYTHM] simultaneously once again.

When Using a Hold Pedal

By holding down the Hold pedal while you play the Rhythm pattern, you can make the Rhythm pattern continue sounding even after you release the key.

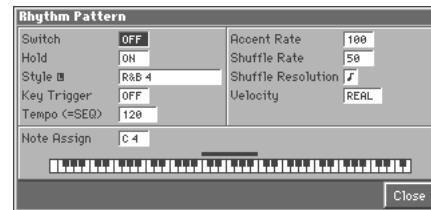
1. Connect an optional pedal switch (DP-2, DP-6, etc.) to the HOLD PEDAL jack.
2. Press [RHYTHM].

3. Hold down the Hold pedal, and press a key to which a Rhythm pattern is assigned.
4. If you press another key while Hold is in effect, the Rhythm pattern will change accordingly.

Making Rhythm Pattern Settings

1. Hold down [JUMP] and press [RHYTHM].

The Rhythm Pattern window appears.



In this window you can set the following Rhythm pattern parameters.

Switch: Switch Rhythm pattern playback on/off.

Hold: Switch between Hold On/Hold Off for the Rhythm pattern playback.

Style: Specify the basic performance style of the Rhythm pattern.

Key Trigger: Specify the timing at which the Rhythm pattern is to begin playing.

Tempo (=SEQ): Specify the tempo of Rhythm pattern playback.

Accent Rate: Adjust the accent strength or note length to modify the rhythm feel (groove) of the performance.

Shuffle Rate: Adjust the note timing to produce shuffle rhythms.

Shuffle Resolution: Specify the timing of the notes in terms of a note value.

Velocity: Specify the note strength for the keys you play.

Note Assign: Specify the keyboard note that will play the Rhythm pattern.

HINT

In rhythm pattern parameters, the **Style (Rhythm Pattern Style)** setting is particularly important. The playback pattern of the rhythm is determined mainly by this selection.



For details regarding each parameter, refer to "Rhythm Pattern Settings (Rhythm Ptn)" (p. 75)."

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. Press [8 (Close)] to close the Rhythm Pattern window.

HINT

Rhythm pattern settings can be saved with each rhythm set as part of the rhythm set settings. This allows you to create a rhythm set that uses the most effective settings.

Creating a Patch

With the Fantom, 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 the 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. 32).

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. 36).

When creating a patch, it is important to decide which tones you are going to use. In the Patch 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. Tones for which the Tone Switch displays a check mark (✓) will sound.

- **Check the Structure setting** (p. 56).

The important Structure parameter (PATCH/TMT) 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. 165).

Since the Fantom 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.

1. **Access the PATCH PLAY screen, and select the patch whose settings you wish to modify** (p. 32).

NOTE

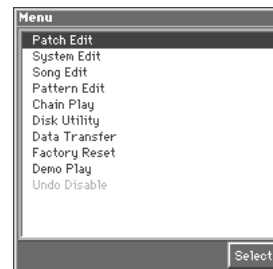
You cannot edit the patches in the PR-E (GM2) group.

HINT

If you want to create all your patches from the ground up, rather than the patches that have already been prepared, carry out the **Initialize** operation (p. 43).

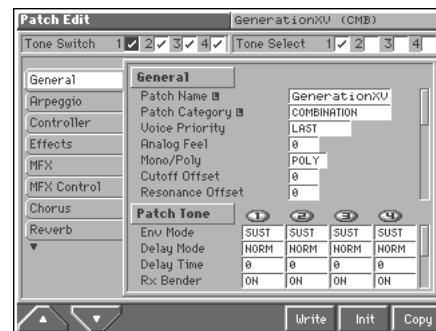
2. **Press [MENU].**

The Menu window appears.



3. **Press ▲ or ▼ to select a "Patch Edit," and then press [8 (Select)].**

The Patch Edit screen appears.



4. **The parameters are organized into several editing groups. Press [1 (▲)] or [2 (▼)] to select the tab for the editing group that contains the parameter you wish to edit.**



For details on how the parameters are grouped, refer to "Parameter list" (Sound/Parameter List).

5. **Use [CURSOR] to move the cursor to the parameter you wish to modify.**

MEMO

- Some of the parameters have a "L" symbol. This indicates that if you press [LIST] when setting one of these parameters, the related window will appear. For example if you press [LIST] at a parameter that requires you to specify a name, the Name window will appear.
- 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.

HINT

- If you have selected a screen for parameters that can be set for each tone, first move the cursor to the parameter that you want to edit, and then press ◀ or ▶ to select a tone. From the left, this is tone 1–4.
 - If you want to simultaneously edit the same parameter for multiple tones, move the cursor to “Tone Select” in the upper part of the Patch Edit screen, and assign a check mark (✓) to each tone that you want to edit. From the left, these correspond to Tone Select 1–4.
 - To switch a tone on/off, move the cursor to the “Tone Switch” in the upper part of the Patch Edit screen, and make the desired settings. From the left, these are Tone Switches 1–4. Assigning a check mark (✓) will turn the tone on, and removing the check mark will turn it off.
6. 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.
 7. Repeat steps 4–6 to complete a patch.
 8. If you wish to save the changes you’ve made, press [6 (Write)] to perform the Save operation (p. 45). If you do not wish to save changes, press [EXIT] to return to the PATCH PLAY screen.
If you return to the PATCH PLAY screen without saving, the display will indicate “EDITED,” reminding you that the patch settings have been modified.

NOTE

If you turn off the power or select a different sound while the display indicates “EDITED,” your edited patch will be lost.

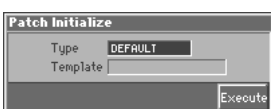
Initializing Patch Settings (Init)

“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. 195).

1. Access the PATCH PLAY screen, and select the patch that you wish to initialize (p. 32).
2. Access the Patch Edit screen (p. 42).
3. Press [7 (Init)].
The Patch Initialize window appears.



4. Move the cursor to “Type,” and select the initialization type.

Type (Initialize Type)

There are three initialize methods. Select either of them depending on the application.

DEFAULT: Resets the currently selected patch in the Temporary memory to the standard values. This is called a Initial Data. Use this setting when you wish to create a sound from scratch.

PRESET: Resets the currently selected patch in user memory to the factory settings.

MFX TEMPLATE: The multi-effect settings of the currently selected patch will be set to the MFX template settings.

NOTE

If the currently selected patch is preset memory (PR-A-E) data, initializing with the “PRESET” setting will set the values to those of the identically numbered user memory.



For details regarding MFX template, refer to “MFX Template List” (Sound/Parameter List).

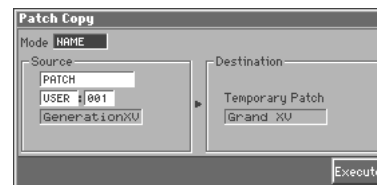
5. If you’ve set the initialization type to “MFX TEMPLATE,” move the cursor to “Template” and select an MFX template.
6. Press [8 (Execute)].
The initialization will be carried out, and you’ll be returned to the Patch Edit screen.

Copying Patch Settings (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.

Basic Procedure for Patch Copy

1. Access the PATCH PLAY screen, and select the copy-destination patch (p. 32).
2. Access the Patch Edit screen (p. 42).
3. Press [8 (Copy)].
The Patch Copy window appears.



4. Move the cursor to “Mode,” and select the data that you wish to copy.
Three types of copy are available: **Patch Name Copy**, **Patch Effects Copy**, and **Patch Tone Copy**. You should select the one that is relevant to the type of data you wish to copy. For details refer to “Types of Patch Copy” (following section).
5. Move the cursor to “Source,” and select the copy-source sound.
6. Press [8 (Execute)] to execute the copy.
7. Press [EXIT] to return to the Patch Edit screen.

Creating a Patch

Types of Patch Copy

Patch Name Copy (NAME)

The name of the patch, rhythm set, multitimbre, or performance will be copied to the currently selected patch.



Patch Effects Copy (MFX/CHORUS/REVERB)

The effect settings of the patch, rhythm set, multitimbre, or performance will be copied to the currently selected patch.



Effect contents that will be copied (Mode)

MFX: Multi-effects settings

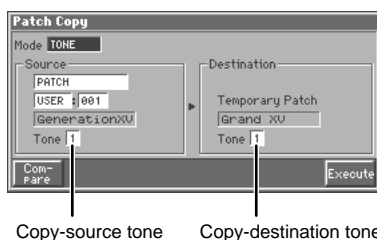
CHORUS: Chorus settings

REVERB: Reverb settings

If you want to copy the multi-effect settings of a multitimbre or performance, select the MFX (MFX-A-MFX-C) whose data will be copied.

Patch Tone Copy (TONE)

Tone settings of a patch will be copied to the tone you specify of the current patch.



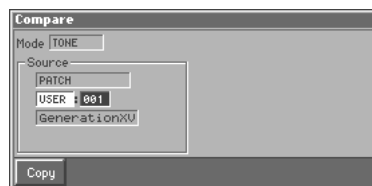
HINT

To specify the currently selected patch as the copy source, set "Source" to "TEMP."

The Compare Function

For the Patch Effect Copy and Patch Tone Copy operations, you can use the Compare function.

The Compare function allows you to play the copy-source patch. To do so, press [1 (Compare)] to open the following window. The copy-source patch can be switched in this window as well, but it is not possible to select GM group patches. After selecting the desired patch, return to the previous window by pressing [1 (Copy)].



NOTE

- The Compare function cannot be used with Patch Effect Copy if "RHYTHM," "MULTITIMBRE" or "PERFORMANCE" is selected as the copy source (Source).
- The patch auditioned using the Compare function may sound slightly different than when it is played normally.

Cautions When Selecting a Waveform

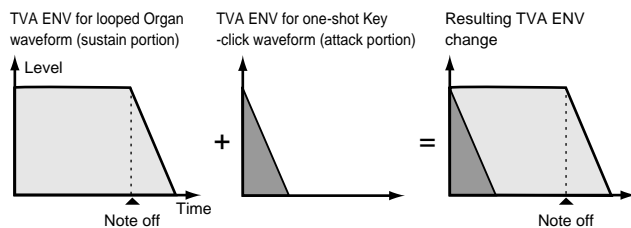
The sounds of the Fantom are based on complex PCM waveforms, and if you attempt to make settings that are contrary to the type of the original waveform, the results will not be as you expect.

The internal waveforms of the Fantom 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's one-shot waveforms are sounds that are complete in themselves, such as percussive instrument sounds. The Fantom 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'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.

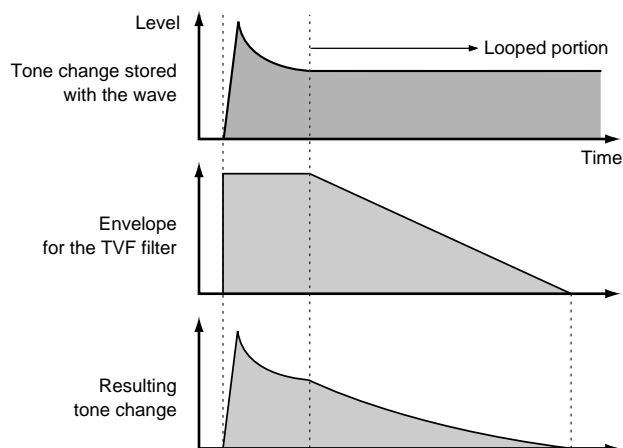


Cautions When Using a One-shot Waveform

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)

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 internal **USER** group (user memory)

When you modify the settings of a patch, the PATCH PLAY screen will indicate "EDITED." Once you save the patch into internal memory (user memory), the "EDITED" indication goes away.

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 Initialization procedure (p. 43).

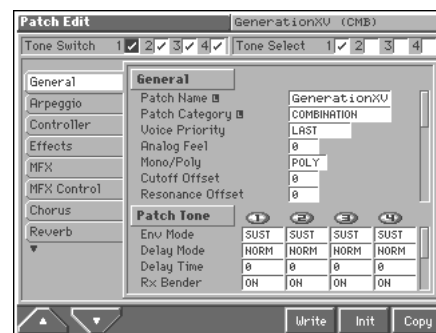
1. **Make sure that the patch you wish to save is selected.**
2. **Press [MENU].**

The Menu window appears.



3. **Press ▲ or ▼ to select a "Patch Edit," and then press [8 (Select)].**

The Patch Edit screen appears.



4. **Press [6 (Write)].**

The Patch Write window appears.



5. **Press ▲ or ▼ to specify the save-destination patch.**

Creating a Patch

HINT

By pressing [7 (Compare)] you can check the save-destination patch (Compare function).

6. Press [8 (Execute)].

The display will indicate "Are you sure?."

7. Press [8 (OK)] to execute the save operation. To cancel the operation, press [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 5 to select the save destination.

2. Press [7 (Compare)].

The Patch Compare window appears, making it possible to sound the currently selected save destination patch.



3. Play the keyboard 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 using [INC]/[DEC].

5. Press [7 (Write)] to return to the Patch Write window.

6. Press [8 (Execute)] once again to execute the Save operation.

Registering a Favorite Patch (Favorite Sound)

You can bring together your favorite and most frequently used patches in one place by registering them in the Favorite sound. By using this function you can rapidly select favorite patches from internal memory or a Wave Expansion Board. You can register a total of 64 sounds (8 sounds x 8 banks) as favorite sounds.



For details on selecting a favorite sound, refer to "Selecting Favorite Patches (Favorite Sound)" (p. 33).

Using [1]–[8] to Register

1. Access the PATCH PLAY screen, and select the patch that you wish to register (p. 32).

2. Hold down [JUMP (BANK)] and press a [1]–[8] to select the bank in which you wish to register the sound.

3. Hold down [SHIFT (REGISTRY)] and press a [1]–[8] to select the button at which you wish to register the sound.

The display will indicate "Register OK?."

4. Press [8 (OK)] to execute the registration. To cancel the operation, press [EXIT].

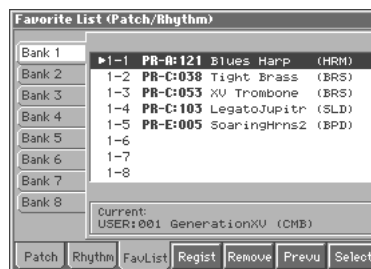
Using the Favorite List Window to Register

1. Access the PATCH PLAY screen to select the patch that you wish to register (p. 32).

2. Make sure that you are in the PATCH PLAY screen, and that the cursor is located at the patch group or the patch number.

3. While holding down [SHIFT], press [LIST]

The Favorite List window appears.



4. Press ◀ to move the cursor to the "Bank 1–8" tab, and press ▲ or ▼ to select the bank in which you wish to register the patch.

5. Press ▶ to move the cursor within the list, and press ▲ or ▼ to select the number to which you wish to register. The number you select here corresponds to [1]–[8].

6. Press [5 (Regist)] to execute the registration.

HINT

• By pressing [6 (Remove)] you can cancel the patch registration that is selected in the Favorite List window.

• By pressing [7 (Prevu)] you can audition the sound of the registered patch (Phrase Preview).

7. When you have finished registering favorite sounds, press [EXIT] to close the Favorite List window.

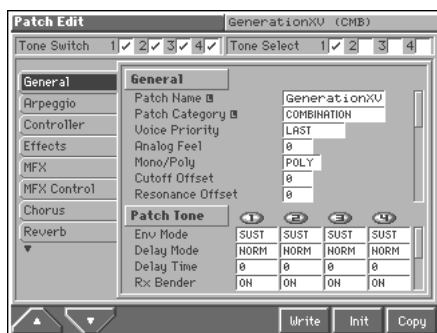
Functions of Patch Parameters

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 the Control screen will determine how these parameters are controlled (p. 54).

Settings Common to the Entire Patch (General)



For details on the setting, refer to “How to Make the Patch Settings” (p. 42).

General

Patch Name

You can assign a name of up to 12 characters to the patch.

Value: space, A-Z, a-z, 0-9, ! " # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ` { | } → ←

For details on assigning names, refer to “Assigning a Name” (p. 30).

Patch Category

Specifies the type (category) of the patch.

The Patch Finder uses this setting. It also determines the phrase that will be sounded when using the Phrase Preview function.

For details on the possible category names, refer to (p. 35).

Voice Priority

This determines how notes will be managed when the maximum polyphony is exceeded (64 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.

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

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.

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 Freq parameters (PATCH/TVF) (p. 62).

Range: -63– +63

* **Cutoff Frequency:** the frequency at which the filter begins to have an effect on the waveform’s frequency components.

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 (PATCH/TVF) (p. 63).

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 Env Time 1 parameters (PATCH/TVA) (p. 66).

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 Env Time 4 parameters (PATCH/TVA) (p. 66).

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)

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 V-Sens parameter (PATCH/TVF) (p. 63)

Level V-Sens parameter (PATCH/TVA) (p. 65)

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.

Clock Source (Patch Clock Source)

The LFO cycle, multi-effects changes, Phrase Loop, and Tone Delay time can be synchronized to a clock (tempo). When this is used by the patch, this Clock Source setting determines the clock which will be used.

Value

PATCH: The Patch Tempo will be used.

SEQUENCER: Synchronize to the clock of the Fantom's sequencer or of an external sequencer.



For details on using clock (tempo), refer to (Q&A p. 16).

Tempo (Patch Tempo)

When Patch Clock Source is set to "PATCH," this setting value is effective.

Value: 20-250

MEMO

The Patch Tempo Clock does not transmit clock messages from the MIDI OUT connector.

Legato Switch (Solo Legato Switch)

Solo Legato is valid when the Mono/Poly parameter (PATCH/General) is set to "MONO." This setting specifies whether the Solo Legato function will be used (ON) or not (OFF).

Value: OFF, ON

With the Legato Switch parameter "ON," 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.

Legato Retrigger (Legato Retrigger Switch)

The Legato Retrigger is valid when the Mono/Poly parameter (PATCH/General) is set to "MONO" and the Legato Switch parameter is set to "ON." The setting determines whether sounds are replayed (ON) or not (OFF) when performing legato. Normally you will leave this parameter "ON." When "OFF," when one key is held down and another key is then pressed, only the pitch changes, without the attack of the latter key being played. Set this to "OFF" when performing wind and string phrases or when using modulation with the mono synth keyboard sound.

Value: OFF, ON

Portamento Switch

Specifies whether the portamento effect will be applied (ON) or not (OFF).

Value: OFF, ON

Portamento

Portamento is an effect which smoothly changes the pitch from the first-played key to the next-played key. By applying portamento when the Mono/Poly parameter (PATCH/General) is "MONO," you can simulate slide performance techniques on a violin or similar instrument.

Portamento Mode

Specifies the performance conditions for which portamento will be applied.

Value

NORMAL: Portamento will always be applied.

LEGATO: Portamento will be applied only when you play legato (i.e., when you press the next key before releasing the previous key).

Portamento Type

Specifies the type of portamento effect.

Value

RATE: The time it takes will depend on the distance between the two pitches.

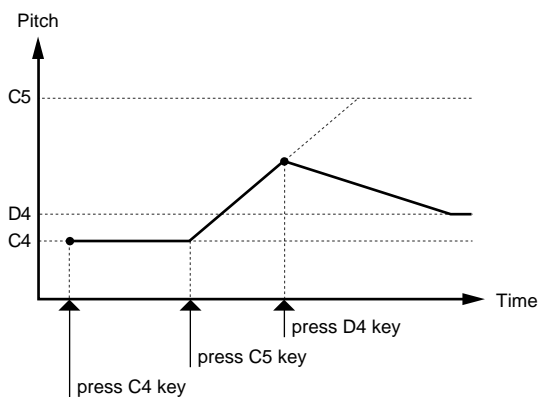
TIME: The time it takes will be constant, regardless of how far apart in pitch the notes are.

Portamento Start

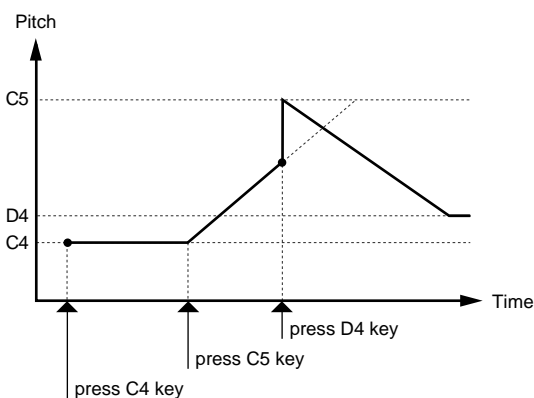
When another key is pressed during a pitch change produced by portamento, a new pitch change will begin. This setting specifies the pitch at which the change will begin.

Value

PITCH: Starts a new portamento when another key is pressed while the pitch is changing.



NOTE: Portamento will begin anew from the pitch where the current change would end.



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.

Value: 0-127

Bend Range Up (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

Bend Range Down (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

Patch Tone

Env Mode (Tone Envelope Mode)

When a loop waveform (p. 44) 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."

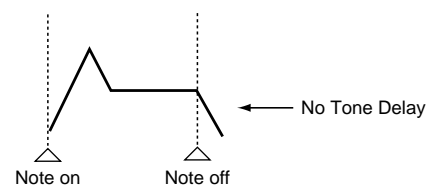
Range: NO SUS, SUST

NOTE

If a one-shot type Wave (p. 44) is selected, it will not sustain even if this parameter is set to "SUST."

Delay Mode (Tone Delay Mode)

Selects the type of tone delay.



Tone Delay

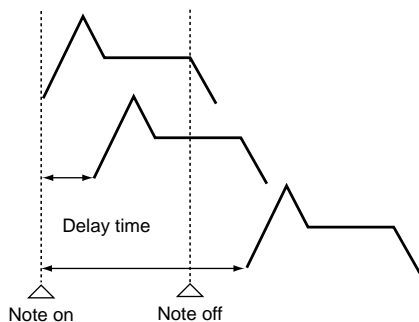
This produces a time delay between the moment a key is pressed (or released), and the moment the tone actually begins to sound. You can also make settings that shift the timing at which each tone is sounded. This differs from the Delay in the internal effects, in that by changing the sound qualities 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 specified tempo (Patch Tempo), or to the tempo of the sequencer (p. 48).

NOTE

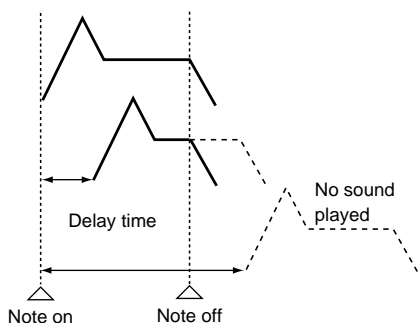
- If you are not going to use Tone Delay, set the Delay Mode parameter to "NORM" and Delay Time parameter to "0."
- If the Structure parameter (PATCH/TMT) is set in the range of "2"-"10," the output of tones 1 and 2 will be combined into tone 2, and the output of tones 3 and 4 will be combined into tone 4. For this reason, tone 1 will follow the settings of tone 2, and tone 3 will follow the settings of tone 4 (p. 56).

Value

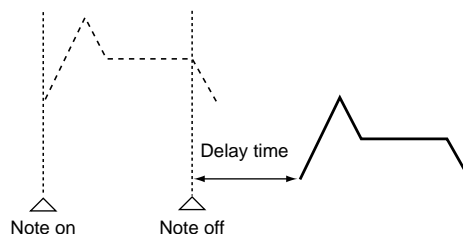
NORM: The tone begins to play after the time specified in the Delay Time parameter has elapsed.



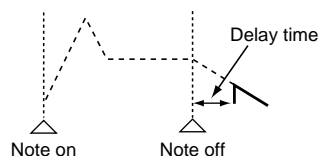
HOLD: Although the tone begins to play after the time specified in the Delay Time parameter has elapsed, if the key is released before the time specified in the Delay Time parameter has elapsed, the tone is not played.



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.

Delay Time (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 (seconds))
♩ (quarter note)	0.5 seconds (60 / 120 = 0.5 (seconds))
♩ (eighth note)	0.25 seconds (60 / 240 = 0.25 (seconds))

Rx 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

Rx Expression (Tone Receive Expression Switch)

For each tone, specify whether MIDI Expression messages will be received (ON), or not (OFF).

Value: OFF, ON

Rx Hold-1 (Tone Receive Hold-1 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 (PATCH/General), this setting will have no effect.

Rx 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

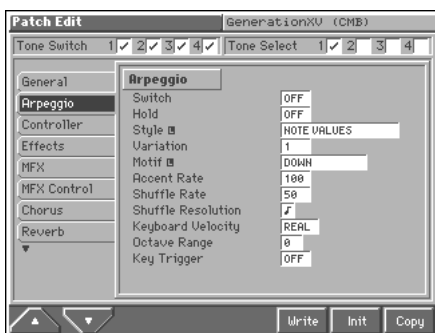
The channels cannot be set so as not to receive Pan messages.

Redamper Sw (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 Rx Hold-1 parameter "ON." This function is effective for piano sounds.

Value: OFF, ON

Arpeggiator Settings (Arpeggio)



NOTE

For details on the setting, refer to "How to Make the Patch Settings" (p. 42).

Arpeggio

Switch (Arpeggio Switch)

Switches the Arpeggiator on/off.

Value: OFF, ON

Hold (Arpeggio Hold Switch)

Switch between Hold On/Hold Off for the Arpeggiator performance.

Value: OFF, ON

Style (Arpeggio Style)

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



For details regarding Arpeggio Style, refer to "Arpeggio Style List" (Sound/Parameter List).

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%

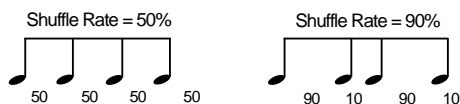
Creating a Patch

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 an 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.

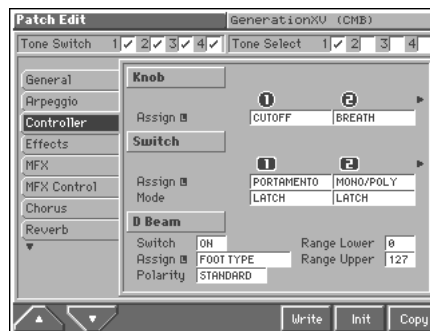
Value: -3– +3

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 or rhythm pattern, turn this “OFF.”

Value: OFF, ON

Realtime Controller / D Beam Controller Settings (Controller)



For details on the setting, refer to “How to Make the Patch Settings” (p. 42).

Knob

Assign 1–4 (Realtime Control Knob Assign 1–4)

Specify the functions that will be controlled by the [1]–[4] knobs.

Value

OFF: The realtime control knob will not be used.

CC01–31, 33–95: Controller numbers 1–31, 33–95



For more information about Control Change messages, please refer to “MIDI Implementation” (Sound/Parameter List).

PITCH BEND: Pitch Bend

AFTERTOUCH: Aftertouch

TEMPO: Tempo

ARP VAR: Arpeggio Variation

ARP ACCENT: Arpeggio Accent Rate

ARP SHFFLE: Arpeggio Shuffle Rate

ARP OCTAVE: Arpeggio Octave Range

Switch

Assign 1–4 (Realtime Control Button Assign 1–4)

Specify the functions that will be controlled by the [1]–[4] buttons.

Value

OFF: The realtime control button will not be used.

CC01–31, 33–95: Controller numbers 1–31, 33–95



For more information about Control Change messages, please refer to “MIDI Implementation” (Sound/Parameter List).

BEND UP: Raises the pitch in semitone steps (up to 4 octaves higher).

BEND DOWN: Lowers the pitch in semitone steps (up to 4 octaves lower).

AFTERTOUCHE: Aftertouch

OCT UP: Raises the key range in octave steps (up to 3 octaves higher).

OCT DOWN: Lowers the key range in octave steps (up to 3 octaves lower).

TRNS UP: Raises the key range in semitone steps (up to 6 semitones higher).

TRNS DOWN: Lowers the key range in semitone steps (up to 5 semitones lower).

TAP TEMPO: Tap tempo (a tempo specified by the interval at which you press the button).

MONO/POLY: Pressed to toggle between polyphonic (POLY) and monophonic (MONO) play of a patch.

ARP HOLD: Switch between Hold On/Hold Off for the Arpeggiator performance.

Mode 1–4 (Realtime Control Button Mode 1–4)

Specify how the [1]–[4] buttons are to operate.

Value

MOMENTARY: The button will be on only while you are pressing (holding) it, and will be off when you release your finger from the button.

LATCH: The button will switch on/off each time you press it.

D Beam

Switch (D Beam Switch)

Switches the D Beam controller on/off.

Value: OFF, ON

Assign (D Beam Assign)

Specifies the function controlled by the D Beam controller.

Value

OFF: The D Beam controller will not be used.

CC01–31, 33–95: Controller numbers 1–31, 33–95



For more information about Control Change messages, please refer to “MIDI Implementation” (Sound/Parameter List).

BEND UP: Raises the pitch in semitone steps (up to 4 octaves higher).

BEND DOWN: Lowers the pitch in semitone steps (up to 4 octaves lower).

AFTERTOUCHE: Aftertouch

NOTE: Play the sound of the most recently pressed key.

OCT UP: Raises the key range in octave steps (up to 3 octaves higher).

OCT DOWN: Lowers the key range in octave steps (up to 3 octaves lower).

START/STOP: Starts/Stops the sequencer.

TAP TEMPO: Tap tempo (a tempo specified by the interval at which you move your hand over the D Beam controller).

ARP SWITCH: Switches the Arpeggiator on/off.

ARP VAR: Arpeggio Variation

ARP ACCENT: Arpeggio Accent Rate

ARP SHFFLE: Arpeggio Shuffle Rate

ARP OCT UP: The range in which the arpeggio is sounded will rise in steps of an octave (maximum 3 octaves).

ARP OCT DW: The range in which the arpeggio is sounded will lower in steps of an octave (maximum 3 octaves).

Polarity (D Beam Polarity)

Switch the polarity of the D Beam controller.

With a setting of “REVERSE,” the direction of control for the D Beam controller will be inverted.

Range: STANDARD, REVERSE

Range Lower (D Beam Range Lower)

Specify the lower limit of the range of the D Beam controller. Values below this setting will not be output.

Value: 0–UPPER

Range Upper (D Beam Range Upper)

Specify the upper limit of the range of the D Beam controller. Values above this setting will not be output.

Value: LOWER–127

Setting Effects for a Patch (Effects/MFX/MFX Control/Chorus/Reverb)



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

- “Applying Effects in Patch Mode” (p. 165)
- “Making Multi-Effects Settings (MFX/MFX Control)” (p. 174)
- “Making Chorus Settings (Chorus)” (p. 176)
- “Making Reverb Settings (Reverb)” (p. 177)

Matrix Control Settings (Matrix Ctrl)



For details on the setting, refer to “How to Make the Patch Settings” (p. 42).

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. 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’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. For example, you can use the Pitch Bend lever to change the LFO cycle rate, or use the keyboard’s touch to open and close a filter. The function which allows you use MIDI messages to make these changes in realtime to the 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).

Source 1–4 (Matrix Control Source 1–4)

Sets the MIDI message used to change the tone parameter with the Matrix Control.

Value

OFF: Matrix control will not be used.

CC01–31, 33–95: Controller numbers 1–31, 33–95



For more information about Control Change messages, please refer to “MIDI Implementation” (Sound/Parameter List).

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)

KEYFOLLOW: Key follow (keyboard position with C4 as 0)

TEMPO: The specified tempo (patch tempo/sequencer tempo) or the tempo of an external MIDI sequencer.

LFO1: LFO 1 cycle rate

LFO2: LFO 2 cycle rate

PITCH ENV: Pitch envelope

TVF ENV: TVF envelope

TVA ENV: TVA envelope

MEMO

Velocity and Key follow correspond to Note messages.

HINT

- You can use the tempo as a Matrix Control. This lets you change the tone settings in realtime according to changes in the Tempo. When synchronizing to the patch tempo, set the Clock Source parameter (PATCH/General) to “PATCH,” and specify the patch tempo with the Tempo parameter (PATCH/General). To synchronize to the sequencer tempo, set the Clock Source parameter (PATCH/General) to “SEQUENCER,” set the Sync Mode parameter (SYSTEM/Sequencer) to “MASTER,” and specify the sequencer tempo with “♩ =**” in the upper part of the PLAY screen. When synchronizing to the tempo of the connected MIDI sequencer, set the Clock Source parameter (PATCH/General) to “SEQUENCER,” and set the Sync Mode parameter (SYSTEM/Sequencer) to “SLAVE MIDI.”
- 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, select “SYS CTRL1”–“SYS CTRL4.” MIDI messages used as System Control 1–4 are set with the Sys Ctrl 1–4 Source parameters (SYSTEM/Control) (p. 184).

NOTE

- There are parameters that determine whether or not Pitch Bend, Controller Number 11 (Expression) and Controller Number 64 (Hold 1) are received (p. 51). 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.”
- There are parameters that let you specify whether specific MIDI messages will be received for each channel in a multitimbre or performance (p. 103, p. 119). When a patch with Matrix Control settings is assigned to a part, confirm that any MIDI messages used for the Matrix Control will be received. If the Fantom is set up such that reception of MIDI messages is disabled, then the Matrix Control will not function.

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 “H.”

● 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

DRY LEVEL: Changes the volume of dry sounds.

CHORUS SEND: Changes the amount of chorus.

REVERB SEND: Changes the amount of reverb.

● Applying LFO to Modulate Sounds

LFO1/LFO2 PCH 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.

● 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

HINT

- If the Matrix Control is used to split tones, set the TMT Vel Control parameter (PATCH/TMT) to “OFF,” and the TMT Control Sw parameter (PATCH/Matrix Ctrl) to “ON” (p. 56, p. 58).
- If the Matrix Control is used to split tones, we recommend setting the Matrix 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 Key Fade Lower and Key Fade Upper parameters (PATCH/TMT) (p. 58). 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 Multi-Effects Parameters

MFX CTRL1–4: Change the parameter that was specified by MFX Control 1–4 Assign parameter.

NOTE

No effects are available, even with the Matrix Control, when the settings are such that no multi-effects are applied.

Creating a Patch

Sns 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. When both positive and negative are selected, the changes are greater as the value increases. Set it to "0" if you don't want this effect.

Value: -63– +63

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

✓: The effect will be applied.

R: The effect will be applied in reverse.

TMT Control Sw (TMT Control Switch)

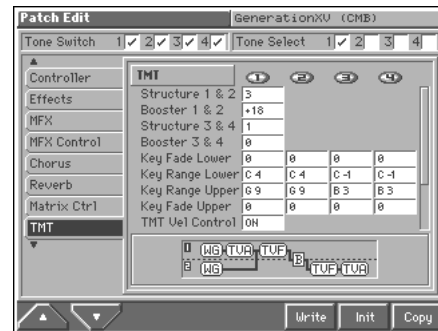
Use the Matrix Control to enable (ON), or disable (OFF) sounding of different tones.

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. 58). 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 TMT Vel Control parameter (PATCH/TMT) to "OFF."

Changing How a Tone Is Sounded (TMT)



For details on the setting, refer to "How to Make the Patch Settings" (p. 42).

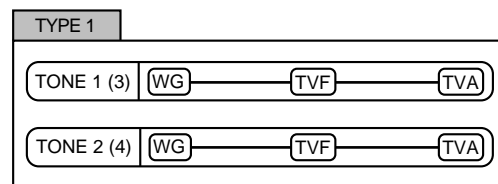
TMT

Structure 1 & 2, 3 & 4 (Structure Type 1 & 2, 3 & 4)

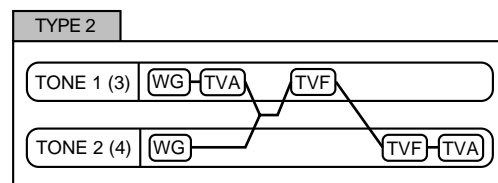
Determines how tone 1 and 2, or tone 3 and 4 are connected.

Value: 1–10

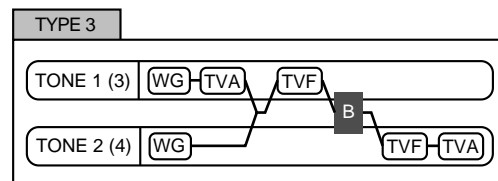
The following 10 different Types of combination are available.



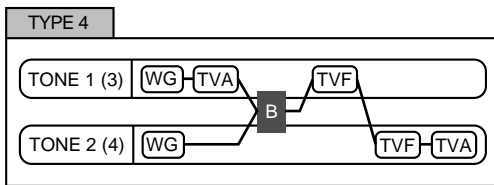
With this type, tones 1 and 2 (or 3 and 4) are independent. Use this type when you want to preserve PCM sounds or create and combine sounds for each tone.



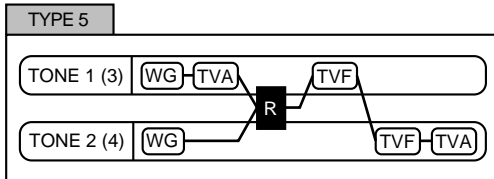
This type stacks the two filters together to intensify the characteristics of the filters. The TVA for tone 1 (or 3) controls the volume balance between the two tones.



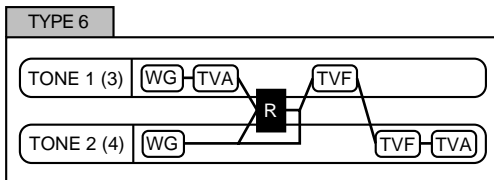
This type mixes the sound of tone 1 (3) and tone 2 (4), applies a filter, and then applies a booster to distort the waveform.



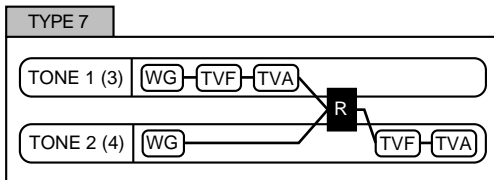
This type applies a booster to distort the waveform, and then combines the two filters. The TVA for tone 1 (or 3) controls the volume balance between the two tones and adjusts booster level.



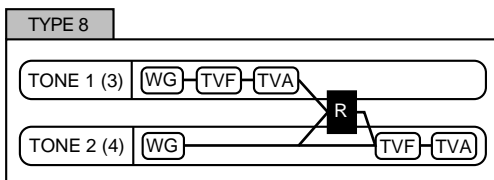
This type uses a ring modulator to create new overtones, and combines the two filters. The tone 1 (3) TVA will control the volume balance of the two tones, adjusting the depth of ring modulator.



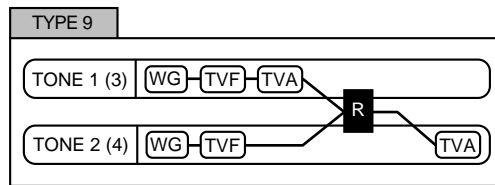
This type uses a ring modulator to create new overtones, and in addition mixes in the sound of tone 2 (4) and stacks the two filters. Since the ring-modulated sound can be mixed with tone 2 (4), tone 1 (3) TVA can adjust the amount of the ring-modulated sound.



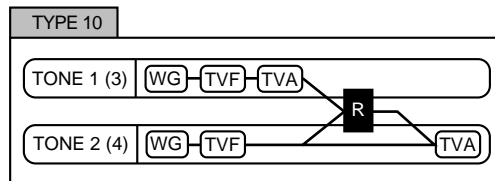
This type applies a filter to tone 1 (3) and ring-modulates it with tone 2 (4) to create new overtones.



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

- If you select a tone while on the Structure screen, the tone paired with the selected tone will also be selected.
- 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. 58) or limit the range of velocities for which it will sound (Velocity Range p. 59), 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)

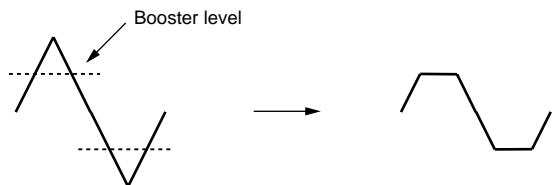
When a Structure Type of TYPE 3 or TYPE 4 is selected, you can adjust the depth of the booster. The booster increases the input signal in order to distort the sound. This creates the distortion effect frequently used with electric guitars. Higher settings will produce more distortion.

Value: 0, +6, +12, +18

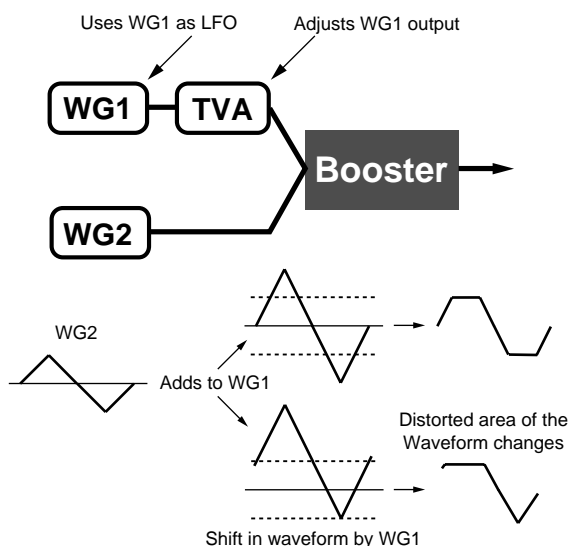
Creating a Patch

Booster

The Booster is used to distort the incoming signal.



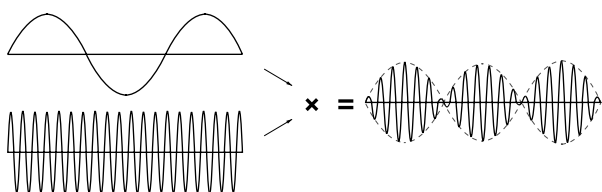
In addition to using this to create distortion, you can use the waveform (WG1) of one of the tones as an LFO which shifts the other waveform (WG2) upward or downward to create modulation similar to PWM (pulse width modulation). This parameter works best when you use it in conjunction with the Wave Gain parameter (PATCH/Wave) (p. 59).



Ring Modulator

A ring modulator multiplies the waveforms of two tones with each other, generating many new overtones (inharmonic 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.



Key Fade Lower (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

Key Range Lower (Keyboard Range Lower)

Specifies the lowest note that the tone will sound for each tone.

Value: C-1-UPPER

Key Range Upper (Keyboard Range Upper)

Specifies the highest note that the tone will sound for each tone.

Value: LOWER-G9

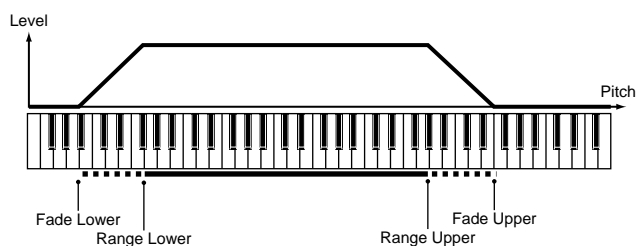
NOTE

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.

Key Fade Upper (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 below the keyboard range is played, set this parameter to "0."

Value: 0-127



TMT Vel 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 "RND," the patch's constituent tones will sound randomly, regardless of any Velocity messages.

Value: OFF, ON, RND

NOTE

Instead of using Velocity, you can also have tones substituted using the Matrix Control (p. 55). 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 TMT Vel Control parameter to "OFF."

Vel Fade Lower (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

Vel Range Lower (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

Vel Range 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 to have different tones played, set the lowest value (Lower) and highest value (Upper) of the value of the MIDI message used.

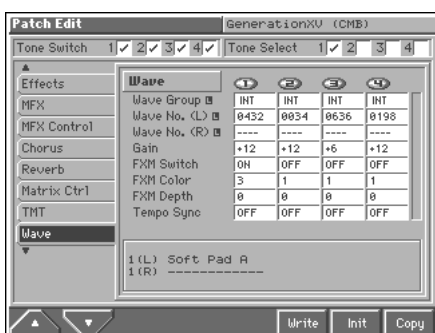
Vel Fade Upper (Velocity Fade Width Upper)

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 Waveforms (Wave)



For details on the setting, refer to "How to Make the Patch Settings" (p. 42).

Wave

Wave Group

Selects the group for the waveform that is to be the basis of the tone.

Value

INT: Waveforms stored in internal memory

XP-A: Waveform stored in a Wave Expansion Board (SR-JV80 series) installed in EXP-A slots.

XP-B: Waveforms residing on a Wave Expansion Board (SRX series) installed in the EXP B slot

XP-C: Waveforms residing on a Wave Expansion Board (SRX series) installed in the EXP C slot

NOTE

You cannot select a waveform group of a Wave Expansion Board that is not installed.

Wave No. (L) (Wave Number (L)) Wave No. (R) (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: ----, 1-1083

Gain (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. 57).

Value: -6, 0, +6, +12

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

Creating a Patch

FXM Depth ★

Specifies the depth of the modulation produced by FXM.

Value: 0–16

Tempo Sync (Wave Tempo Sync)

When you wish to synchronize a Phrase Loop to the clock (tempo), set this to “ON.” This is valid only when an optional Wave Expansion Board, such as “SR-JV80-10: BASS&DRUMS,” is installed, and you have selected a tone which uses a waveform that displays tempo (BPM).

Value: OFF, ON

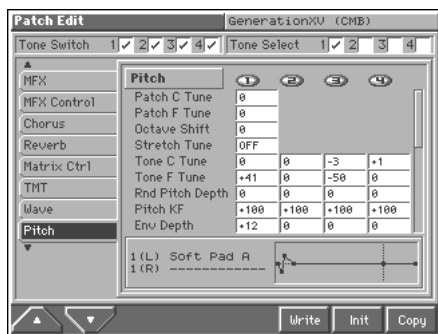
NOTE

- When the Tempo Sync parameter is set to “ON,” settings related to Pitch (p. 60) and FXM (p. 59) are disabled.
- When the Tempo Sync parameter is set to “ON,” set the Delay Time parameter (PATCH/General) 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.”

Modifying Pitch (Pitch)



For details on the setting, refer to “How to Make the Patch Settings” (p. 42).

Pitch

Patch C Tune (Patch Coarse Tune) ★

Adjusts the pitch of the patch’s sound up or down in semitone steps (+/-4 octaves).

Value: -48– +48

Patch F Tune (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.

Octave Shift

Adjusts the pitch of the patch’s sound up or down in units of an octave (+/-3 octaves).

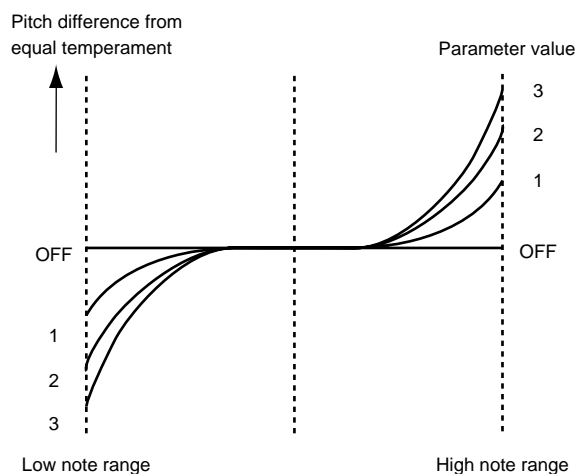
Value: -3– +3

Stretch Tune (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.



Tone C Tune (Tone Coarse Tune) ★

Adjusts the pitch of the tone’s sound up or down in semitone steps (+/-4 octaves).

Value: -48– +48

Tone F Tune (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.

Rnd Pitch Depth (Random Pitch Depth)

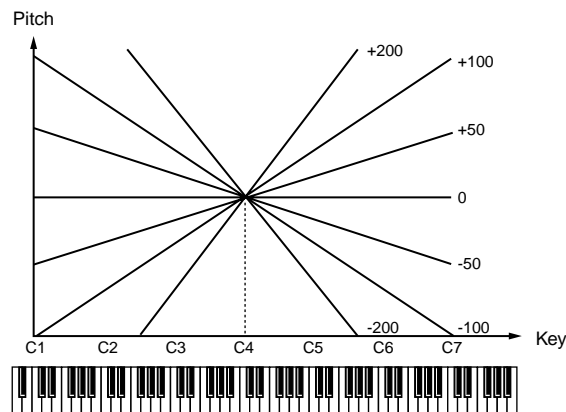
This specifies the width of random pitch deviation that will occur each time a key is pressed. If you do not want the pitch to change randomly, set this to "0." These values are in units of cents (1/100th of a semitone).

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 KF (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



Env Depth (Pitch Envelope 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

Env V-Sens (Pitch Envelope Velocity Sensitivity)

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

Env T1 V-Sens (Pitch Envelope Time 1 Velocity Sensitivity)

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

Env T4 V-Sens (Pitch Envelope Time 4 Velocity Sensitivity)

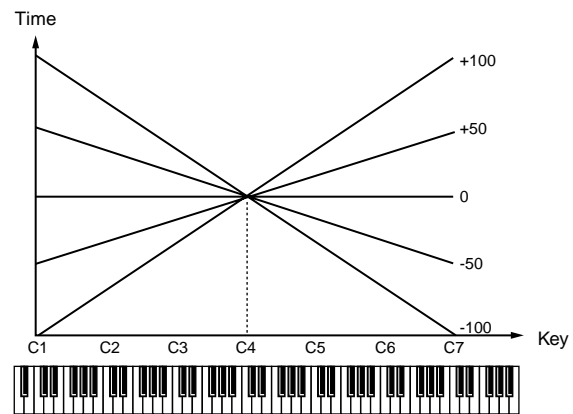
Use this parameter when you want key release speed to impact on Time 4 value of the pitch envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63- +63

Env Time KF (Pitch Envelope 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



Env Level 0-4 (Pitch Envelope Level 0-4)

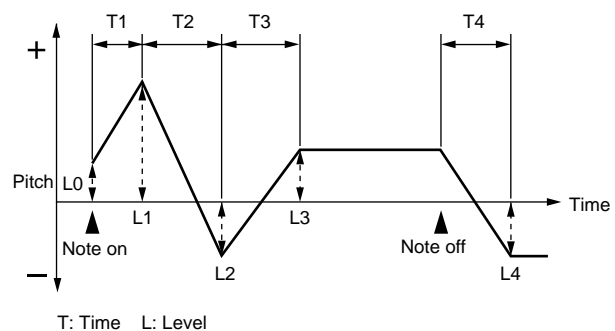
Specify the pitch envelope levels (Level 0-Level 4). It determines how much the pitch changes from the reference pitch (the value set with Coarse Tune or Fine Tune on the Pitch screen) at each point. Positive (+) settings will cause the pitch to be higher than the standard pitch, and negative (-) settings will cause it to be lower.

Value: -63- +63

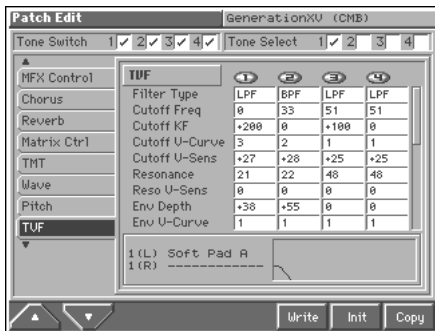
Env Time 1-4 (Pitch Envelope Time 1-4) ★

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



Modifying the Brightness of a Sound with a Filter (TVF)



For details on the setting, refer to “How to Make the Patch Settings” (p. 42).

TVF

Filter Type

Selects the type of filter. A filter is a function that cuts off a specific frequency band to change a sound's brightness, thickness, and 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 ones.

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.

Cutoff Freq (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.

HINT

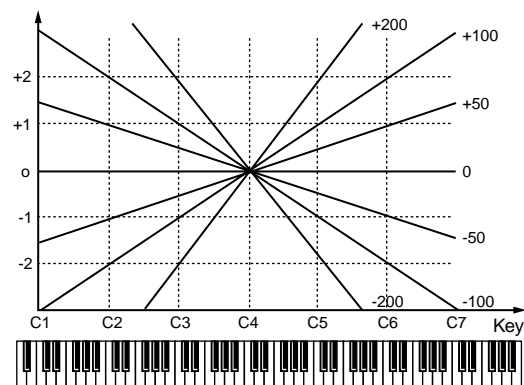
To edit the overall patch while preserving the relative differences in the Cutoff Frequency values set for each tone, set the Cutoff Offset parameter (PATCH/General) (p. 47).

Cutoff KF (Cutoff Frequency 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 frequency (Octave)



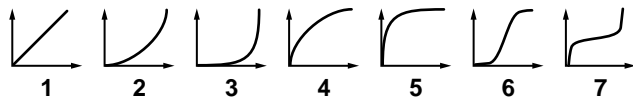
HINT

The cutoff frequency key follow setting appearing at the lower part of the TVF settings screen graphically depicts the current values of the settings. Solid lines represent the cutoff frequency key follow setting, while dotted lines are used for the TVA bias settings. This lets you compare the TVF cutoff frequency key follow setting and the TVA bias settings while you make settings.

Cutoff V-Curve (Cutoff Frequency Velocity Curve)

Selects one of the following seven curves that determine how keyboard playing dynamics (velocity) influence the cutoff frequency. Set this to "FIXED" when the Cutoff frequency is not to be changed according to the force with which the keys are pressed.

Value: FIXED, 1-7



Cutoff V-Sens (Cutoff Velocity Sensitivity)

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

HINT

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 (PATCH/General) (p. 48). However, this setting is shared by the Level V-Sens parameter (PATCH/TVA) (p. 65).

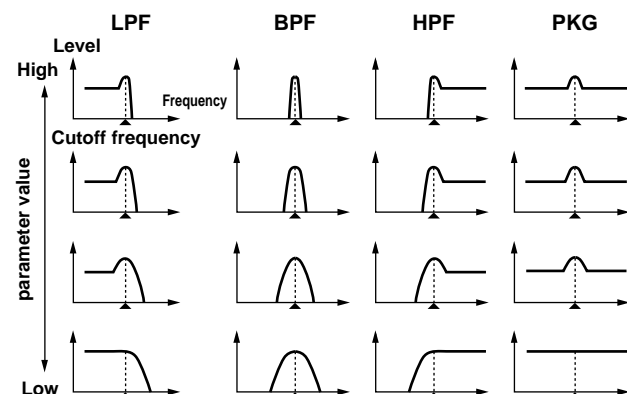
Resonance ★

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

HINT

To edit the overall patch while preserving the relative differences in the Resonance values set for each tone, set the Resonance Offset parameter (PATCH/General) (p. 47).



Reso V-Sens (Resonance Velocity Sensitivity)

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

Env Depth (TVF Envelope 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

Env V-Curve (TVF Envelope 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" when the amount of TVF Envelope applied is not to be changed according to the force with which the keys are pressed.

Value: FIXED, 1-7



Env V-Sens (TVF Envelope Velocity Sensitivity)

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

Env T1 V-Sens (TVF Envelope Time 1 Velocity Sensitivity)

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

Env T4 V-Sens (TVF Envelope Time 4 Velocity Sensitivity)

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.

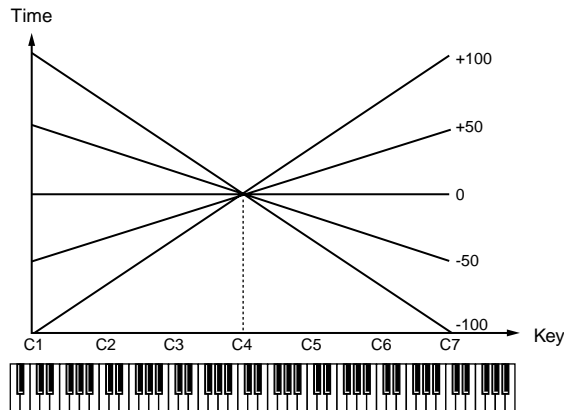
Value: -63- +63

Creating a Patch

Env Time KF (TVF Envelope 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 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



Env Level 0–4 (TVF Envelope Level 0–4)

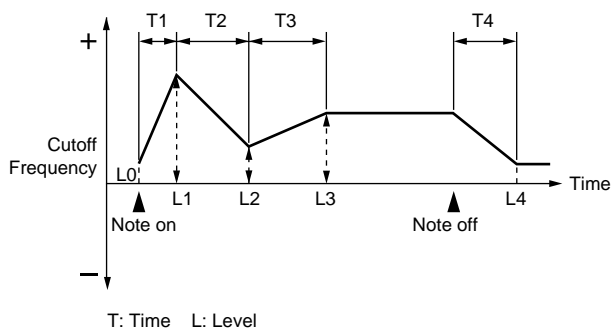
Specify the TVF envelope levels (Level 0–Level 4). These settings specify how the cutoff frequency will change at each point, relative to the standard cutoff frequency (the cutoff frequency value specified in the TVF screen).

Value: 0–127

Env Time 1–4 (TVF Envelope Time 1–4) ★

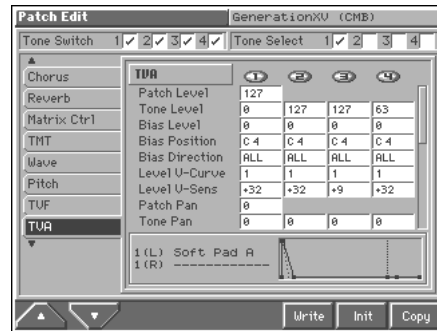
Specify the TVF envelope times (Time 1–Time 4). Higher settings will lengthen the time until the next cutoff frequency level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.)

Value: 0–127



The envelopes appearing at the lower part of the TVF settings screen graphically depict the current values of the settings. Solid lines represent the TVF envelope, while dotted lines are used for the TVA envelope. This lets you compare the TVF and TVA envelopes while you make settings.

Adjusting the Volume (TVA)



For details on the setting, refer to “How to Make the Patch Settings” (p. 42).

TVA

Patch Level

Specifies the volume of the patch.

Value: 0–127

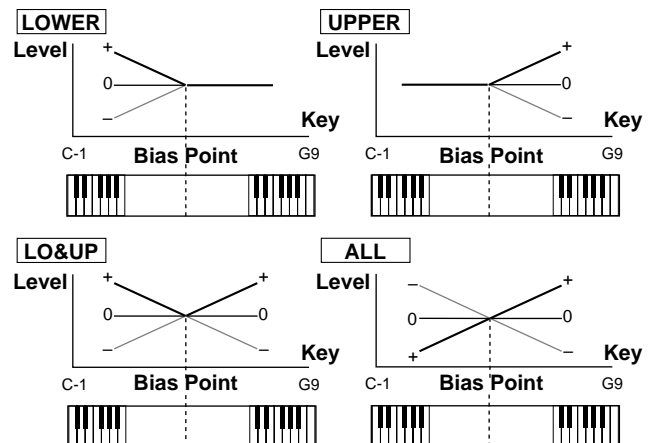
Tone Level ★

Sets the volume of the tone. This setting is useful primarily for adjusting the volume balance between tones.

Value: 0–127

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.

HINT

The bias settings appearing at the lower part of the TVA settings screen graphically depict the current values of the settings. Solid lines represent the bias settings, while dotted lines are used for the TVF cutoff frequency key follow setting. This lets you compare the TVA bias settings and the TVF cutoff frequency key follow setting while you make settings.

Level V-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 V-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

HINT

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 (PATCH/General) (p. 48). However, this setting is shared by the Cutoff V-Sens parameter (PATCH/TVF) (p. 63).

Patch Pan

Specifies the pan of the patch. "L64" is far left, "0" is center, and "63R" is far right.

Value: L64-0-63R

Tone Pan ★

Sets the pan of the tone. "L64" is far left, "0" is center, and "63R" is far right.

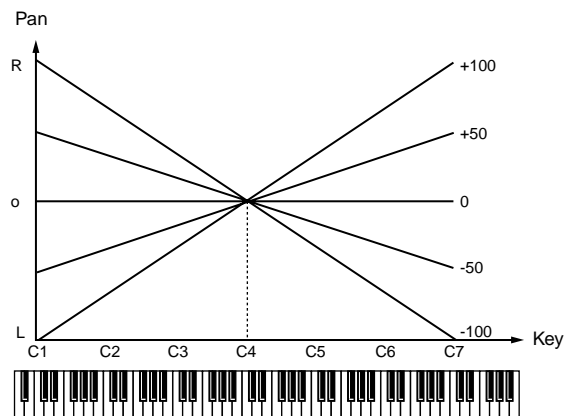
Value: L64-0-63R

Pan KF (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



Rnd Pan Depth (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

Alter Pan Depth (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 (PATCH/TMT) in the Pan KF, 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. 56).

Env T1 V-Sens (TVA Envelope Time 1 Velocity Sensitivity)

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

Creating a Patch

Env T4 V-Sens (TVA Envelope Time 4 Velocity Sensitivity)

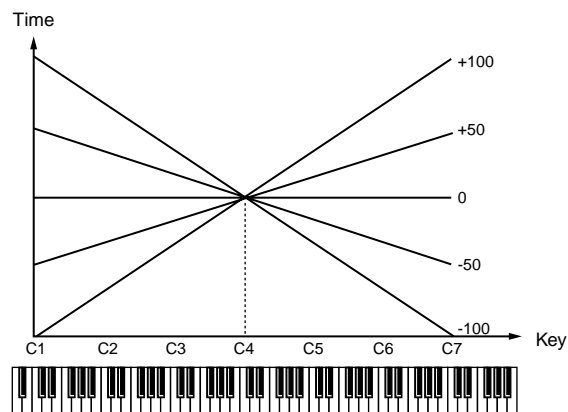
The parameter to use when you want key release speed to control the Time 4 value of the TVA envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Value: -63– +63

Env Time KF (TVA Envelope 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



Env Time 1–4 (TVA Envelope 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

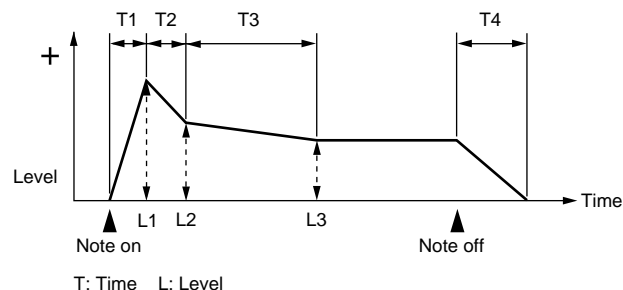
HINT

To edit the overall patch while preserving the relative differences in the Env Time 1 parameter (Attack Time) values set for each tone, set the Attack Time Offset parameter (PATCH/General) (p. 48). Similarly, to edit the overall patch while preserving the relative differences in the Env Time 4 parameter (Release Time) values set for each tone, set the Release Time Offset parameter (PATCH/General) (p. 48).

Env Level 1–3 (TVA Envelope 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).

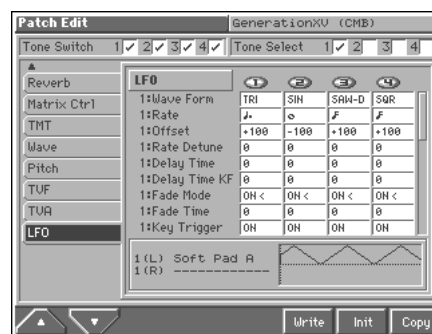
Value: 0–127



HINT

The envelopes appearing at the lower part of the TVA settings screen graphically depict the current values of the settings. Solid lines represent the TVA envelope, while dotted lines are used for the TVF envelope. This lets you compare the TVA and TVF envelopes while you make settings.

Modulating Sounds (LFO)



HINT

For details on the setting, refer to “How to Make the Patch Settings” (p. 42).

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.

LFO

1:/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

NOTE

If you set this to "BND-U" or "BND-D," you must turn the 1:/2:Key Trigger parameter to "ON." If this is "OFF," it will have no effect.

1:/2: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 when the tempo that specifies the LFO cycle (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))

NOTE

This setting will be ignored if the 1:/2:Waveform parameter is set to "CHAOS."

1:/2: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

1:/2:Rate Detune (LFO1/LFO2 Rate Detune)

LFO Rate Detune makes subtle changes in the LFO cycle rate (1:/2:Rate parameter) each time a key is pressed. Higher settings will cause greater change.

Value: 0-127

1:/2: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



After referring to "How to Apply the LFO" (p. 68), change the setting until the desired effect is achieved.

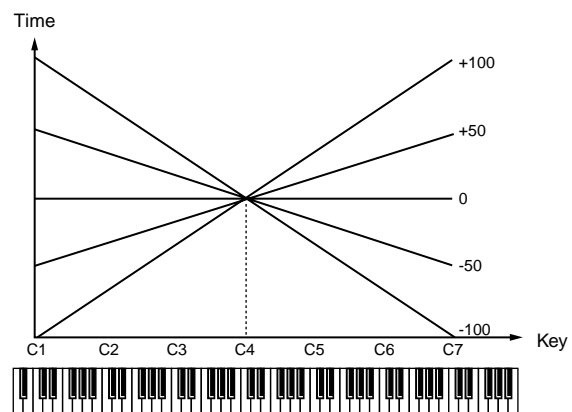
HINT

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 1:/2:Delay Time in conjunction with the 1:/2:Pitch Depth parameter and 1:/2:Rate parameter, the vibrato will be applied automatically following a certain interval after the key is pressed. This effect is called **Delay Vibrato**.

1:/2:Delay Time KF (LFO1/LFO2 Delay Time Key Follow)

Adjusts the value for the 1:/2: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



1:/2:Fade Mode (LFO1/LFO2 Fade Mode)

Specifies how the LFO will be applied.

Value: ON <, ON >, OFF <, OFF >



After referring to "How to Apply the LFO" (p. 68), change the setting until the desired effect is achieved.

1:/2:Fade Time (LFO1/LFO2 Fade Time)

Specifies the time over which the LFO amplitude will reach the maximum (minimum).

Value: 0-127



After referring to "How to Apply the LFO" (p. 68), change the setting until the desired effect is achieved.

Creating a Patch

1:/2: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

1:/2:Pitch Depth (LFO1/LFO2 Pitch Depth) ★

Specifies how deeply the LFO will affect pitch.

Value: -63- +63

1:/2:TVF Depth (LFO1/LFO2 TVF Depth) ★

Specifies how deeply the LFO will affect the cutoff frequency.

Value: -63- +63

1:/2:TVA Depth (LFO1/LFO2 TVA Depth) ★

Specifies how deeply the LFO will affect the volume.

Value: -63- +63

1:/2:Pan Depth (LFO1/LFO2 Pan Depth) ★

Specifies how deeply the LFO will affect the pan.

Value: -63- +63

HINT

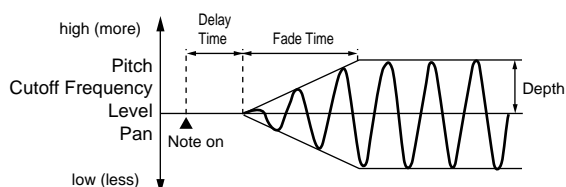
Positive (+) and negative (-) settings for the Depth parameter result in differing kinds of change in pitch and volume. For example, if you set the Depth parameter to a positive (+) value for one tone, and set another tone to the same numerical value, but make it negative (-), the modulation phase for 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 (PATCH/TMT) 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 1:/2: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. 56).

How to Apply the LFO

● Apply the LFO gradually after the key is pressed

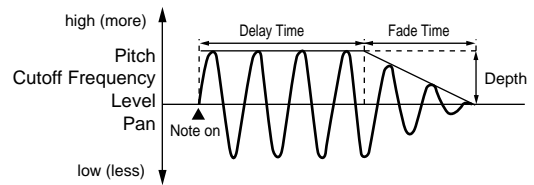


Fade Mode: ON <

Fade Time: The time over which the LFO amplitude will reach the maximum after the Delay Time has elapsed.

Delay Time: The time from when the keyboard is played until the LFO begins to be applied.

● Apply the LFO immediately when the key is pressed, and then gradually begin to decrease the effect

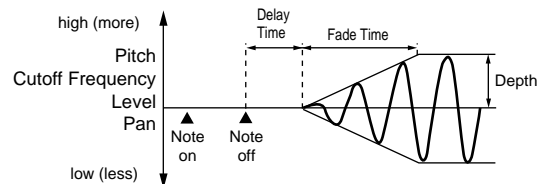


Fade Mode: ON >

Fade Time: The time over which the LFO amplitude will reach the minimum after the Delay Time has elapsed.

Delay Time: The time that the LFO will continue after the keyboard is played.

● Apply the LFO gradually after the key is released

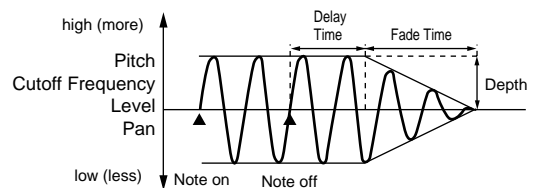


Fade Mode: OFF <

Fade Time: The time over which the LFO amplitude will reach the maximum after the Delay Time has elapsed.

Delay Time: The time from when the keyboard is released until the LFO begins to be applied.

● 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 >

Fade Time: The time over which the LFO amplitude will reach the minimum after the Delay Time has elapsed.

Delay Time: The time that the LFO will continue after the keyboard is released.

Creating a Rhythm Set

With the Fantom, 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 the 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.

1. Access the PATCH PLAY screen, and select the rhythm set whose settings you wish to modify (p. 40).

NOTE

You cannot edit the rhythm sets in the PR-E (GM2) group.

HINT

If you want to create all your rhythm sets from the ground up, rather than the rhythm sets that have already been prepared, carry out the **Initialize** operation (p. 69).

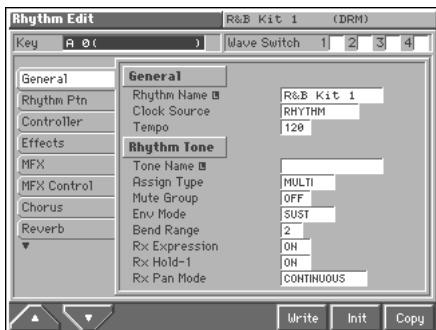
2. Press [MENU].

The Menu window appears.



3. Press ▲ or ▼ to select “Rhythm Edit,” and then press [8 (Select)].

The Rhythm Edit screen appears.




4. The parameters are organized into several editing groups. Press [1 (▲)] or [2 (▼)] to select the tab for the editing group that contains the parameter you wish to edit.



For details on how the parameters are grouped, refer to “Parameter list” (Sound/Parameter List).

5. Use [CURSOR] to move the cursor to the parameter you wish to modify.

MEMO

- Some of the parameters have a “” symbol. This indicates that if you press [LIST] when setting one of these parameters, the related window will appear. For example if you press [LIST] at a parameter that requires you to specify a name, the Name window will appear.
- 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.

HINT

- If you have selected a screen of parameters that can be specified individually for each rhythm tone, move the cursor to “Key” (located in the upper part of the Rhythm Edit screen), and specify the key (rhythm tone) whose settings you want to edit. You can also press a note on the keyboard to specify the key.
- To switch a wave on/off, move the cursor to the “Wave Switch” in the upper part of the Rhythm Edit screen, and make the desired settings. From the left, these are Wave Switches 1–4. Assigning a check mark (✓) will turn the wave on, and removing the check mark will turn it off.

6. Turn the VALUE dial or press [INC]/[DEC] to get the value you want.

7. Repeat steps 4–6 to complete a rhythm set.

8. If you wish to save the changes you’ve made, press [6 (Write)] to perform the Save operation (p. 72). If you do not wish to save changes, press [EXIT] to return to the PATCH PLAY screen.

If you return to the PATCH PLAY screen without saving, the display will indicate “EDITED,” reminding you that the rhythm set settings have been modified.

NOTE

If you turn off the power or select a different sound while the display indicates “EDITED,” your edited rhythm set will be lost.

Initializing Rhythm Set Settings (Init)

“Initialize” means to return the settings of the currently selected sound to a standard set of values or to the factory settings.

NOTE

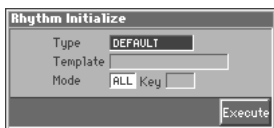
The Initialize operation will affect only the currently selected sound; the sounds that are stored in user memory will not be affected. If you wish to restore all of the Fantom’s settings to their factory values, perform a Factory Reset (p. 195).

1. Access the PATCH PLAY screen, and select the rhythm set that you wish to initialize (p. 40).
2. Access the Rhythm Edit screen (p. 69).

Creating a Rhythm Set

3. Press [7 (Init)].

The Rhythm Initialize window appears.



4. Move the cursor to “Type,” and select the initialization type.

Type (Initialize Type)

There are three initialize methods. Select either of them depending on the application.

DEFAULT: Resets the currently selected rhythm set in the TEMPORARY memory to the standard values. This is called a ‘Initial Data.’ Use this setting when you wish to create a sound from scratch.

PRESET: Resets the currently selected rhythm set in user memory to the factory settings.

AFX TEMPLATE: The multi-effect settings of the currently selected patch will be set to the MFX template settings.

NOTE

If the currently selected rhythm set is preset memory (PRST) data, initializing with the “PRESET” setting will set the values to those of the identically numbered user memory.



For details regarding MFX template, refer to “**MFX Template List**” (Sound/Parameter List).

5. If you’ve set the initialization type to “DEFAULT” or “PRESET,” move the cursor to “Mode” and select the initialization mode.

Mode (Initialize Mode)

ALL: The rhythm set will be initialized.

KEY: A rhythm tone will be initialized. Move the cursor to “Key” and select the rhythm tone that will be initialized. Key (rhythm tone) settings can be made by pressing a note.

6. If you’ve set the initialization type to “AFX TEMPLATE,” move the cursor to “Template” and select an MFX template.

7. Press [8 (Execute)].

The initialization will be carried out, and you’ll be returned to the Rhythm Edit screen.

Copying Rhythm Set Settings (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.

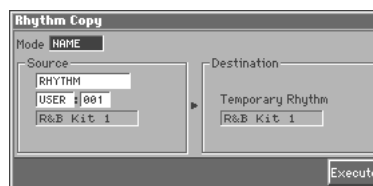
Basic Procedure for Rhythm Set Copy

1. Access the PATCH PLAY screen, and select the copy-destination rhythm set (p. 40).

2. Access the Rhythm Edit screen (p. 69).

3. Press [8 (Copy)].

The Rhythm Copy window appears.



4. Move the cursor to “Mode,” and select the data that you wish to copy.

Three types of copy are available: **Rhythm Set Name Copy**, **Rhythm Set Effects Copy**, and **Rhythm Tone Copy**. You should select the one that is relevant to the type of data you wish to copy. For details refer to “Types of Rhythm Set Copy” (following section).

5. Move the cursor to “Source,” and select the copy-source sound.

6. Press [8 (Execute)] to execute the Copy operation.

7. Press [EXIT] to return to the Rhythm Edit screen.

Types of Rhythm Set Copy

Rhythm Set Name Copy (NAME)

The name of a patch, rhythm set, multitimbre, or performance will be copied to the currently selected rhythm set.



Rhythm Set Effects Copy (MFX/CHORUS/REVERB)

The effect settings of a patch, rhythm set, multitimbre, or performance will be copied to the currently selected rhythm set.



Effect contents that will be copied (Mode)

MFX: Multi-effects settings

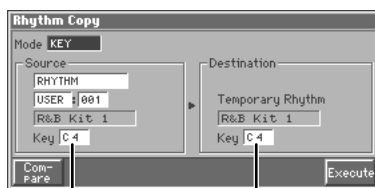
CHORUS: Chorus settings

REVERB: Reverb settings

If you want to copy the multi-effect settings of a multitimbre or performance, select the MFX (MFX-A–MFX-C) whose data will be copied.

Rhythm Tone Copy (KEY)

Individual rhythm tone (percussion sound) settings assigned to each key will be copied to each key in the current rhythm set.



Copy-source Key

Copy-destination Key

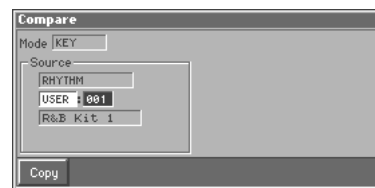
HINT

- To specify the currently selected rhythm set as the copy source, set “Source” to “TEMP.”
- The copy-source and copy-destination key can also be specified by pressing a key on the keyboard.

The Compare Function

For the Rhythm Tone Copy and Rhythm Set Effect Copy operations, you can use the Compare function.

The Compare function allows you to play the copy-source rhythm set. To do so, press [1 (Compare)] to open the following window. The copy-source rhythm set can be switched in this window as well, but it is not possible to select GM group rhythm sets. After selecting the desired rhythm set, return to the previous screen by pressing [1 (Copy)].



NOTE

- The Compare function cannot be used with Rhythm Set Effect Copy if “PATCH,” “MULTITIMBRE” or “PERFORMANCE” is selected as the copy-source (Source).
- 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 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 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’s one-shot waveforms are sounds that are complete in themselves, such as percussive instrument sounds. The Fantom 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.

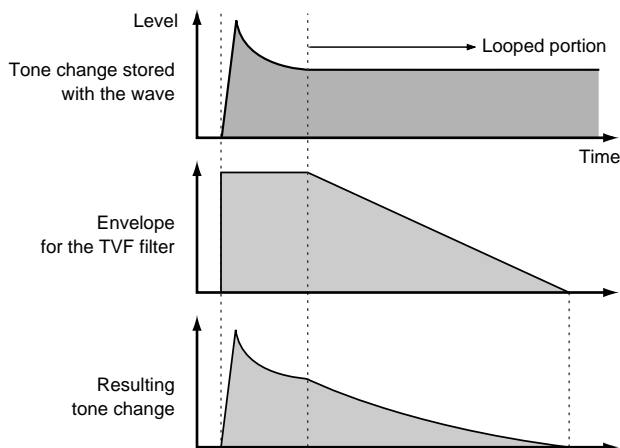
Looped: These waveforms include sounds with long decays as well as sustained sounds. Loop waveforms repeatedly play back (loop) the portion of the waveform after the sound has reached a relatively steady state. The Fantom’s looped waveforms also include components of other sounds, such as piano-string 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)

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 internal **USER** group (user memory)

When you modify the settings of a rhythm set, the PATCH PLAY screen will indicate "EDITED." Once you save the rhythm set into internal memory (user memory), the "EDITED" indication goes away.

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 Initialization procedure (p. 69).

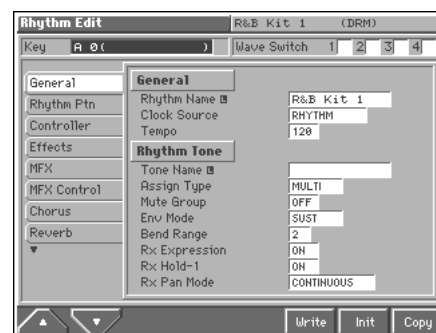
1. Make sure that the Rhythm Set you wish to save is selected.
2. Press [MENU].

The Menu window appears.



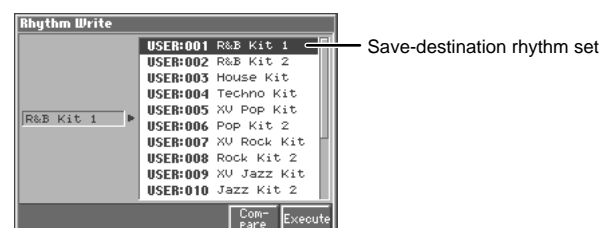
3. Press ▲ or ▼ to select "Rhythm Edit," and then press [8 (Select)].

The Rhythm Edit window appears.



4. Press [6 (Write)].

The Rhythm Write window appears.



5. Press ▲ or ▼ to specify the save-destination rhythm set.

HINT

By pressing [7 (Compare)] you can check the save-destination rhythm set (Compare function).

6. Press [8 (Execute)].

The display will indicate "Are you sure?"

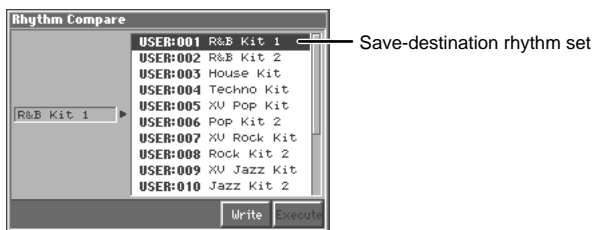
7. Press [8 (OK)] to execute the save operation. To cancel the operation, press [EXIT].

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 [7 (Compare)].

The Rhythm Compare window appears, making it possible to sound the currently selected save destination rhythm set.


3. Play the keyboard 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 using ▲ or ▼.
5. Press [7 (Write)] to return to the Rhythm Write window.
6. Press [8 (Execute)] once again to execute the Save operation.

Registering Favorite Rhythm Sets (Favorite Sound)

You can bring together your favorite and most frequently used rhythm sets in one place by registering them in the Favorite sound. By using this function you can rapidly select favorite rhythm sets from internal memory or a Wave Expansion Board. You can register a total of 64 sounds (8 sounds x 8 banks) as favorite sounds.



For details on selecting a favorite sound, refer to "Selecting Favorite Patches (Favorite Sound)" (p. 33).

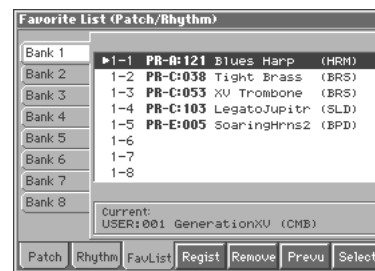
Using [1]–[8] to Register

1. Access the PATCH PLAY screen, and select the rhythm set that you wish to register (p. 40).
2. Hold down [JUMP (BANK)] and press a [1]–[8] to select the bank in which you wish to register the sound.
3. Hold down [SHIFT (REGISTRY)] and press a [1]–[8] to select the button at which you wish to register the sound. The display will indicate "Register OK ?"
4. Press [8 (OK)] to execute the registration. To cancel the operation, press [EXIT].

Using the Favorite List Window to Register

1. Access the PATCH PLAY screen to select the rhythm set that you wish to register (p. 40).
2. Make sure that you are in the PATCH PLAY screen, and that the cursor is located at the rhythm set group or the rhythm set number.
3. While holding down [SHIFT], press [LIST]

The Favorite List window appears.



4. Press ◀ to move the cursor to the "Bank 1–8" tab, and press ▲ or ▼ to select the bank in which you wish to register the rhythm set.
5. Press ▶ to move the cursor within the list, and press ▲ or ▼ to select the number to which you wish to register. The number you select here corresponds to [1]–[8].
6. Press [5 (Regist)] to execute the registration.

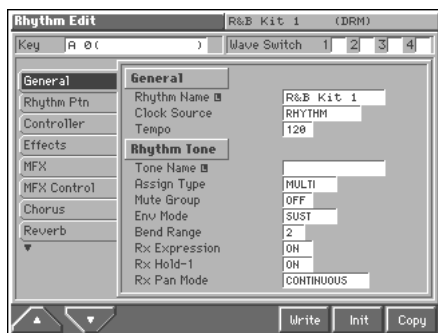
HINT

- By pressing [6 (Remove)] you can cancel the rhythm set registration that is selected in the Favorite List window.
 - By pressing [7 (Prevu)] you can audition the sound of the registered rhythm set (Phrase Preview).
7. When you have finished registering favorite sounds, press [EXIT] to close the Favorite List window.

Functions of Rhythm Set Parameters

This section explains the functions the different rhythm set parameters have, as well as the composition of these parameters.

Settings Common to the Entire Rhythm Set (General)



For details on the setting, refer to “How to Make the Rhythm Set Settings” (p. 69).

General

Rhythm Name (Rhythm Set Name)

You can assign a name of up to 12 characters to the rhythm set.
Value: space, A–Z, a–z, 0–9, ! " # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ` { | } → ←

For details on assigning names, refer to “Assigning a Name” (p. 30).

Clock Source (Rhythm Set Clock Source)

The LFO cycle, multi-effects changes, Phrase Loop, and Tone Delay time can be synchronized to a clock (tempo). When this is used by the rhythm set, this Clock Source setting determines the clock which will be used.

Value
RHYTHM: The Rhythm Set Tempo will be used.

SEQUENCER: Synchronize to the clock of the Fantom’s sequencer or of an external sequencer.

For details on using clock (tempo), refer to (Q&A; p. 16).

Tempo (Rhythm Set Tempo)

When Rhythm Clock Source is set to “RHYTHM,” this setting value is effective.

MEMO
 The Rhythm Set Tempo Clock does not transmit clock messages from the MIDI OUT connector.

Rhythm Tone

Tone Name (Rhythm Tone Name)

You can assign a name of up to 12 characters to the rhythm tone.
Value: space, A–Z, a–z, 0–9, ! " # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ` { | } → ←

For details on assigning names, refer to “Assigning a Name” (p. 30).

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

Env Mode (Rhythm Tone Envelope Mode)

When a loop waveform (p. 71) 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, SUST

NOTE
 If a one-shot type Wave (p. 71) is selected, it will not sustain even if this parameter is set to “SUST.”

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

Rx 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

Rx 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).

NOTE

If "NO SUS" is selected for Env Mode parameter (RHYTHM/General), this setting will have no effect.

Rx 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

The channels cannot be set so as not to receive Pan messages.

Rhythm Pattern Settings (Rhythm Ptn)



NOTE

For details on the setting, refer to "How to Make the Rhythm Set Settings" (p. 69).

Rhythm Ptn (Rhythm Pattern)

Switch (Rhythm Pattern Switch)

Switch Rhythm pattern playback on/off.

Value: OFF, ON

Hold (Rhythm Pattern Hold Switch)

Switch between Hold On/Hold Off for the Rhythm pattern playback.

Value: OFF, ON

Style (Rhythm Pattern Style)

Select the basic playback style of the Rhythm pattern.

NOTE

For details regarding Rhythm Pattern Style, refer to "Rhythm Pattern Style List" (Sound/Parameter List).

Accent Rate (Rhythm Pattern Accent Rate)

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

Value: 0-100%

Shuffle Rate (Rhythm Pattern 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 (Rhythm Pattern 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 (Rhythm Pattern 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

Note Assign (Rhythm Pattern Note Assign)

Specify the note name of the lowest note in the key range that will play the Rhythm pattern. The Rhythm pattern can be played in a one-octave range starting from the key you specify here.

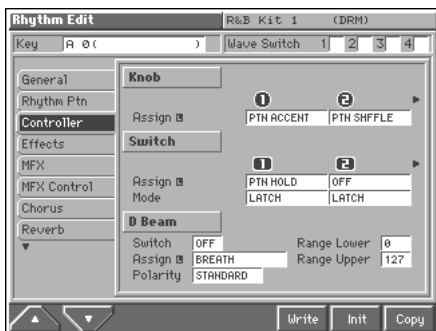
Value: C-1-G9

Key Trigger (Rhythm Pattern Key Trigger)

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

Value: OFF, ON

Realtime Controller / D Beam Controller Settings (Controller)



For details on the setting, refer to “How to Make the Rhythm Set Settings” (p. 69).

Knob

Assign 1-4 (Realtime Control Knob Assign 1-4)

Specify the functions that will be controlled by the [1]-[4] knobs.

Value

OFF: The realtime control knob will not be used.

CC01-31, 33-95: Controller numbers 1-31, 33-95



For more information about Control Change messages, please refer to “MIDI Implementation” (Sound/Parameter List).

PITCH BEND: Pitch Bend

AFTERTOUCH: Aftertouch

TEMPO: Tempo

PTN ACCENT: Rhythm Pattern Accent Rate

PTN SHFFLE: Rhythm Pattern Shuffle Rate

Switch

Assign 1-4 (Realtime Control Button Assign 1-4)

Specify the functions that will be controlled by the [1]-[4] buttons.

Value

OFF: The realtime control button will not be used.

CC01-31, 33-95: Controller numbers 1-31, 33-95



For more information about Control Change messages, please refer to “MIDI Implementation” (Sound/Parameter List).

BEND UP: Raises the pitch in semitone steps (up to 4 octaves higher).

BEND DOWN: Lowers the pitch in semitone steps (up to 4 octaves lower).

AFTERTOUCH: Aftertouch

OCT UP: Raises the key range in octave steps (up to 3 octaves higher).

OCT DOWN: Lowers the key range in octave steps (up to 3 octaves lower).

TRNS UP: Raises the key range in semitone steps (up to 6 semitones higher).

TRNS DOWN: Lowers the key range in semitone steps (up to 5 semitones lower).

TAP TEMPO: Tap tempo (a tempo specified by the interval at which you press the button).

PTN HOLD: Switch between Hold On/Hold Off for the Rhythm pattern playback.

Mode 1-4 (Realtime Control Button Mode 1-4)

Specify how the [1]-[4] buttons are to operate.

Value

MOMENTARY: The button will be on only while you are pressing (holding) it, and will be off when you release your finger from the button.

LATCH: The button will switch on/off each time you press it.

D Beam

Switch (D Beam Switch)

Switches the D Beam controller on/off.

Value: OFF, ON

Assign (D Beam Assign)

Specifies the function controlled by the D Beam controller.

Value

OFF: The D Beam controller will not be used.

CC01-31, 33-95: Controller numbers 1-31, 33-95



For more information about Control Change messages, please refer to “MIDI Implementation” (Sound/Parameter List).

- BEND UP:** Raises the pitch in semitone steps (up to 4 octaves higher).
- BEND DOWN:** Lowers the pitch in semitone steps (up to 4 octaves lower).
- AFTERTOUCHE:** Aftertouch
- NOTE:** Play the sound of the most recently pressed key.
- OCT UP:** Raises the key range in octave steps (up to 3 octaves higher).
- OCT DOWN:** Lowers the key range in octave steps (up to 3 octaves lower).
- START/STOP:** Starts/Stops the sequencer.
- TAP TEMPO:** Tap tempo (a tempo specified by the interval at which you move your hand over the D Beam controller).
- PTN SWITCH:** Switch Rhythm pattern playback on/off.
- PTN ACCENT:** Rhythm Pattern Accent Rate
- PTN SHFFLE:** Rhythm Pattern Shuffle Rate

Polarity (D Beam Polarity)

Switch the polarity of the D Beam controller.
 With a setting of "REVERSE," the direction of control for the D Beam controller will be inverted.
Range: STANDARD, REVERSE

Range Lower (D Beam Range Lower)

Specify the lower limit of the range of the D Beam controller. Values below this setting will not be output.
Value: 0-UPPER

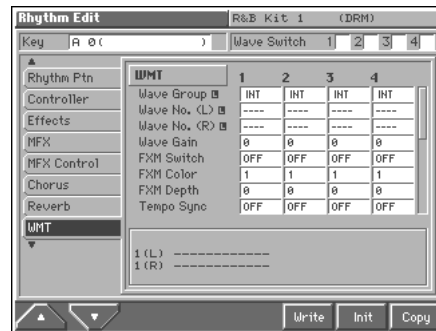
Range Upper (D Beam Range Upper)

Specify the upper limit of the range of the D Beam controller. Values above this setting will not be output.
Value: LOWER-127

Setting Effects for a Rhythm Set (Effects/MFX/MFX Control/Chorus/Reverb)

- ☞ For details regarding effect settings, refer to the pages shown below.
- "Applying Effects in Patch Mode" (p. 165)
- "Making Multi-Effects Settings (MFX/MFX Control)" (p. 174)
- "Making Chorus Settings (Chorus)" (p. 176)
- "Making Reverb Settings (Reverb)" (p. 177)

Changing How a Rhythm Tone Is Sounded (WMT)



☞ For details on the setting, refer to "How to Make the Rhythm Set Settings" (p. 69).

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.

WMT

Wave Group

Select the groups containing the Waves comprising the rhythm tone.

Value

INT: Waveforms stored in internal memory

XP-A: Waveform stored in a Wave Expansion Board (SR-JV80 series) installed in EXP-A slots.

XP-B: Waveforms residing on a Wave Expansion Board (SRX series) installed in the EXP B slot

XP-C: Waveforms residing on a Wave Expansion Board (SRX series) installed in the EXP C slot

NOTE

You cannot select a waveform group of a Wave Expansion Board that is not installed.

Creating a Rhythm Set

Wave No. (L) (Wave Number (L)) Wave No. (R) (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: ----, 1-1083

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

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

Tempo Sync (Wave Tempo Sync)

When you wish to synchronize a Phrase Loop to the clock (tempo), set this to "ON." This is valid only when an optional Wave Expansion Board, such as "SR-JV80-10: BASS&DRUMS," is installed, and you have selected a tone which uses a waveform that displays tempo (BPM).

Value: OFF, ON

NOTE

When the Tempo Sync parameter is set to "ON," settings related to Pitch (p. 79) and FXM (p. 78) are disabled.

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."

Coarse Tune

Adjusts the pitch of the waveform's sound up or down in semitone steps (+/-4 octaves).

Value: -48- +48

HINT

The Coarse Tune of the entire rhythm tone is set by the Tone Coarse parameter (RHYTHM/Pitch) (p. 79).

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.

HINT

The Fine Tune of the entire rhythm tone is set by the Tone Fine Tune parameter (RHYTHM/Pitch) (p. 79).

Wave Pan

This specifies the pan of the waveform. "L64" is far left, "0" is center, and "63R" is far right.

Value: L64-0-63R

HINT

The pan of the entire rhythm tone is set by the Tone Pan parameter (RHYTHM/TVA) (p. 82).

Rnd Pan Sw (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 (RHYTHM/TVA) (p. 82).

Alter Pan Sw (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 (RHYTHM/TVA) (p. 82) 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

Wave Level

You can set the volume of the waveform.

Value: 0–127



The volume level of each rhythm tone is set with the Tone Level parameter (RHYTHM/TVA); the volume levels of the entire rhythm set is set with the Rhythm Level parameter (RHYTHM/TVA) (p. 82).

Velocity Control (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, RND

Vel Fade Lower (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

Vel Range Lower (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

Vel Range 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



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.

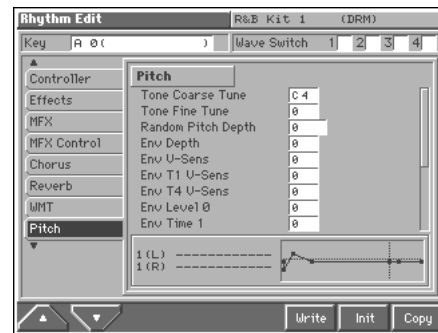
Vel Fade Upper (Velocity Fade Width Upper)

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)



For details on the setting, refer to “How to Make the Rhythm Set Settings” (p. 69).

Pitch

Tone Coarse Tune (Rhythm Tone Coarse Tune)

Selects the pitch at which a rhythm tone sounds.

Value: C-1– G9



Set the coarse tuning for Waves comprising the rhythm tones with the Coarse Tune parameter (RHYTHM/WMT) (p. 78).

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



One cent is 1/100th of a semitone.



Set the fine tuning for Waves comprising the rhythm tones with the Fine Tune parameter (RHYTHM/WMT) (p. 78).

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

Env Depth (Envelope 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

Creating a Rhythm Set

Env V-Sens (Pitch Envelope Velocity Sensitivity)

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

Env T1 V-Sens (Pitch Envelope Time 1 Velocity Sensitivity)

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

Env T4 V-Sens (Pitch Envelope Time 4 Velocity Sensitivity)

Use this parameter when you want key release speed to impact on 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

Env Level 0-4 (Pitch Envelope Level 0-4)

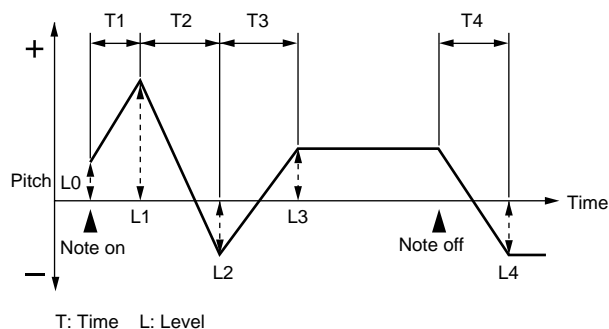
Specify the pitch envelope levels (Level 0-Level 4). It determines how much the pitch changes from the reference pitch (the value set with Coarse Tune or Fine Tune on the Pitch screen) at each point. Positive (+) settings will cause the pitch to be higher than the standard pitch, and negative (-) settings will cause it to be lower.

Value: -63- +63

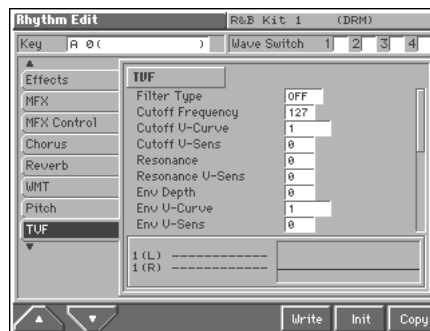
Env Time 1-4 (Pitch Envelope Time 1-4)

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



Modifying the Brightness of a Sound with a Filter (TVF)



For details on the setting, refer to “How to Make the Rhythm Set Settings” (p. 69).

TVF

Filter Type

Selects the type of filter. A filter is a function that cuts off a specific frequency band to change a sound's brightness, thickness, and other qualities.

Value

OFF: No filter is used.

LPF: Low Pass Filter. This reduces the volume of all frequencies above the cutoff frequency (Cutoff Frequency), 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.



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.

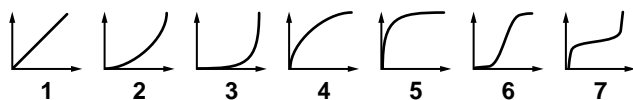
With "HPF" selected, higher Cutoff Frequency settings will reduce lower harmonics to emphasize just the brighter components of the sound.

With "PKG" selected, the harmonics to be emphasized will vary depending on Cutoff Frequency setting.

Cutoff V-Curve (Cutoff Frequency Velocity Curve)

Selects one of the following seven curves that determine how keyboard playing dynamics (velocity) influence the cutoff frequency. Set this to "FIXED" when the Cutoff frequency is not to be changed according to the force with which the keys are pressed.

Value: FIXED, 1-7



Cutoff V-Sens (Cutoff Velocity Sensitivity)

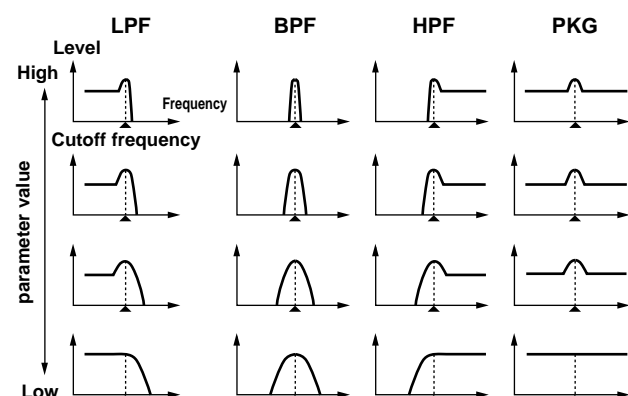
Use this parameter when changing the cutoff frequency to be applied as a result of changes in playing velocity. If you want strongly played notes to raise the cutoff frequency, set this parameter to positive (+) settings. If you want strongly played notes to lower the cutoff frequency, use negative (-) settings.

Value: -63- +63

Resonance

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



Resonance V-Sens (Resonance Velocity Sensitivity)

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

Env Depth (TVF Envelope 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

Env V-Curve (TVF Envelope 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" when the amount of TVF Envelope applied is not to be changed according to the force with which the keys are pressed.

Value: FIXED, 1-7



Env V-Sens (TVF Envelope Velocity Sensitivity)

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

Env T1 V-Sens (TVF Envelope Time 1 Velocity Sensitivity)

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

Env T4 V-Sens (TVF Envelope Time 4 Velocity Sensitivity)

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

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).

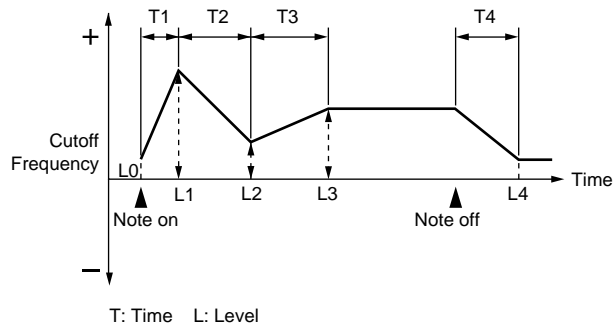
Value: 0-127

Creating a Rhythm Set

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.)

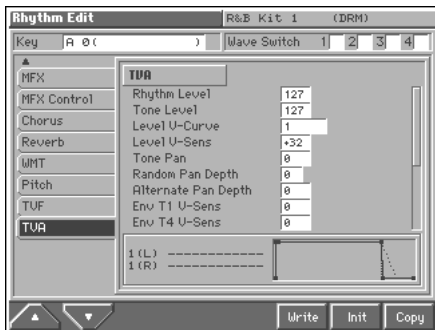
Value: 0-127



HINT

The envelopes appearing at the lower part of the TVF settings screen graphically depict the current values of the settings. Solid lines represent the TVF envelope, while dotted lines are used for the TVA envelope. This lets you compare the TVF and TVA envelopes while you make settings.

Adjusting the Volume (TVA)



For details on the setting, refer to “How to Make the Rhythm Set Settings” (p. 69).

TVA

Rhythm Level (Rhythm Set Level)

Sets the volume of the rhythm set.

Value: 0-127

HINT

The volume levels of the Waves from which the rhythm tone is composed is set with the Wave Level parameter (RHYTHM/WMT) (p. 79).

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

HINT

The volume levels of the Waves from which the rhythm tone is composed is set with the WMT1-4 Wave Level parameter (RHYTHM/WMT) (p. 79).

Level V-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 rhythm tone to be affected by the force with which you press the key, select “FIXED.”

Value: FIXED, 1-7



Level V-Sens (TVA Level Velocity Sensitivity)

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

HINT

Set the Pan for Waves comprising the rhythm tones with the Wave Pan parameter (RHYTHM/WMT) (p. 78).

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 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

Env T1 V-Sens (TVA Envelope Time 1 Velocity Sensitivity)

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

Env T4 V-Sens (TVA Envelope Time 4 Velocity Sensitivity)

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

Env Time 1-4 (TVA Envelope Time 1-4)

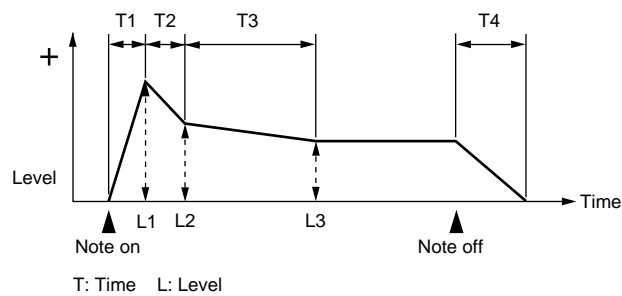
Specify the TVA envelope times (Time 1- Time 4). Higher settings will lengthen the time until the next volume level is reached. (For example, Time 2 is the time over which Level 1 will change to Level 2.)

Value: 0-127

Env Level 1-3 (TVA Envelope 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



HINT

The envelopes appearing at the lower part of the TVA settings screen graphically depict the current values of the settings. Solid lines represent the TVA envelope, while dotted lines are used for the TVF envelope. This lets you compare the TVA and TVF envelopes while you make settings.

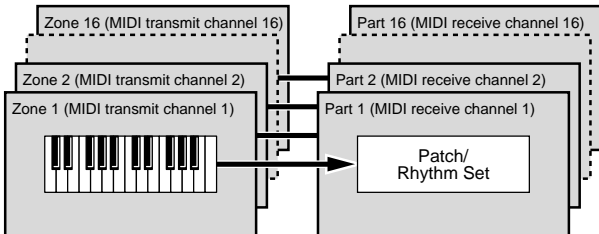
Playing in Performance Mode

Performance mode is where you can combine multiple sounds (patches or rhythm sets) to create complex sounds, or use the Fantom as a master keyboard. You can also create and play layers (patches played together) or splits (separate patches played from different areas of the keyboard).

About the MIDI Connection Settings (Zone and Part)

Although the Fantom's keyboard controller section and sound generator section are connected internally using a MIDI connection, in Performance mode, you can then make even more detailed settings affecting the way the connection works between the keyboard controller section and the sound generator section, as well as with an external MIDI device.

At the factory standard settings, shown below, there is a one-to-one correspondence between the **zone**, the **MIDI transmit/receive channel**, and the **part**.



Under these conditions, you could simply consider that “each of the zones from 1 to 16 is linked in a one-to-one relationship with its numerical counterpart among parts 1 to 16”. In other words, you can use zone 1 when controlling part 1, zone 2 is when controlling part 2, and so on.

MEMO

In this manual, the expression “the zone and part are linked” refers to the condition whereby a zone's MIDI transmit channel and a part's MIDI receive channel are matched in this one-to-one relationship.

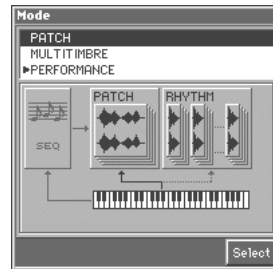
About the PERFORMANCE PLAY Screen

Displaying PERFORMANCE PLAY Screen

To access the PERFORMANCE PLAY screen, use the following procedure.

1. Press **[MODE]**.

The Mode window appears.



2. Press **▲** or **▼** to select “PERFORMANCE,” and then press **[8 (Select)]**.

You will enter Performance mode, and the PATCH PLAY screen appears.



Functions in the PERFORMANCE PLAY Screen

Indicates the current sound generating mode.



Indicates the name of the currently selected song, the measure location, the time signature, and the sequencer status.

Sets the Octave Shift (Oct) and the Transpose (Trans).



Indicates the song file name.

Switches multi-effects (MFX), chorus (CHO), and reverb (REV) on and off. Turns the RPS function on/off (RPS). Turns Loop Play on/off (LOOP).

Indicates the group of the selected performance.

Indicates the MIDI receive channel used for switching performances from an external MIDI device.

Indicates/sets the tempo at which the song, Arpeggio or rhythm pattern is played.

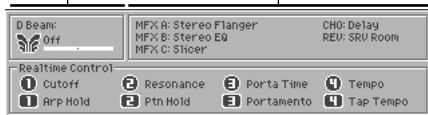


Indicates/selects the group, number, and name of the selected performance.

This indicates the region that can be used for normal keyboard performance (ZONE), the region in which arpeggios can be played (ARP), and the region in which rhythm patterns can be played (RHY).

This indicates the function that is assigned to the D Beam controller, and the response status of the D Beam controller.

Displays the type of effect used.



Indicates the functions that are assigned to each realtime controller knob (●) and button (■). The value will be displayed when you turn the knob.



Indicates the names of the performances that can be selected by [1]–[8].

Selecting a Performance

The Fantom has two performance groups, including the User group and Preset groups, with each group storing 64 performances, for a total of 128 performances.

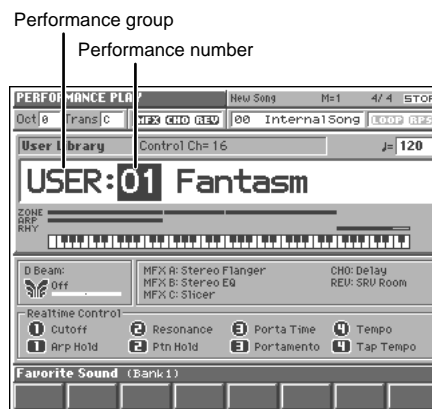
USER

This is the group inside the Fantom which can be rewritten. Performances you yourself create can be stored in this group. The Fantom contains 64 preset performances.

PRST (Preset)

This is the group inside the Fantom which cannot be rewritten. However you may modify the settings of the currently selected performance, and then store the modified performance in User memory. The Fantom contains 64 preset performances.

1. Access the PERFORMANCE PLAY screen (p. 84).



2. Press [CURSOR] to move the cursor to the performance group.
3. Turn the VALUE dial, or press [INC]/[DEC] to select a performance group.
USER: User
PRST: Preset
4. Press [CURSOR] to move the cursor to the performance number.
5. Turn the VALUE dial or press [INC]/[DEC] to select the performance number.

Selecting Favorite Performances (Favorite Sound)

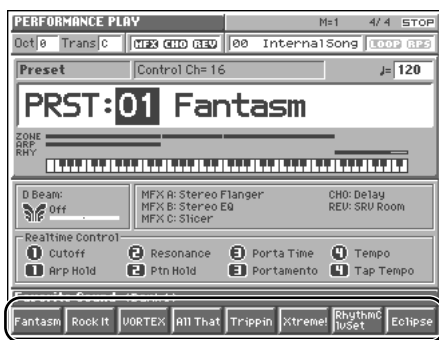
You can bring together your favorite and most frequently used performances in one place by registering them in the Favorite sound. By using this function you can quickly select your favorite performances from internal memory.



For instructions on how to register to the Favorite Sounds, refer to “Registering a Favorite Performance (Favorite Sound)” (p. 93).

Selecting from [1]–[8]

1. Access the PERFORMANCE PLAY screen (p. 84).
2. Press [1]–[8] to select a performance.



Press [1]–[8] to select a performance

3. To switch the favorite sound bank, hold down [JUMP] and press [1]–[8].

Selecting from the Favorite List Window

1. In the PERFORMANCE PLAY screen, make sure that the cursor is located at the performance group or performance number.
2. While holding down [SHIFT], press [LIST]
The Favorite List window appears.



3. Press ▲ or ▼ to select a performance.
4. To switch banks, press ◀ to move the cursor to the “Bank 1–8” tab, and press ▲ or ▼ to select the desired bank.
5. After switching the bank, press ▶ to move the cursor within the list, and press ▲ or ▼ to select the performance.
6. When you press [8 (Select)] the performance will be selected, and the Favorite List window will close.

Selecting Performances from the List

You can display a list of performances and select a performance from that list.

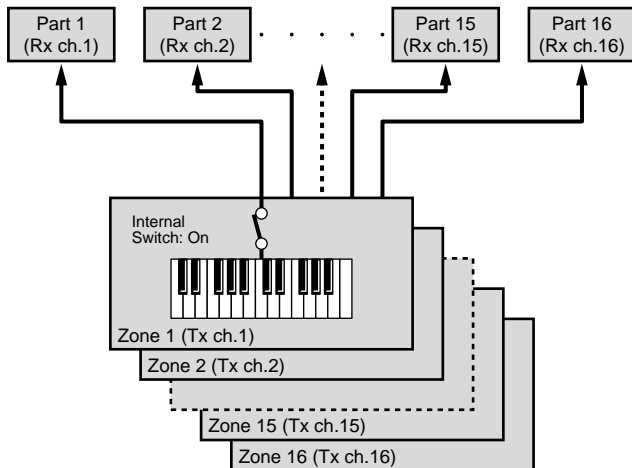
1. In the PERFORMANCE PLAY screen, make sure that the cursor is located at the performance group or performance number.
2. Press [LIST].
The Performance List window appears.



3. Press ▲ or ▼ to choose the performance.
4. To switch the performance group, press ◀ to move the cursor to the performance group tab, and press ▲ or ▼ to select the performance group.
5. After switching the performance group, press ▶ to move the cursor within the list, and press ▲ or ▼ to select the performance.
6. Press [EXIT] to close the Performance List window.

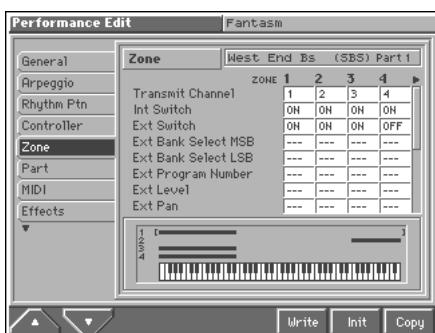
Combining and Playing Sounds Together (Layer)

In Performance mode you can play the sounds of all zones whose Internal Switch is on, and all connected parts. Combining the parts will produce, thicker, fatter sounds.



Rx ch.: Receive Channel
Tx ch.: Transmit Channel

1. Access the PERFORMANCE PLAY screen (p. 84).
2. Press [MENU] to open the Menu window.
3. Press ▲ or ▼ to select "Performance Edit," and then press [8 (Select)].
The Performance Edit screen appears.
4. Press [1 (▲)] or [2 (▼)] to select the "Zone" tab.
A screen like the one shown below appears.

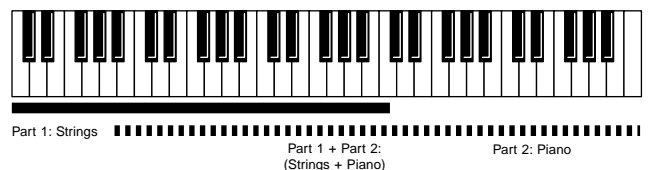


5. Use [CURSOR] to move the cursor to "Int Switch."
6. Press ◀ or ▶ to select the zone that is connected to the part you want to play.
7. Turn the VALUE dial or press [INC] to select "ON."
8. Repeat steps 5–7 to turn the Internal Switch on for all zones that are connected to the parts you want to play.
9. When you are finished making settings, press [EXIT] to return to the PERFORMANCE PLAY screen, and begin playing.

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

In Performance mode you can divide the keyboard and play a different patch in each area (this is called "split"). As the note range that plays each zone can be specified individually, you can split the keyboard into a maximum of 16 sections.

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

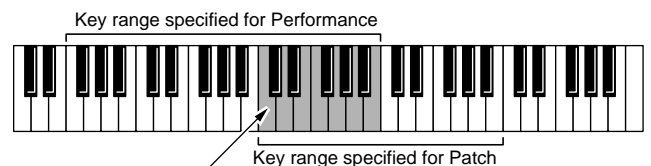


MEMO

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

NOTE

- If the Key Range of the patch has been set (p. 58), the sound will be heard for keys in the area for which the key ranges of the patch and performance overlap.



The range in which notes will play

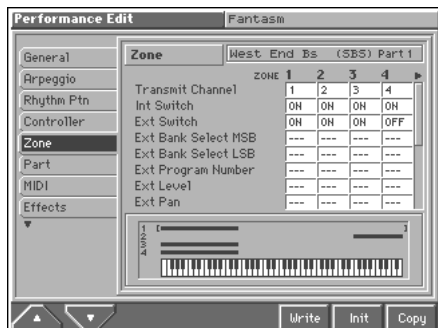
- In a performance, you can specify the range over which each part will sound (p. 102), but if you will be playing the performance from the keyboard of the Fantom, we recommend that you use the zone settings explained here to specify the keyboard range, instead of specifying the range of each part.

1. Access the PERFORMANCE PLAY screen (p. 84).
2. Refer to the procedure for the preceding section "Combining and Playing Sounds Together (Layer)," and turn the Internal Screen on for each zone that is connected to a part you want to play.

Playing in Performance Mode

3. Make sure the Performance Edit screen is displayed, and press [1 (▲)] or [2 (▼)] to select the “Zone” tab.

A screen like the one shown below appears.



4. To set the lower limit of the range, use [CURSOR] to move the cursor to “Key Range Lower.” To set the upper limit of the range, move the cursor to “Key Range Upper.”
5. Press ◀ or ▶ to select the zone whose range you want to set.
6. Turn the VALUE dial or press [INC]/[DEC] to specify the range.

HINT

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

7. When you are finished making settings, press [EXIT] to return to the PERFORMANCE PLAY screen, and begin playing.

Playing Arpeggios in a Specific Region of the Keyboard

In Patch mode, when you press [ARPEGGIO] to turn the arpeggiator on, the keyboard will allow you to play arpeggios. On the other hand, it will no longer be possible to play normally.

However, in Performance mode, you can split the keyboard to divide it into a range for normal playing and a range for arpeggio playing. This setting, for instance, allows you to play arpeggios with the left hand and a melody with the right hand.

1. Access the PERFORMANCE PLAY screen (p. 84).
2. As described in the procedure for “Combining and Playing Sounds Together (Layer)” (p. 87), turn on the Internal Switch for the zone that is connected to the part whose sound you want to play.
3. Make sure that the Performance Edit screen is displayed, and press [1 (▲)] or [2 (▼)] to select the “Arpeggio” tab. A screen like the one shown below appears.



4. Use [CURSOR] to move the cursor to “Zone Number.”
5. Turn the VALUE dial or press [INC] or [DEC] to select the zone linked to the part for which arpeggios are to be played.
6. Next, specify the range of the zone. Press [2 (▼)] to select the “Zone” tab.

A screen like the one shown below appears.



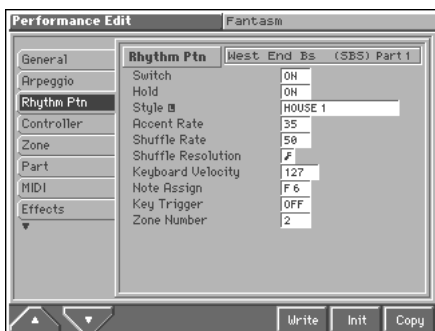
7. To set the lower limit of the range, use [CURSOR] to move the cursor to “Key Range Lower.” To set the upper limit, move the cursor to “Key Range Upper.”
8. Press ◀ or ▶ to select the zone that you set in step 5.

9. Turn the VALUE dial or press [INC]/[DEC] to specify the range of notes.
This specifies the range of the zone that is connected to the part that will be played by the arpeggios.
10. Press ◀ or ▶ to select a zone that is connected to a part that is not playing arpeggios.
11. Set the key range of the zones linked to the parts other than the part for which arpeggios are played so that this range does not overlap with the key range over which the arpeggios are played.
12. When you are finished making settings, press [EXIT] to return to the PERFORMANCE PLAY screen, and begin playing.
The zone that plays the arpeggio will be displayed as “ARP,” and will be enabled when you press [ARPEGGIO].

Playing Rhythm Patterns in a Specific Region of the Keyboard

In Performance mode, you can create a split keyboard setup that divides the keyboard into a region for normal keyboard playing, and a separate region for playing rhythm patterns. For example, you could hold a rhythm pattern while you play a melody. In addition, you could specify a region for arpeggio performance, and use this to produce an accompaniment while you play the melody—an easy way to produce ensemble performances.

1. Access the PERFORMANCE PLAY screen (p. 84).
2. As described in the procedure for “Combining and Playing Sounds Together (Layer)” (p. 87), turn on the Internal Switch for the zone that is connected to the part whose sound you want to play.
3. Make sure the PERFORMANCE EDIT screen is displayed, and press [1 (▲)] or [2 (▼)] to select the “Rhythm Ptn” tab. A screen like the one shown below appears.



4. Use [CURSOR] to move the cursor to “Zone Number.”
5. Turn the VALUE dial or press [INC]/[DEC] to specify the zone that is connected to the part that is to play the rhythm pattern.
6. Use [CURSOR] to move the cursor to “Note Assign.”

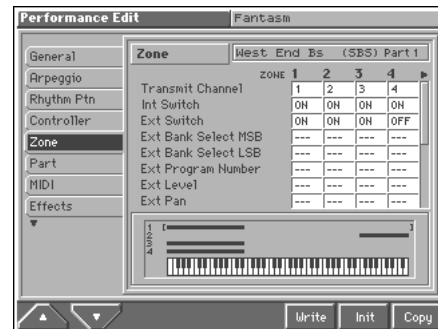
7. Turn the VALUE dial or press [INC]/[DEC] to specify the lowest key (note name) of the range that is to play the rhythm pattern.

MEMO

The rhythm pattern can be played in a one-octave range starting from the key you specify here.

8. Next, specify the range of the zone. Press [2 (▼)] to select the “Zone” tab.

A screen like the one shown below appears.



9. To set the lower limit of the range, use [CURSOR] to move the cursor to “Key Range Lower.” To set the upper limit of the range, move the cursor to “Key Range Upper.”
10. Press ◀ or ▶ to select the zone that you set in step 5.
11. Turn the VALUE dial or press [INC]/[DEC] to specify the range. Specify a keyboard range extending one octave above the key you specified in step 7.
This specifies the range of the zone connected to the part that is to play the rhythm pattern.
12. Press ◀ or ▶ to select a zone that is connected to a part other than the part that is to play the rhythm pattern.
13. Set the range of the zones that are connected to parts other than the part that plays the rhythm pattern, so that they do not overlap the zone that plays the rhythm pattern.
14. When you are finished making settings, press [EXIT] to return to the PERFORMANCE PLAY page, and begin playing.
The zone that plays the rhythm pattern will be displayed as “RHY,” and will be enabled when you press [RHYTHM].

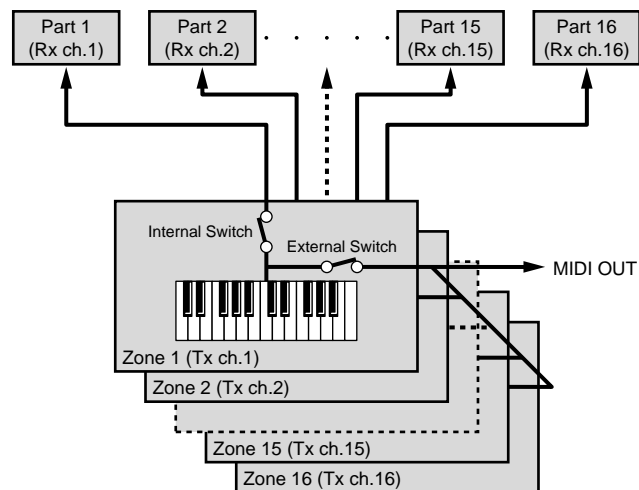
Using the Fantom As a Master Keyboard

Although the Fantom's keyboard controller section and sound generator section are connected internally using a MIDI connection, in Performance mode, you can then make even more detailed settings affecting the way the connection works between the keyboard controller section and the sound generator section, as well as with an external MIDI device.

This allows the keyboard of the Fantom to freely control the internal sound generator or external sound generators as a master keyboard.

Changing the Connections between Keyboard and Sound Generator (Zone)

In general, connections within the Fantom are made by matching the MIDI transmit channel of the keyboard (zone) with the MIDI receive channel of the sound generator (part). Then you can specify whether the internal sound generator will be played, or an external sound generator connected to the MIDI OUT connector will be played.



Rx ch.: Receive Channel
Tx ch.: Transmit Channel

To change the connections between the keyboard and the sound generator, make the following settings.

● Zone Settings (p. 98)

Transmit Channel: Specify the MIDI transmit channel (1–16) of the keyboard (zone).

Int Switch (Internal Switch): Turn this “ON” if you want to sound the internal sound generator of the Fantom.

Ext Switch (External Switch): Turn this “ON” if you want to sound an external sound generator connected to the MIDI OUT connector.

● Part Settings (p. 103)

Receive Channel: Specify the MIDI receive channel of the internal sound generator (part).

● External Sound Generator Settings

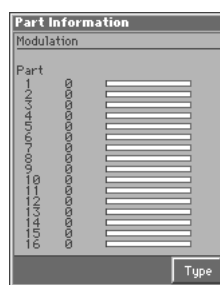
This sets the MIDI receive channel.

Confirming MIDI Information for Each Part (Part Information)

In Performance mode, the reception status of MIDI messages that control various things can be viewed for each part. This is useful when you want to check whether the sound generator is responding correctly to the keyboard, or to operations from an external MIDI controller.

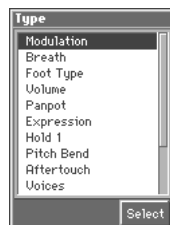
1. Access the PERFORMANCE PLAY screen (p. 84).
2. Press [MENU] to open the Menu window.
3. Press ▲ or ▼ to select “Part Information,” and then press [8 (Select)].

The Part Information window appears.



4. Press [8 (Type)]

The Type window appears.



5. Press ▲ or ▼ to select the message that you want to check, and then press [8 (Select)].

Modulation: Modulation Information

Breath: Breath Information

Foot Type: Foot type Information

Volume: Volume Information

Panpot: Panpot Information

Expression: Expression Information

Hold 1: Hold 1 Information

Pitch Bend: Pitch Bend Information

Aftertouch: Aftertouch Information

Voices: Voice Information (The number of voices used)

Sys Control1–4: System Control 1–4 Information

The MIDI message specified as the Sys Ctrl 1–4 Source parameter (SYSTEM/Controller).

Creating a Performance

With the Fantom, 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 performances, and the functions of the performance parameters.

How to Make the Performance Settings

Start with an existing performance and edit it to create a new performance. But before you do, try to envision what the entire performance will sound like and decide which patch or rhythm set to assign to each of 16 parts.

1. Access the **PERFORMANCE PLAY** screen, and select the performance whose settings you wish to modify (p. 85).

HINT

If you want to create all your performances from the ground up, rather than the performances that have already been prepared, carry out the **Initialize** operation (p. 91).

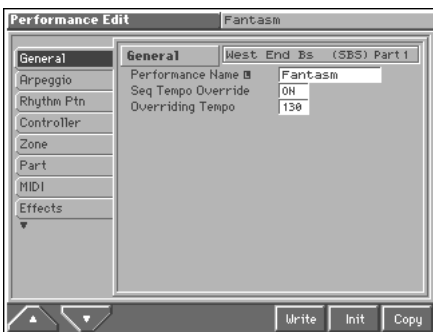
2. Press **[MENU]**.

The Menu window appears.



3. Press **▲** or **▼** to select “Performance Edit,” and then press **[8 (Select)]**.

The performance Edit screen appears.



4. The parameters are organized into several editing groups. Press **[1 (▲)]** or **[2 (▼)]** to select the tab for the editing group that contains the parameter you wish to edit.



For details on the parameter groupings, refer to “**Parameter list**” (Sound/Parameter List).

5. Use **[CURSOR]** to move the cursor to the parameter you wish to modify.

MEMO

- Some of the parameters have a “**□**” symbol. This indicates that if you press **[LIST]** when setting one of these parameters, the related window will appear. For example if you press **[LIST]** at a parameter that requires you to specify a name, the Name window will appear.
- 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.

HINT

If you have selected a screen for parameters that can be set for each part or zone, first move the cursor to the parameter that you wish to edit, and then press **◀** or **▶** to select the part or zone.

6. Turn the **VALUE** dial or press **[INC]/[DEC]** to get the value you want.
7. Repeat steps 4–6 to complete a performance.
8. If you wish to save the changes you’ve made, press **[6 (Write)]** to perform the Save operation (p. 93). If you do not wish to save changes, press **[EXIT]** to return to the **PERFORMANCE PLAY** screen.

If you return to the **PERFORMANCE PLAY** screen without saving, the display will indicate “**EDITED**,” reminding you that the performance settings have been modified.

NOTE

If you turn off the power or select a different sound while the display indicates “**EDITED**,” your edited performance will be lost.

Initializing Performance Settings (Init)

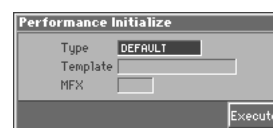
“Initialize” means to return the settings of the currently selected sound to a standard set of values or to the factory settings.

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. 195).

1. Access the **PERFORMANCE PLAY** screen, and select the performance that you wish to initialize (p. 85).
2. Access the **Performance Edit** screen (p. 91).
3. Press **[7 (Init)]**.

The Performance Initialize window appears.



4. Move the cursor to “**Type**,” and select the initialization type.

Creating a Performance

Type (Initialize Type)

There are three initialize methods. Select either of them depending on the application.

DEFAULT: Resets the currently selected performance in the Temporary memory to the standard values. This is called a 'Initial Data.' Use this setting when you wish to create a sound from scratch.

PRESET: Resets the currently selected performance in user memory to the factory settings.

MFX TEMPLATE: The multi-effect settings of the currently selected performance will be set to the MFX template settings.

NOTE

If the currently selected performance is preset memory (PRST) data, initializing with the "PRESET" setting will set the values to those of the identically numbered user memory.



For details regarding MFX template, refer to "MFX Template List" (Sound/Parameter List).

5. If you've set the initialization type to "MFX TEMPLATE," move the cursor to "Template" and select an MFX template. Then move the cursor to "MFX," and select the relevant MFX (MFX-A-MFX-C).

6. Press [8 (Execute)].

The initialization will be carried out, and you'll be returned to the Performance Edit screen.

Copying Performance Settings (Copy)

This operation copies the settings of any desired performance to the currently selected performance. You can use this feature to make the editing process faster and easier.

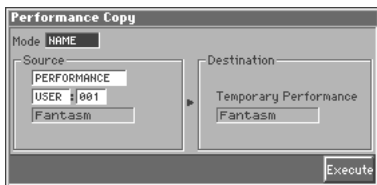
Basic Procedure for Performance Copy

1. Access the PERFORMANCE PLAY screen, and select the copy-destination performance (p. 85).

2. Access the Performance Edit screen (p. 91).

3. Press [8 (Copy)].

The Performance Copy window appears.



4. Move the cursor to "Mode," and select the data that you wish to copy.

Three types of copy are available: **Performance Name Copy**, **Performance Effects Copy**, and **Performance Part Copy**. You should select the one that is relevant to the type of data you wish to copy. For details refer to "Types of Performance Copy" (following section).

5. Move the cursor to "Source," and select the copy-source sound.

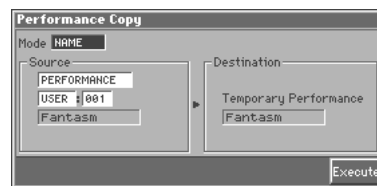
6. Press [8 (Execute)] to execute the copy.

7. Press [EXIT] to return to the Performance Edit screen.

Types of Performance Copy

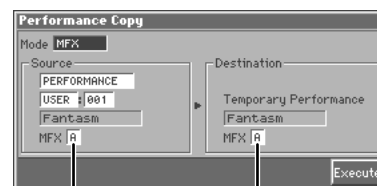
Performance Name Copy (NAME)

The name of a patch, rhythm set, multitimbre, or performance will be copied to the currently selected performance.



Performance Effects Copy (MFX/CHORUS/REVERB)

The effect settings of a patch, rhythm set, multitimbre, or performance will be copied to the currently selected performance.



Copy-source multi-effects

Copy-destination multi-effects

Effect contents that will be copied (Mode)

MFX: Multi-effects settings

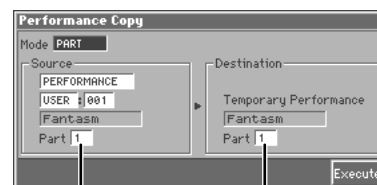
CHORUS: Chorus settings

REVERB: Reverb settings

If you want to copy the multi-effect settings of a multitimbre or performance, select the MFX (MFX-A-MFX-C) whose data will be copied.

Performance Part Copy (PART)

Part settings of a performance will be copied to the part you specify of the current performance.



Copy-source part

Copy-destination part

HINT

To specify the currently selected performance as the copy source, set "Source" to "TEMP."

Saving Performance 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 internal **USER** group (user memory)

When you modify the settings of a performance, the **PERFORMANCE PLAY** screen will indicate "EDITED." Once you save the performance into internal memory (user memory), the "EDITED" indication goes away.

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 Initialization procedure (p. 91).

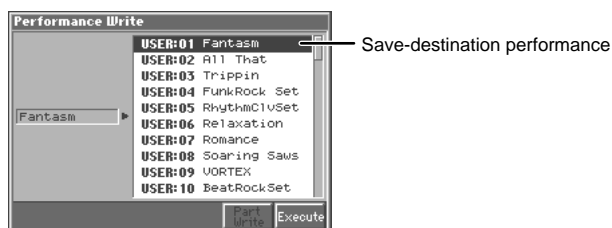
1. Make sure that performance you wish to save is selected.
2. Press [MENU].
The Menu window appears.



3. Press ▲ or ▼ to select "Performance Edit," and then press [8 (Select)].
The Performance Edit screen appears.



4. Press [6 (Write)].
The Performance Write window appears.

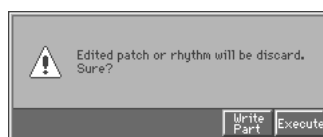


5. Press ▲ or ▼ to specify the save-destination performance.

6. Press [8 (Execute)].
The display will indicate "Are you sure?"
7. Press [8 (OK)] to execute the save operation. To cancel the operation, press [EXIT].

When Changing the Settings for the Patch or Rhythm Set Assigned to a Part in a Performance

After changing the settings for the patch or rhythm set assigned to a part in a performance, if you then try to save the performance without first saving the changes in the settings, the following message appears.



If you do not need to keep the patch or rhythm set settings, press [8 (Execute)] to save the performance.

If you want to keep the patch or rhythm set settings, press [7 (Write Part)] to access the Performance Part Write window.



An indication of "EDITED" will appear for the part for which the assigned patch or rhythm set was edited. If you want to edit the patch or rhythm set settings for more than one part, press [3 (▲)] or [4 (▼)] to select the part.

Specify the save-destination patch and press [8 (Execute)]. The patch or rhythm set will be saved; then you'll be returned to the Performance Write window, where you need to save the performance once again.

Registering a Favorite Performance (Favorite Sound)

You can bring together your favorite and most frequently used performances in one place by registering them in the Favorite sound. By using this function you can rapidly select favorite performances from internal memory or a Wave Expansion Board. You can register a total of 64 sounds (8 sounds x 8 banks) as favorite sounds.



For details on selecting a favorite sound, refer to "Selecting Favorite Performances (Favorite Sound)" (p. 86).

Using [1]–[8] to Register

1. Access the PERFORMANCE PLAY screen, and select the performance that you wish to register (p. 85).
2. Hold down [JUMP (BANK)] and press a [1]–[8] to select the bank in which you wish to register the sound.
3. Hold down [SHIFT (REGISTRY)] and press a [1]–[8] to select the button at which you wish to register the sound.
The display will indicate “Register OK ?”
4. Press [8 (OK)] to execute the registration. To cancel the operation, press [EXIT].

Using the Favorite List Window to Register

1. Access the PERFORMANCE PLAY screen to select the performance that you wish to register (p. 85).
2. Make sure that you are in the PERFORMANCE PLAY screen, and that the cursor is located at the performance group or the performance number.
3. While holding down [SHIFT], press [LIST]
The Favorite List window appears.



4. Press **◀** to move the cursor to the “Bank 1–8” tab, and press **▲** or **▼** to select the bank in which you wish to register the performance.
5. Press **▶** to move the cursor within the list, and press **▲** or **▼** to select the number to which you wish to register. The number you select here corresponds to [1]–[8].
6. Press [5 (Regist)] to execute the registration.

HINT

By pressing [6 (Remove)] you can cancel the performance registration that is selected in the Favorite List window.

7. When you have finished registering favorite sounds, press [EXIT] to close the Favorite List window.

Functions of Performance Parameters

This section explains the functions the different performance parameters have, as well as the composition of these parameters.

Settings Common to the Entire Performance (General)



For details on the setting, refer to “How to Make the Performance Settings” (p. 91).

General

Performance Name

You can assign a name of up to 12 characters to the performance.

Value: space, A–Z, a–z, 0–9, ! " # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ` { | } → ←



For details on assigning names, refer to “Assigning a Name” (p. 30).

You can assign a name to the performance of up to 12 characters.

Seq Tempo Override (Sequencer Tempo Override)

Specify whether the sequencer tempo will change (ON), or will not change (OFF) when you switch performances. The tempo following the change is specified by the Overriding Tempo parameter. If, after switching performances, you want the arpeggiator and rhythm pattern settings specified for that performance to be played at an appropriate tempo, turn this “ON.”

Value: OFF, ON

Overriding Tempo

If you want the sequencer tempo to change when you switch performances, specify the tempo that will follow this change. This setting is valid when the Seq Tempo Override parameter is “ON.”

Value: 20–250

Arpeggiator Settings (Arpeggio)



For details on the setting, refer to “How to Make the Performance Settings” (p. 91).

Arpeggio

Switch (Arpeggio Switch)

Switches the Arpeggiator on/off.

Value: OFF, ON

Hold (Arpeggio Hold Switch)

Switch between Hold On/Hold Off for the Arpeggiator performance.

Value: OFF, ON

Style (Arpeggio Style)

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



For details regarding Arpeggio Style, refer to “Arpeggio Style List” (Sound/Parameter List).

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 or rhythm pattern, turn this "OFF."

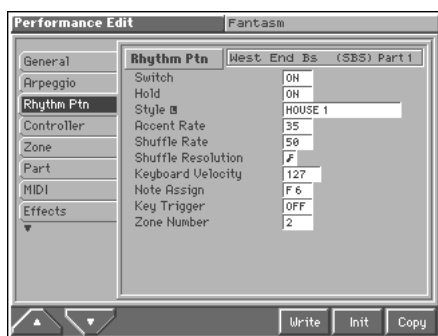
Value: OFF, ON

Zone Number (Arpeggio Zone Number)

Specify the zone for arpeggio performance. The Arpeggio performance corresponding to the part connected to the zone set here is played.

Value: 1-16

Rhythm Pattern Settings (Rhythm Ptn)



For details on the setting, refer to "How to Make the Performance Settings" (p. 91).

Rhythm Ptn (Rhythm Pattern)

Switch (Rhythm Pattern Switch)

Switch Rhythm pattern playback on/off.

Value: OFF, ON

Hold (Rhythm Pattern Hold Switch)

Switch between Hold On/Hold Off for the Rhythm pattern playback.

Value: OFF, ON

Style (Rhythm Pattern Style)

Select the basic playback style of the Rhythm pattern.

Value



For details regarding Rhythm Pattern Style, refer to "Rhythm Pattern Style List" (Sound/Parameter List).

Accent Rate (Rhythm Pattern Accent Rate)

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

Value: 0-100%

Shuffle Rate (Rhythm Pattern 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 (Rhythm Pattern 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 (Rhythm Pattern 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

Note Assign (Rhythm Pattern Note Assign)

Specify the note name of the lowest note in the key range that will play the Rhythm pattern. The Rhythm pattern can be played in a one-octave range starting from the key you specify here.

Value: C-1-G9

Key Trigger (Rhythm Pattern Key Trigger)

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

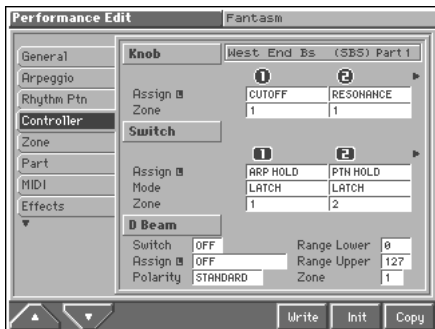
Value: OFF, ON

Zone Number (Rhythm Pattern Zone Number)

Specify the zone that will play the Rhythm pattern. The Rhythm pattern will be played for the part that is connected to the zone you specify here.

Value: 1-16

Realtime Controller / D Beam Controller Settings (Controller)



For details on the setting, refer to “How to Make the Performance Settings” (p. 91).

Knob

Assign 1–4 (Realtime Control Knob Assign 1–4)

Specify the functions that will be controlled by the [1]–[4] knobs.

Value

OFF: The realtime control knob will not be used.

CC01–31, 33–95: Controller numbers 1–31, 33–95

For more information about Control Change messages, please refer to “MIDI Implementation” (Sound/Parameter List).

PITCH BEND: Pitch Bend

AFTERTOUCH: Aftertouch

TEMPO: Tempo

ARP VAR: Arpeggio Variation

ARP ACCENT: Arpeggio Accent Rate

ARP SHFFLE: Arpeggio Shuffle Rate

ARP OCTAVE: Arpeggio Octave Range

PTN ACCENT: Rhythm Pattern Accent Rate

PTN SHFFLE: Rhythm Pattern Shuffle Rate

Zone 1–4 (Realtime Control Knob Zone Number 1–4)

Specify the zone that will be controlled by each knob [1]–[4]. The effect will apply only to the part that is connected to the zone you specify here.

Value: 1–16

Switch

Assign 1–4 (Realtime Control Button Assign 1–4)

Specify the functions that will be controlled by the [1]–[4] buttons.

Value

OFF: The realtime control button will not be used.

CC01–31, 33–95: Controller numbers 1–31, 33–95



For more information about Control Change messages, please refer to “MIDI Implementation” (Sound/Parameter List).

BEND UP: Raises the pitch in semitone steps (up to 4 octaves higher).

BEND DOWN: Lowers the pitch in semitone steps (up to 4 octaves lower).

AFTERTOUCHE: Aftertouch

OCT UP: Raises the key range in octave steps (up to 3 octaves higher).

OCT DOWN: Lowers the key range in octave steps (up to 3 octaves lower).

TRNS UP: Raises the key range in semitone steps (up to 6 semitones higher).

TRNS DOWN: Lowers the key range in semitone steps (up to 5 semitones lower).

TAP TEMPO: Tap tempo (a tempo specified by the interval at which you press the button).

MONO/POLY: Pressed to toggle between polyphonic (POLY) and monophonic (MONO) play of a patch.

ARP HOLD: Switch between Hold On/Hold Off for the Arpeggiator performance.

PTN HOLD: Switch between Hold On/Hold Off for the Rhythm pattern playback.

ZONE INT: Turn the Internal Switch on/off for the zone.

ZONE EXT: Turn the External Switch on/off for the zone.

Mode 1–4 (Realtime Control Button Mode 1–4)

Specify how the [1]–[4] buttons are to operate.

Value

MOMENTARY: The button will be on only while you are pressing (holding) it, and will be off when you release your finger from the button.

LATCH: The button will switch on/off each time you press it.

Zone 1–4 (Realtime Control Button Zone Number 1–4)

Specify the zone that will be controlled by each button [1]–[4]. The effect will apply only to the part that is connected to the zone you specify here.

Value: 1–16

D Beam

Switch (D Beam Switch)

Switches the D Beam controller on/off.

Value: OFF, ON

Assign (D Beam Assign)

Specifies the function controlled by the D Beam controller.

Value

OFF: The D Beam controller will not be used.

CC01–31, 33–95: Controller numbers 1–31, 33–95



For more information about Control Change messages, please refer to “**MIDI Implementation**” (Sound/Parameter List).

BEND UP: Raises the pitch in semitone steps (up to 4 octaves higher).

BEND DOWN: Lowers the pitch in semitone steps (up to 4 octaves lower).

AFTERTOUCH: Aftertouch

NOTE: Play the sound of the most recently pressed key.

OCT UP: Raises the key range in octave steps (up to 3 octaves higher).

OCT DOWN: Lowers the key range in octave steps (up to 3 octaves lower).

START/STOP: Starts/Stops the sequencer.

TAP TEMPO: Tap tempo (a tempo specified by the interval at which you move your hand over the D Beam controller).

ARP SWITCH: Switches the Arpeggiator on/off.

ARP VAR: Arpeggio Variation

ARP ACCENT: Arpeggio Accent Rate

ARP SHFFLE: Arpeggio Shuffle Rate

ARP OCT UP: The range in which the arpeggio is sounded will rise in steps of an octave (maximum 3 octaves).

ARP OCT DW: The range in which the arpeggio is sounded will lower in steps of an octave (maximum 3 octaves).

PTN SWITCH: Switch Rhythm pattern playback on/off.

PTN ACCENT: Rhythm Pattern Accent Rate

PTN SHFFLE: Rhythm Pattern Shuffle Rate

Polarity (D Beam Polarity)

Switch the polarity of the D Beam controller.

With a setting of “REVERSE,” the direction of control for the D Beam controller will be inverted.

Range: STANDARD, REVERSE

Range Lower (D Beam Range Lower)

Specify the lower limit of the range of the D Beam controller. Values below this setting will not be output.

Value: 0–UPPER

Range Upper (D Beam Range Upper)

Specify the upper limit of the range of the D Beam controller. Values above this setting will not be output.

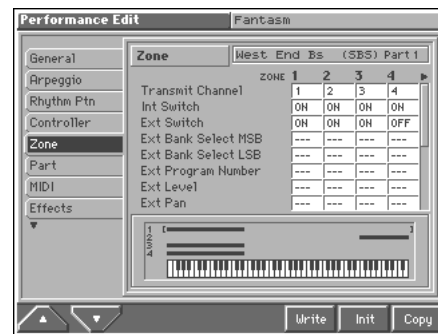
Value: LOWER–127

Zone (D Beam Zone Number)

Specify the zone that will be controlled by the D Beam controller. The effect will apply to the part that is connected to the zone you specify here.

Value: 1–16

Zone Settings (Zone)



For details on the setting, refer to “**How to Make the Performance Settings**” (p. 91).

Transmit Channel

Specifies the MIDI transmit channel for each zone.

Value: 1–16

Int Switch (Internal Switch)

Specifies, for each zone, whether or not the keyboard controller section will be connected to the internal sound generator.

Normally this is left “ON,” but if you wish to use the Fantom’s keyboard and controllers to control only external sound modules, set it to “OFF.”

Value: OFF, ON

Ext Switch (External Switch)

Determines, for each zone, whether or not data generated by the keyboard controller section is sent as MIDI messages from the MIDI OUT connector.

Normally you will leave this “ON,” but you can turn it “OFF” when you do not want the Fantom to control external sound generators.

Value: OFF, ON

Ext Bank Select MSB (External Bank Select MSB)

If you want a Bank Select number MSB (controller number 0) to also be transmitted when you switch performances, specify the value that you want to transmit (0–127) for each zone. If you do not want this message to be transmitted, set this to “---.”

Value: 0–127, ---



The data of the zone for which the External Switch is turned off will not be transmitted.

Ext Bank Select LSB (External Bank Select LSB)

If you want a Bank Select number LSB (controller number 32) to also be transmitted when you switch performances, specify the value that you want to transmit (0–127) for each zone.

Value: 0–127

NOTE

The data of the zone for which the External Switch is turned off will not be transmitted.

Ext Program Number (External Program Change Number)

If you want a Program Change number to also be transmitted when you switch performances, specify the value that you want to transmit (0–127) for each zone. If you do not want this message to be transmitted, set this to “---.”

Value: 1–128, ---

NOTE

The data of the zone for which the External Switch is turned off will not be transmitted.

Ext Level (External Level)

If you want Volume messages to also be transmitted when you select a performance, specify the desired value (0–127) for the zone. If you do not want this message to be transmitted, set this to “---.”

Value: 0–127, ---

NOTE

The data of the zone for which the External Switch is turned off will not be transmitted.

Ext Pan (External Pan)

If you want Pan messages to also be transmitted when you select a performance, specify the desired value (L64–0–63R) for the zone. If you do not want this message to be transmitted, set this to “---.”

Value: L64–0–63R, ---

NOTE

The data of the zone for which the External Switch is turned off will not be transmitted.

Key Range Lower (Keyboard Range Lower)

Specifies the lowest note that the tone will sound for each zone.

Value: C-1–UPPER

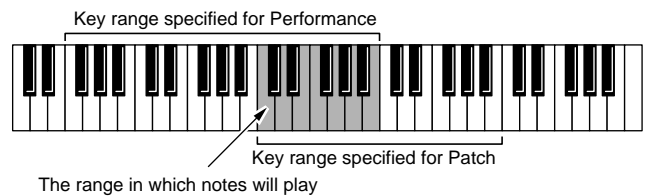
Key Range Upper (Keyboard Range Upper)

Specifies the highest note that the tone will sound for each zone.

Value: LOWER–G9

NOTE

When the Key Range (p. 59) 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 zone overlap.



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.

Control Bender (Control Pitch Bend Switch)

For each zone, specify whether MIDI Pitch Bend messages will be transmitted (ON), or not (OFF).

Value: OFF, ON

Control Aftertouch (Control Aftertouch Switch)

For each zone, specify whether MIDI Aftertouch messages will be transmitted (ON), or not (OFF).

Value: OFF, ON

Control Modulation (Control Modulation Switch)

For each zone, specify whether MIDI Modulation messages will be transmitted (ON), or not (OFF).

Value: OFF, ON

Control Hold Pedal (Control Hold Pedal Switch)

For each zone, you can specify whether control messages from a pedal connected to the HOLD PEDAL jacks will be transmitted (ON), or not (OFF).

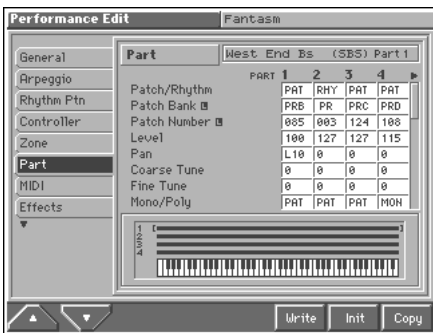
Value: OFF, ON

Control Pedal 1, 2 (Control Pedal 1, 2 Switch)

For each zone, you can specify whether control messages from a pedal connected to the CTL 1 and CTL 2 PEDAL jacks will be transmitted (ON), or not (OFF).

Value: OFF, ON

Making Settings for Each Part (Part)



For details on the setting, refer to “How to Make the Performance Settings” (p. 91).

Patch/Rhythm (Patch/Rhythm Set)

Sets the assignment of a patch (PAT) or rhythm set (RHY) to each of the parts.

Patch Bank

Selects the group to which the desired patch or rhythm set belongs.

Value

USR: User

PRA–E: Preset A–E

GM: GM (GM2)

XPA–C: Wave Expansion Boards installed in EXP-A–C Slots

Patch Number

Selects the desired patch or rhythm set by its number.

Value: 001–***

Level (Part Level)

Adjust the volume of each part. This setting’s main purpose is to adjust the volume balance between parts.

Value: 0–127

Pan (Part Pan)

Adjust the pan of each part. “L64” is far left, “0” is center, and “63R” is far right.

Value: L64–0–63R

Coarse Tune (Part Coarse Tune)

Adjusts the pitch of the part’s sound up or down in semitone steps (+/-4 octaves).

Value: -48– +48

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.

Fine Tune (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.

Mono/Poly (Part Mono/Poly)

Set this parameter to “MON” when the patch assigned to the part is to be played monophonically, or to “POL” when the patch is to be played polyphonically. When using the setting of the patch assigned to each part (p. 47), set this to “PAT.”

Value: MON, POL, PAT

NOTE

For the part to which the rhythm set is assigned, this setting is ignored.

Legato Switch (Part Legato Switch)

You can add legato when performing monophonically. Legato is a playing style in which the spaces between notes are smoothed, creating a flowing feel with no borders between the notes. 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. When using the setting of the patch assigned to each part (p. 48), set this to “PAT.”

Value: OFF, ON, PAT

NOTE

For the part to which the rhythm set is assigned, this setting is ignored.

Pitch Bend Range (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. When using the setting of the patch assigned to each part (p. 49), set this to "PAT."

Value: 0-24, PAT

Portamento Switch (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. When using the setting of the patch assigned to each part (p. 48), set this to "PAT."

Value: OFF, ON, PAT

Portamento Time (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. When using the setting of the patch assigned to each part (p. 49), set this to "PAT."

Value: 0-127, PAT

NOTE

For the part to which the rhythm set is assigned, this setting is ignored.

Cutoff Offset (Part Cutoff Offset)

Adjusts the cutoff frequency for the patch or rhythm set assigned to a part.

Value: -64- +63

NOTE

Patches also have a Cutoff Offset setting (p. 47). The final Cutoff frequency value is the sum of the tone Cutoff Frequency value and the patch and part Cutoff Frequency Offset values. If the tone's cutoff frequency is already set to "127" (maximum), there will be no change produced by setting the Cutoff Frequency Offset to a positive value.

Resonance Offset (Part Resonance Offset)

Adjusts the Resonance for the patch or rhythm set assigned to a part.

Value: -64- +63

NOTE

Patches also have a Resonance Offset setting (p. 47). 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.

Attack Time Offset (Part Attack Time Offset)

Adjusts the TVA Envelope Attack Time for the patch or rhythm set assigned to a part.

Value: -64- +63

NOTE

Patches also contain the Attack Time Offset setting (p. 48). 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.

Release Time Offset (Part Release Time Offset)

Adjusts the TVA Envelope Release Time for the patch or rhythm set assigned to a part.

Value: -64- +63

NOTE

Patches also contain a Release Time Offset setting (p. 48). 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.

Decay Time Offset (Part Decay Time Offset)

Adjusts the TVA Envelope Decay Time for the patch or rhythm set assigned to a part.

Value: -64- +63

Vibrate Rate (Part Vibrate 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

Vibrate Depth (Part Vibrate 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

Vibrate Delay (Part Vibrate 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

Octave Shift (Part Octave Shift)

Adjusts the pitch of the part's sound up or down in units of an octave (+/-3 octaves).

Value: -3- +3

NOTE

Note that when a rhythm set is assigned to a part, if the Octave Shift parameter is set, the rhythm tone that is played also changes.

Vel Sens Offset (Part Velocity Sensitivity 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. 48). 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.

Key Fade Lower (Part Keyboard Fade Width Lower)

This determines what will happen to the part's level when a note that's lower than the part'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

Key Range Lower (Part Keyboard Range Lower)

Specifies the lowest note that the tone will sound for each part.

Value: C-1-UPPER

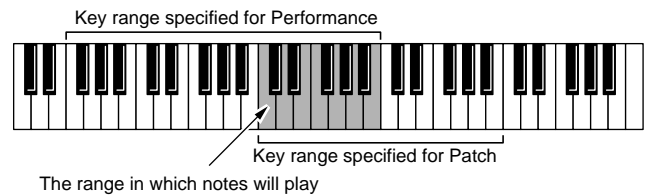
Key Range Upper (Part Keyboard Range Upper)

Specifies the highest note that the tone will sound for each part.

Value: LOWER-G9

NOTE

When the Key Range (p. 58) 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.



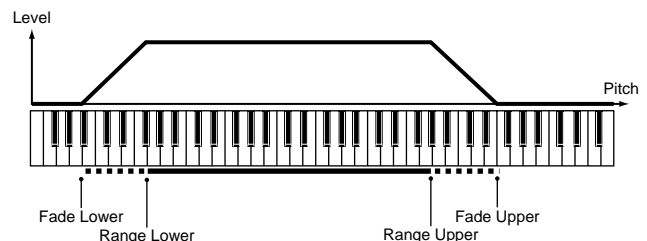
NOTE

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.

Key Fade Upper (Part Keyboard Fade Width Upper)

This determines what will happen to the part's level when a note that's higher than the part'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



Voice Reserve

This setting specifies the number of voices that will be reserved for each part when more than 64 voices are played simultaneously.

Value: 0-63, FUL

NOTE

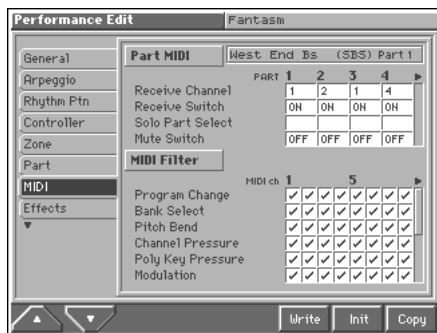
It is not possible for the settings of all parts to total an amount greater than 64. The remaining number of available voices will be displayed at (rest=). Pay attention to this readout as you make set the Voice Reserve parameter.

Calculating the Number of Voices Being Used

The Fantom is able to play up to 64 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)

Making Settings for Receiving MIDI (MIDI)



For details on the setting, refer to “How to Make the Performance Settings” (p. 91).

Part MIDI

Receive Channel

Specifies the MIDI receive channel for each part.

Value: 1–16



If this is set to the same channel as the Performance Ctrl Ch parameter (SYSTEM/MIDI), attempting to switch patches by transmitting only a program change from an external device will actually cause the performance to change. If you want to switch patches, change the Performance Ctrl Ch parameter to another number (p. 182), or transmit bank select and program change messages together (Q&A; p. 14).

Receive Switch

For each part, specify whether MIDI messages will be received (ON), or not (OFF).

If this is “OFF,” the part will respond to the keyboard, but not to the internal sequencer or external MIDI devices. 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

Solo Part Select

Select one part whose sound you want to play. Turn it “SEL” to the part that you want to solo. Parts other than the part you select here will not sound.

Mute Switch

Temporarily mutes (MUT) or releases the mute (OFF) for the performance of 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, MUT



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.

MIDI Filter

Program Change (Receive Program Change Switch)

For each MIDI channel, specify whether MIDI Program Change messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Bank Select (Receive Bank Select Switch)

For each MIDI channel, specify whether MIDI Bank Select messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Pitch Bend (Receive Pitch Bend Switch)

For each MIDI channel, specify whether MIDI Pitch Bend messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Channel Pressure (Receive Channel Pressure Switch)

For each MIDI channel, specify whether MIDI Channel Pressure messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Poly 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). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Modulation (Receive Modulation Switch)

For each MIDI channel, specify whether MIDI Modulation messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Creating a Performance

Volume (Receive Volume Switch)

For each MIDI channel, specify whether MIDI Volume messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Pan (Receive Pan Switch)

For each MIDI channel, specify whether MIDI Pan messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Expression (Receive Expression Switch)

For each MIDI channel, specify whether MIDI Expression messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Hold-1 (Receive Hold 1 Switch)

For each MIDI channel, specify whether MIDI Hold 1 messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it 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.

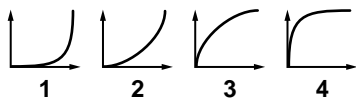
NOTE

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.

Velocity Curve

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.

Value: 1-4



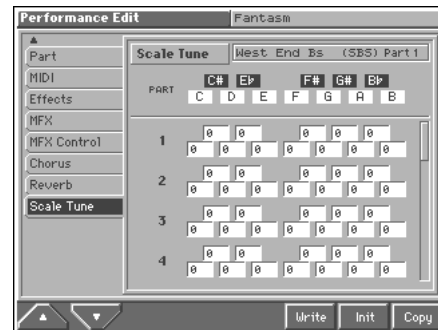
Setting Effects for a Performance (Effects/MFX/MFX Control/Chorus/Reverb)



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

- “Applying Effects in Performance Mode or Multitimbre Mode” (p. 170)
- “Making Multi-Effects Settings (MFX/MFX Control)” (p. 174)
- “Making Chorus Settings (Chorus)” (p. 176)
- “Making Reverb Settings (Reverb)” (p. 177)

Scale Tune Settings (Scale Tune)



For details on the setting, refer to “How to Make the Performance Settings” (p. 91).

C-B (Part Scale Tune C-B)

Make scale tune settings for each part.

Value: -64- +63



Scale Tune is switched on/off by means of the Scale Tune Switch parameter (SYSTEM/Scale Tune) (p. 186).

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 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, 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

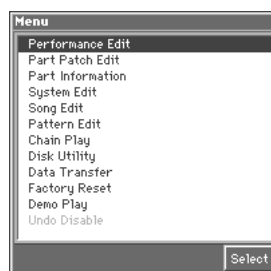
Changing the Settings of the Patch Assigned to a Part

When using patches in Performance mode, some settings such as effects settings will be affected by performance settings. If you wish to edit a patch while hearing how it will sound in the performance, 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 is the same. Substitute "rhythm set" wherever "patch" appears in a sentence.

1. Make sure the PERFORMANCE PLAY screen is displayed.
2. Press [MENU].

The Menu window appears.



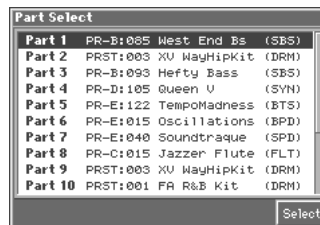
3. Press ▲ or ▼ to select a "Part Patch Edit," and then press [8 (Select)].

The patch assigned to the part is displayed in the Patch Edit screen.



4. Press [4 (Part Select)].

The Part Select window will appear.



5. Press ▲ or ▼ to select the part whose assigned patch you want to change, and then press [8 (Select)].
6. The rest of the procedure is the same as when making changes in Patch mode (p. 42).

Playing in Multitimbre Mode

Multitimbre mode is ideal when you want to use the sequencer to create a song, or when you want to play song data. When creating songs or playing song data, a different MIDI channel is assigned for each patch or rhythm set used in a part. Such a set of sounds selected for each part to play is called a **multitimbre**.

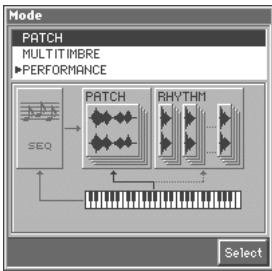
About the MULTITIMBRE PLAY screen

Displaying the MULTITIMBRE PLAY screen

To access the MULTITIMBRE PLAY screen, use the following procedure.

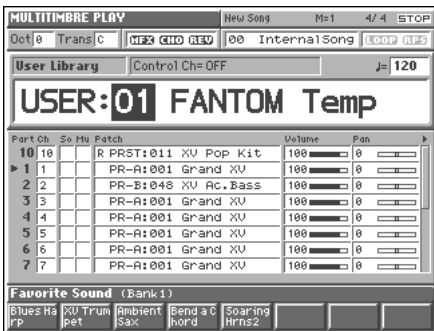
1. Press [MODE].

The Mode window appears.



2. Press ▲ or ▼ to select "Multitimbre," and then press [8 (Select)].

You will be in Multitimbre mode, and the MULTITIMBRE PLAY screen appears.



Functions in the MULTITIMBRE PLAY Screen

Indicates the current sound generating mode.



Indicates the name of the currently selected song, the measure location, the time signature, and the sequencer status.

Sets the Octave Shift (Oct) and the Transpose (Trans).

Indicates the song file name.



Switches multi-effects (MFX), chorus (CHO), and reverb (REV) on and off.

Turns the RPS function on/off (RPS). Turns Loop Play on/off (LOOP).

Indicates the group of the selected multitimbre.

Indicates the MIDI receive channel used for switching multitimbres from an external MIDI device.

Indicates/sets the tempo at which the song, Arpeggio or rhythm pattern is played.

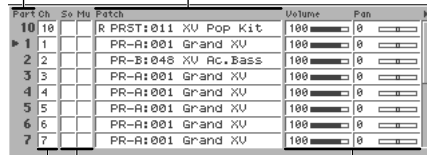


Indicates/selects the group, number, and name of the selected multitimbre.

Part number

The currently selected part is indicated by the "▶" symbol.

Indicates/selects the group, number, and name of the patch assigned to each part.



Switches the Solo (So) and Mute (Mu) function on/off.

Indicates/sets the following settings of the part.

- Volume (Volume)
- Pan (Pan)
- Output Destination (Out)
- Chorus Send Level (Chorus)
- Reverb Send Level (Reverb)

Indicates/sets the part's MIDI receive channels.



Indicates the names of the patches or rhythm sets that can be selected by [1]-[8].

Selecting a Multitimbre

The Fantom has two multitimbre groups, including the User group and Preset groups, with each group storing 16 multitimbres, for a total of 32 multitimbres.

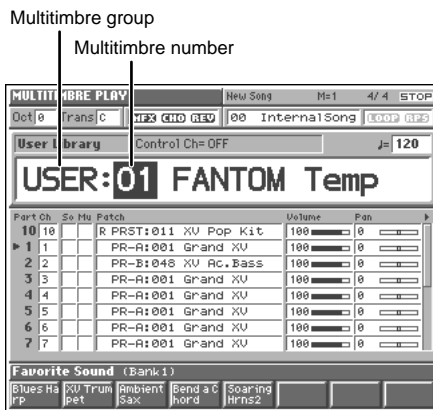
USER

This is the group inside the Fantom which can be rewritten. Performances you yourself create can be stored in this group. The Fantom contains 16 preset multitimbres.

PRST (Preset)

This is the group inside the Fantom which cannot be rewritten. However you may modify the settings of the currently selected multitimbre, and then store the modified multitimbre in User memory. The Fantom contains 16 preset multitimbres.

1. Access the MULTITIMBRE PLAY screen (p. 106).



2. Press [CURSOR] to move the cursor to the multitimbre group.
3. Turn the VALUE dial, or press [INC]/[DEC] to select a multitimbre group.
USER: User
PRST: Preset
4. Press [CURSOR] to move the cursor to the multitimbre number.
5. Turn the VALUE dial or press [INC]/[DEC] to select the multitimbre number.

Selecting Multitimbres from a List

You can display a list of performances and select a multitimbres from that list.

1. In the MULTITIMBRE PLAY screen, make sure that the cursor is located at the multitimbre group or multitimbre number.

2. Press [LIST].

The Multitimbre List window appears.

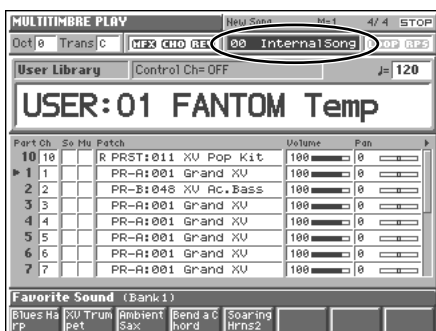


3. Press ▲ or ▼ to choose the multitimbre.
4. To switch the multitimbre group, press ◀ to move the cursor to the multitimbre group tab, and press ▲ or ▼ to select the multitimbre group.
5. After switching the multitimbre group, press ▶ to move the cursor within the list, and press ▲ or ▼ to select the multitimbre.
6. Press [EXIT] to close the Multitimbre List window.

Playing Back a Song

Use Multitimbre mode to play back a song stored on disk.

1. Access the MULTITIMBRE PLAY screen (p. 106).
2. Into the disk drive, insert the disk that contains the song you want to play.
3. Press [CURSOR] to move the cursor to the song file name in the upper part of the screen.



4. Turn the VALUE dial or press [INC]/[DEC] to select the song that you wish to play back.

HINT

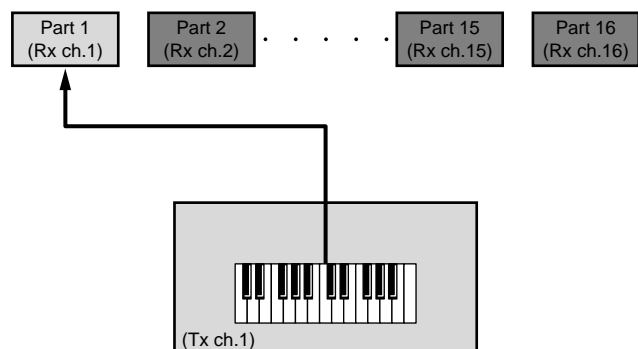
When your cursor is located at the song file name, you can press [LIST] to open the Song List window, and select a song from a list of the songs on the disk.

5. Press [STOP/PLAY] to begin playback.

When song playback ends, it will stop automatically. To interrupt playback, press [STOP/PLAY].

Selecting a Part to Play from the Keyboard (Current Part)

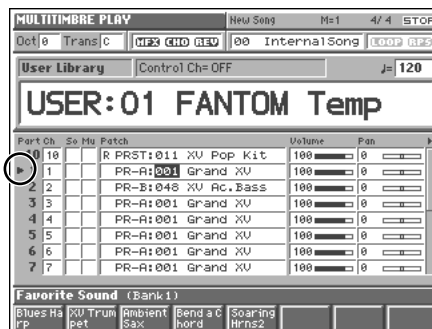
In Multitimbre mode, you can play one of the parts from the keyboard. The part you select here is called the **current part**. For example, when you want to play along with a song, this allows you to select the part you are going to play on the keyboard.



Rx ch.: Receive Channel
Tx ch.: Transmit Channel

1. Access the MULTITIMBRE PLAY screen (p. 106).
2. Move the cursor to the part list, and press ▲ or ▼ to select the part to be played.

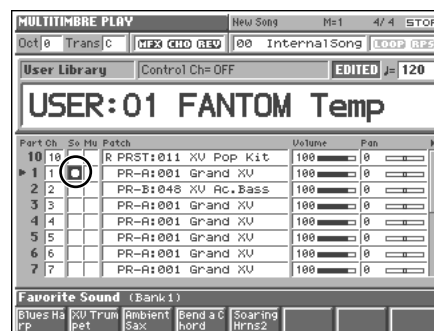
The selected part will be indicated by the "■" symbol. This symbol shows that this is the currently selected part (**current part**).



Selecting a Part to Play Individually (Solo)

You can have only the performance of a specific part be played when playing back a song.

1. Access the MULTITIMBRE PLAY screen (p. 106).
2. Use [CURSOR] to move the cursor to the "So" area of the part that you want to play by itself.
3. Turn the VALUE dial or press [INC]/[DEC] to assign a "●" mark.



When a song is played back, only the parts with a check mark will play back.

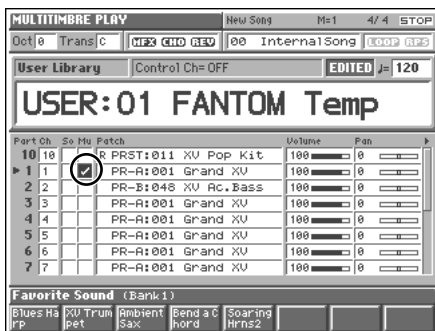
MEMO

This setting is linked with the Solo Part Select parameter (MULTITIMBRE/Part), and can be saved as a multitimbre setting (p. 118).

Silencing the Playback of a Specific Part (Mute)

While you play along with the playback of a song, you can turn off the specific part. This allows you to turn off the melody part for karaoke applications or for practicing the muted part.

1. Access the **MULTITIMBRE PLAY** screen (p. 106).
2. Use **[CURSOR]** to move the cursor to the “Mu” area of the part that you want to mute.
3. Turn the **VALUE** dial or press **[INC]/[DEC]** to assign a check mark (✓).



When a song is played back, the parts with a check mark will not play back.

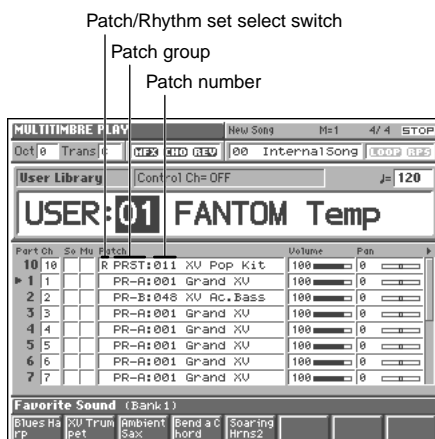
MEMO

Part Mute does not turn off the MIDI receive switch; rather, it sets the volume to the minimum setting to silence the sound. Therefore, MIDI messages are still received.

Assigning a Different Patch to a Part

If you do not like the patch that is assigned to each part, you can easily switch patches.

1. Access the **MULTITIMBRE PLAY** screen (p. 106).
2. Use **[CURSOR]** to move the cursor to the “Patch” area of the part whose patch you want to change.



3. Turn the **VALUE** dial or press **[INC]/[DEC]** to select a patch or rhythm set.

If you want to select a rhythm set, set the patch/rhythm set select switch to “R.”

HINT

- When the cursor is located at the patch group or patch number, if you press **[LIST]**, the Patch List window appears, allowing you to select a patch from the list (p. 33).
- By pressing **[1]–[8]** you can select your favorite patches (p. 33).

MEMO

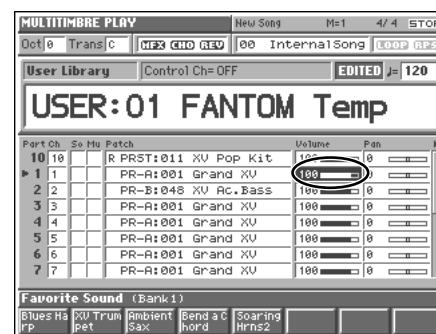
This setting is linked with the Patch/Rhythm, Patch Bank, and Patch Number parameters (MULTITIMBRE/Part), and can be saved as multitimbre settings (p. 115).

Adjusting the Volume and Pan of Each Part

In the **MULTITIMBRE PLAY** screen, you can edit the following settings of each part.

- MIDI Receive Channel (**Ch**)
- Volume (**Volume**)
- Pan (**Pan**)
- Output Destination (**Out**)
- Chorus Send Level (**Chorus**)
- Reverb Send Level (**Reverb**)

1. Access the **MULTITIMBRE PLAY** screen (p. 106).
2. Use **[CURSOR]** to move the cursor to the parameter you want to change.



HINT

To move the cursor to “Out,” “Chorus,” or “Reverb,” move the cursor to “Pan” and then press **▶**.

3. Turn the **VALUE** dial or press **[INC]/[DEC]**, set the value.

MEMO

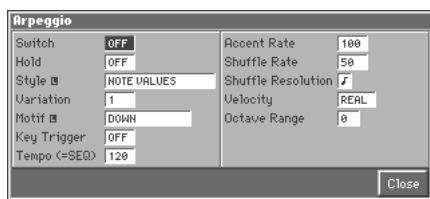
These settings are linked with the Receive Channel, Level, Pan, Part Output Assign, Part Chorus Send Level, and Part Reverb Send Level parameters, and can be saved as multitimbre settings (p. 118, p. 115, p. 172).

Recording an Arpeggio Performance

The Arpeggiator provides for the play of the various notes in chords. With the **Arpeggiator**, you can play arpeggios that use the component notes of a chord, just by pressing the chord. When you use the sequencer to create a song, it is also convenient to use the Arpeggiator to record the bass part. In this way, it is convenient to use the arpeggiator as a compositional tool.

1. Access the **MULTITIMBRE PLAY** screen (p. 106).
2. Select the multitimbre that you will use for recording (p. 107).
3. Press **▲** or **▼** to select the part (track) on which the arpeggio performance will be recorded.
The selected part will be indicated by the "■" symbol, and the performance will be recorded on that part (track).

4. Hold down **[JUMP]** and press **[ARPEGGIO]**.
The Arpeggio window appears. In this window you can make various arpeggio-related settings.



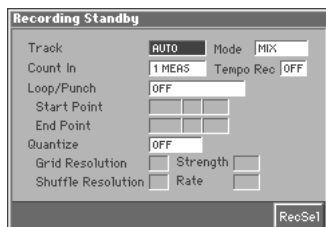
5. Specify how the arpeggio will be played.

HINT

Of all the arpeggio settings, the **Style (Arpeggio Style)** is particularly important. The playback pattern of the arpeggio is determined mainly by this selection. For details, refer to "Arpeggiator Settings (Arpeggio)" (p. 51).

6. After completing your settings, press **[8 (Close)]** to close the Arpeggio window.
7. Press **[REC]**.

The **[REC]** indicator will blink, and the Recording Standby window appears. In this window you can change various settings related to realtime recording.



8. Specify the recording method.

HINT

For details on making this setting, refer to "Recording Your Performance as You Play It (Realtime Recording)" (p. 129).

9. Press **[STOP/PLAY]**.

The Recording Standby window will close, and the **[REC]** indicator will change from blinking to lit. After that, recording will begin.

10. Play a chord on the keyboard.

Arpeggios will be sounded according to the notes of the chord you press, and will be recorded on the part (track) you selected in step 3.

11. When you finish recording, press **[STOP/PLAY]**.

The **[REC]** indicator will go dark.

Recording the Performance of a Rhythm Pattern

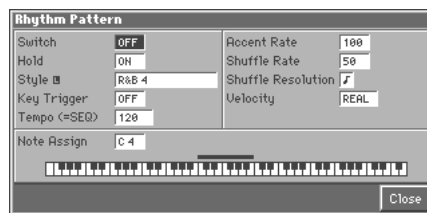
The Fantom contains various Rhythm patterns. Simply by pressing a single key, you can play the Rhythm patterns. When you use the sequencer to create a song, it is also convenient to use Rhythm patterns to record the drum part.

1. Access the **MULTITIMBRE PLAY** screen (p. 106).
2. Select the multitimbre that will be used for recording (p. 107).
3. Press **▲** or **▼** to select the part (track) on which the Rhythm pattern will be recorded.

A "■" will be displayed for the selected part, and the Rhythm pattern will be recorded on that part (track).

4. Hold down **[JUMP]** and press **[RHYTHM]**.

The Rhythm Pattern window appears. In this window you can make various settings for Rhythm patterns.



5. Specify how the Rhythm pattern will be played.

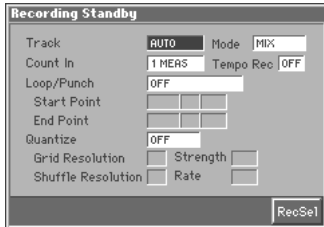
HINT

Of all the Rhythm pattern parameters, the **Style (Pattern Style)** setting is particularly important. The playback pattern of the rhythm is determined mainly by this selection. For details, refer to "Rhythm Pattern Settings (Rhythm Ptn)" (p. 75).

6. After completing your settings, press **[8 (Close)]** to close the Rhythm Pattern window.

7. Press [REC].

The [REC] indicator will blink, and the Recording Standby window appears. In this window you can change various settings related to realtime recording.



8. Select the recording method.



For details on making this setting, refer to “Recording Your Performance as You Play It (Realtime Recording)” (p. 129).

9. Press [STOP/PLAY].

The Recording Standby window will close, and the [REC] indicator will change from blinking to lit. After that, recording will begin.

10. Press a key to which a Rhythm pattern is assigned.

The assigned Rhythm patterns will be played according to the keys you press, and the performance will be recorded on the part (track) you selected in step 3.

11. When you finish recording, press [STOP/PLAY].

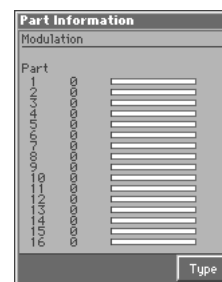
The [REC] indicator will go dark.

Confirming MIDI Information for Each Part (Part Information)

In Multitimbre mode, the reception status of MIDI messages that control various things can be viewed for each part. This is useful when you want to check whether the sound generator is responding correctly to the keyboard, or to operations from an external MIDI controller.

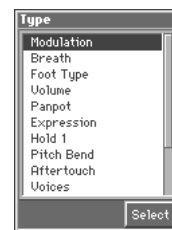
1. Access the MULTITIMBRE PLAY screen (p. 106).
2. Press [MENU] to open the Menu window.
3. Press ▲ or ▼ to select “Part Information,” and then press [8 (Select)].

The Part Information window appears.



4. Press [8 (Type)]

The Type Information window appears.



5. Press ▲ or ▼ to select the message that you want to check, and then press [8 (Select)].

Modulation: Modulation Information

Breath: Breath Information

Foot Type: Foot type Information

Volume: Volume Information

Panpot: Panpot Information

Expression: Expression Information

Hold 1: Hold 1 Information

Pitch Bend: Pitch Bend Information

Aftertouch: Aftertouch Information

Voices: Voice Information (The number of voices used)

Sys Control1–4: System Control 1–4 Information

The MIDI message specified as the Sys Ctrl 1–4 Source parameter (SYSTEM/Controller).

Creating a Multitimbre

With the Fantom, 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 multitimbres, and the functions of the multitimbre parameters.

How to Make the Multitimbre Settings

Start with an existing multitimbre and edit it to create a new multitimbre. But before you do, try to envision what the entire multitimbre will sound like and decide which patch or rhythm set to assign to each of 16 parts.

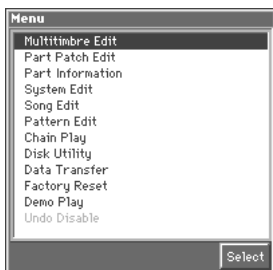
1. Access the MULTITIMBRE PLAY screen, and select the multitimbre whose settings you wish to modify (p. 107).

HINT

If you want to create all your multitimbres from the ground up, rather than the multitimbres that have already been prepared, carry out the **Initialize** operation (p. 112).

2. Press [MENU].

The Menu window appears.



3. Press ▲ or ▼ to select "Multitimbre Edit," and then press [8 (Select)].

The Multitimbre Edit screen appears.



4. The parameters are organized into several editing groups. Press [1 (▲)] or [2 (▼)] to select the tab for the editing group that contains the parameter you wish to edit.



For details on the parameter groupings, refer to "Parameter list" (Sound/Parameter List).

5. Use [CURSOR] to move the cursor to the parameter you wish to modify.

MEMO

- Some of the parameters have a "□" symbol. This indicates that if you press [LIST] when setting one of these parameters, the related window will appear. For example if you press [LIST] at a parameter that requires you to specify a name, the Name window will appear.
- 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.

HINT

If you have selected a screen for parameters that can be set for each part, first move the cursor to the parameter that you wish to edit, and then press ◀ or ▶ to select the part.

6. Turn the VALUE dial or press [INC]/[DEC] to get the value you want.
7. Repeat steps 4–6 to complete a multitimbre.
8. If you wish to save the changes you've made, press [6 (Write)] to perform the Save operation (p. 114). If you do not wish to save changes, press [EXIT] to return to the MULTITIMBRE PLAY screen.

If you return to the MULTITIMBRE PLAY screen without saving, the display will indicate "EDITED," reminding you that the multitimbre settings have been modified.

NOTE

If you turn off the power or select a different sound while the display indicates "EDITED," your edited multitimbre will be lost.

Initializing Multitimbre Settings (Init)

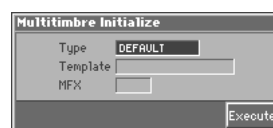
"Initialize" means to return the settings of the currently selected sound to a standard set of values or to the factory settings.

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. 195).

1. Access the MULTITIMBRE PLAY screen, and select the multitimbre that you wish to initialize (p. 107).
2. Access the Multitimbre Edit screen (p. 112).
3. Press [7 (Init)].

The Multitimbre Initialize window appears.



4. Move the cursor to "Type," and select the initialization type.

Type (Initialize Type)

There are three initialize methods. Select either of them depending on the application.

DEFAULT: Resets the currently selected multitimbre in the Temporary memory to the standard values. This is called a 'Initial Data.' Use this setting when you wish to create a sound from scratch.

PRESET: Resets the currently selected multitimbre in user memory to the factory settings.

MFX TEMPLATE: The multi-effect settings of the currently selected multitimbre will be set to the MFX template settings.

NOTE

If the currently selected multitimbre is preset memory (PRST) data, initializing with the "PRESET" setting will set the values to those of the identically numbered user memory.



For details regarding MFX template, refer to "MFX Template List" (Sound/Parameter List).

5. If you've set the initialization type to "MFX TEMPLATE," move the cursor to "Template" and select an MFX template. Then move the cursor to "MFX," and select the relevant MFX (MFX-A-MFX-C).

6. Press [8 (Execute)].

The initialization will be carried out, and you'll be returned to the Multitimbre Edit screen.

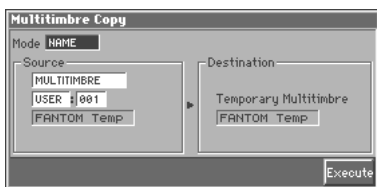
Copying Multitimbre Settings (Copy)

This operation copies the settings of any desired multitimbre to the currently selected multitimbre. You can use this feature to make the editing process faster and easier.

Basic Procedure for Multitimbre Copy

1. Access the MULTITIMBRE PLAY screen, and select the copy-destination multitimbre (p. 107).
2. Access the Multitimbre Edit screen (p. 112).
3. Press [8 (Copy)].

The Multitimbre Copy window appears.



4. Move the cursor to "Mode," and select the data that you wish to copy.

Three types of copy are available: **Multitimbre Name Copy**, **Multitimbre Effects Copy**, and **Multitimbre Part Copy**. You should select the one that is relevant to the type of data you wish to copy. For details refer to "Types of Multitimbre Copy" (following section).

5. Move the cursor to "Source," and select the copy-source sound.

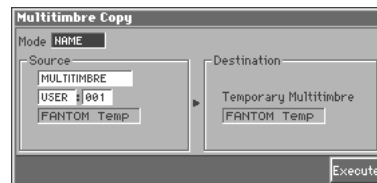
6. Press [8 (Execute)] to execute the copy.

7. Press [EXIT] to return to the Multitimbre Edit screen.

Types of Multitimbre Copy

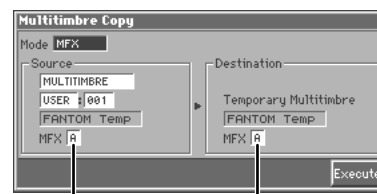
Multitimbre Name Copy (NAME)

The name of a patch, rhythm set, multitimbre, or performance will be copied to the currently selected multitimbre.



Multitimbre Effects Copy (MFX/CHORUS/REVERB)

The effect settings of a patch, rhythm set, multitimbre, or performance will be copied to the currently selected multitimbre.



Copy-source multi-effects

Copy-destination multi-effects

Effect contents that will be copied (Mode)

MFX: Multi-effects settings

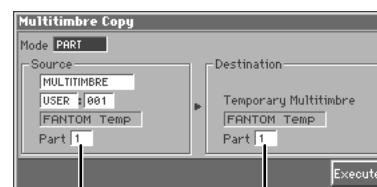
CHORUS: Chorus settings

REVERB: Reverb settings

If you want to copy the multi-effect settings of a multitimbre or performance, select the MFX (MFX-A-MFX-C) whose data will be copied.

Multitimbre Part Copy (PART)

Part settings of a multitimbre will be copied to the part you specify of the current multitimbre.



Copy-source part

Copy-destination part

HINT

To specify the currently selected multitimbre as the copy source, set "Source" to "TEMP."

Saving Multitimbre 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 internal **USER** group (user memory)

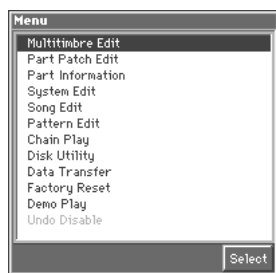
When you modify the settings of a multitimbre, the MULTITIMBRE PLAY screen will indicate "EDITED." Once you save the multitimbre into internal memory (user memory), the "EDITED" indication goes away.

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 Initialization procedure (p. 112).

1. Make sure that multitimbre you wish to save is selected.
2. Press [MENU].

The Menu window appears.



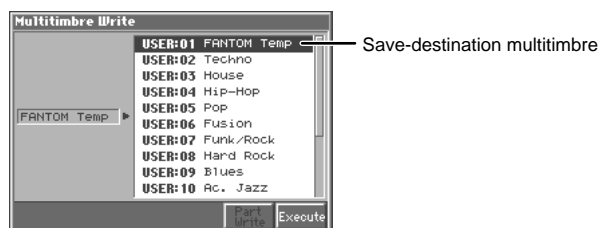
3. Press ▲ or ▼ to select "Multitimbre Edit," and then press [8 (Select)].

The Multitimbre Edit screen appears.



4. Press [6 (Write)].

The Multitimbre Write window appears.



5. Press ▲ or ▼ to specify the save-destination multitimbre.

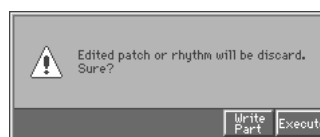
6. Press [8 (Execute)].

The display will indicate "Are you sure?"

7. Press [8 (OK)] to execute the save operation. To cancel the operation, press [EXIT].

When Changing the Settings for the Patch or Rhythm Set Assigned to a Part in a Multitimbre

After changing the settings for the patch or rhythm set assigned to a part in a multitimbre, if you then try to save the multitimbre without first saving the changes in the settings, the following message appears.



If you do not need to keep the patch or rhythm set settings, press [8 (Execute)] to save the multitimbre.

If you want to keep the patch or rhythm set settings, press [7 (Write Part)] to access the Multitimbre Part Write window.



An indication of "EDITED" will appear for the part for which the assigned patch or rhythm set was edited. If you want to edit the patch or rhythm set settings for more than one part, press [3 (▲)] or [4 (▼)] to select the part.

Specify the save-destination patch and press [8 (Execute)]. The patch or rhythm set will be saved; then you'll be returned to the Performance Write window, where you need to save the multitimbre once again.

Functions of Multitimbre Parameters

This section explains the functions the different multitimbre parameters have, as well as the composition of these parameters.

Settings Common to the Entire Multitimbre (General)



For details on the setting, refer to “How to Make the Multitimbre Settings” (p. 112).

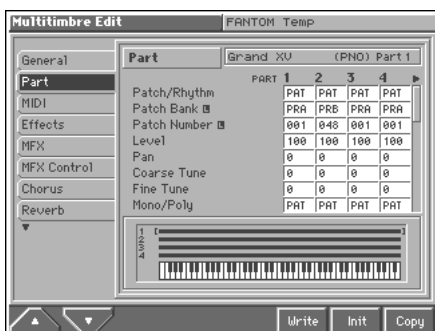
Multitimbre Name

You can assign a name of up to 12 characters to the multitimbre.

Value: space, A–Z, a–z, 0–9, ! " # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ` { | } → ←

For details on assigning names, refer to “Assigning a Name” (p. 30).

Making Settings for Each Part (Part)



For details on the setting, refer to “How to Make the Multitimbre Settings” (p. 112).

Patch/Rhythm (Patch/Rhythm Set)

Sets the assignment of a patch (PAT) or rhythm set (RHY) to each of the parts.

Patch Bank

Selects the group to which the desired Patch or Rhythm Set belongs.

Value

USR: User

PRA–E: Preset A–E

GM: GM (GM2)

XPA–C: Wave Expansion Boards installed in EXP-A–C Slots

Patch Number

Selects the desired patch or rhythm set by its number.

Value: 001–***

Level (Part Level)

Adjust the volume of each part. This setting’s main purpose is to adjust the volume balance between parts.

Value: 0–127

Pan (Part Pan)

Adjust the pan of each part. “L64” is far left, “0” is center, and “63R” is far right.

Value: L64–0–63R

Coarse Tune (Part Coarse Tune)

Adjusts the pitch of the part’s sound up or down in semitone steps (+/-4 octaves).

Value: -48- +48

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.

Fine Tune (Part Fine Tune)

Adjusts the pitch of the part’s sound up or down in 1-cent steps (+/-50 cents).

Value: -50- +50



One cent is 1/100th of a semitone.

Mono/Poly (Part Mono/Poly)

Set this parameter to "MON" when the patch assigned to the part is to be played monophonically, or to "POL" when the patch is to be played polyphonically. When using the setting of the patch assigned to each part (p. 47), set this to "PAT."

Value: MON, POL, PAT

NOTE

For the part to which the rhythm set is assigned, this setting is ignored.

Legato Switch (Part Legato Switch)

You can add legato when performing monophonically. Legato is a playing style in which the spaces between notes are smoothed, creating a flowing feel with no borders between the notes. 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. When using the setting of the patch assigned to each part (p. 48), set this to "PAT."

Value: OFF, ON, PAT

NOTE

For the part to which the rhythm set is assigned, this setting is ignored.

Pitch Bend Range (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. When using the setting of the patch assigned to each part (p. 49), set this to "PAT."

Value: 0-24, PAT

Portamento Switch (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. When using the setting of the patch assigned to each part (p. 48), set this to "PAT."

Value: OFF, ON, PAT

Portamento Time (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. When using the setting of the patch assigned to each part (p. 49), set this to "PAT."

Value: 0-127, PAT

NOTE

For the part to which the rhythm set is assigned, this setting is ignored.

Cutoff Offset (Part Cutoff Offset)

Adjusts the cutoff frequency for the patch or rhythm set assigned to a part.

Value: -64- +63

NOTE

Patches also have a Cutoff Offset setting (p. 47). The final Cutoff frequency value is the sum of the tone Cutoff Frequency value and the patch and part Cutoff Frequency Offset values. If the tone's cutoff frequency is already set to "127" (maximum), there will be no change produced by setting the Cutoff Frequency Offset to a positive value.

Resonance Offset (Part Resonance Offset)

Adjusts the Resonance for the patch or rhythm set assigned to a part.

Value: -64- +63

NOTE

Patches also have a Resonance Offset setting (p. 47). 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.

Attack Time Offset (Part Attack Time Offset)

Adjusts the TVA Envelope Attack Time for the patch or rhythm set assigned to a part.

Value: -64- +63

NOTE

Patches also contain the Attack Time Offset setting (p. 48). 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.

Release Time Offset (Part Release Time Offset)

Adjusts the TVA Envelope Release Time for the patch or rhythm set assigned to a part.

Value: -64- +63

NOTE

Patches also contain a Release Time Offset setting (p. 48). 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.

Decay Time Offset (Part Decay Time Offset)

Adjusts the TVA Envelope Decay Time for the patch or rhythm set assigned to a part.

Value: -64- +63

Vibrate Rate (Part Vibrate 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

Vibrate Depth (Part Vibrate 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

Vibrate Delay (Part Vibrate 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

Octave Shift (Part Octave Shift)

Adjusts the pitch of the part's sound up or down in units of an octave (+/-3 octaves).

Value: -3– +3

NOTE

Note that when a rhythm set is assigned to a part, if the Octave Shift parameter is set, the rhythm tone that is played also changes.

Vel Sens Offset (Part Velocity Sensitivity 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. 48). 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.

Key Fade Lower (Part Keyboard Fade Width Lower)

This determines what will happen to the part's level when a note that's lower than the part'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

Key Range Lower (Part Keyboard Range Lower)

Specifies the lowest note that the tone will sound for each part.

Value: C-1–UPPER

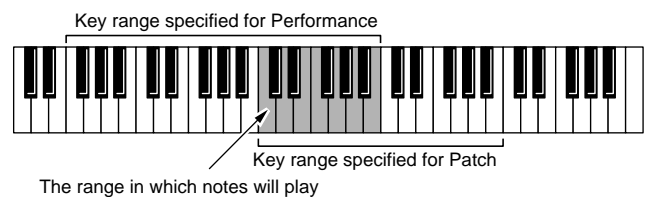
Key Range Upper (Part Keyboard Range Upper)

Specifies the highest note that the tone will sound for each part.

Value: LOWER–G9

NOTE

When the Key Range (p. 58) 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.



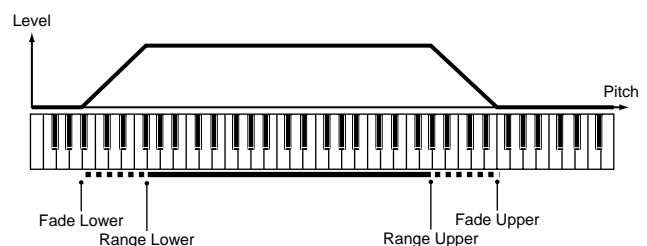
NOTE

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.

Key Fade Upper (Part Keyboard Fade Width Upper)

This determines what will happen to the part's level when a note that's higher than the part'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



Creating a Multitimbre

Voice Reserve

This setting specifies the number of voices that will be reserved for each part when more than 64 voices are played simultaneously.

Value: 0-63, FUL

NOTE

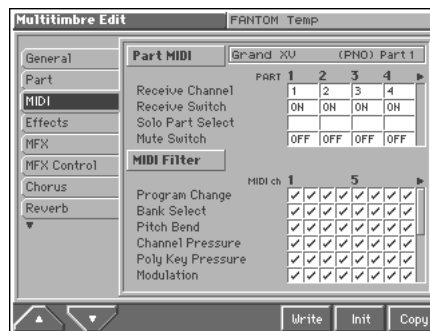
It is not possible for the settings of all parts to total an amount greater than 64. The remaining number of available voices will be displayed at (rest=). Pay attention to this readout as you make set the Voice Reserve parameter.

Calculating the Number of Voices Being Used

The Fantom is able to play up to 64 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.

$(\text{Number of Sounds Being Played}) \times (\text{Number of Tones Used by Patches Being Played}) \times (\text{Number of Waves Used in the Tones})$

Making Settings for Receiving MIDI (MIDI)



For details on the setting, refer to “How to Make the Multitimbre Settings” (p. 112).

Part MIDI

Receive Channel

Specifies the MIDI receive channel for each part.

Value: 1-16

NOTE

If this is set to the same channel as the Multitimbre Ctrl Ch parameter (SYSTEM/MIDI), attempting to switch patches by transmitting only a program change from an external device will actually cause the multitimbre to change. If you want to switch patches, change the Multitimbre Ctrl Ch parameter to another number (p. 182), or transmit bank select and program change messages together (Q&A; p. 14).

Receive Switch

For each part, specify whether MIDI messages will be received (ON), or not (OFF).

If this is “OFF,” the part will respond to the keyboard, but not to the internal sequencer or external MIDI devices. 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

Solo Part Select

Select one part whose sound you want to play. Turn it “SEL” to the part that you want to solo. Parts other than the part you select here will not sound.

Mute Switch

Temporarily mutes (MUT) or releases the mute (OFF) for the performance of 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, MUT

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.

MIDI Filter

Program Change (Receive Program Change Switch)

For each MIDI channel, specify whether MIDI Program Change messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Bank Select (Receive Bank Select Switch)

For each MIDI channel, specify whether MIDI Bank Select messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Pitch Bend (Receive Pitch Bend Switch)

For each MIDI channel, specify whether MIDI Pitch Bend messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Channel Pressure (Receive Channel Pressure Switch)

For each MIDI channel, specify whether MIDI Channel Pressure messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Poly 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). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Modulation (Receive Modulation Switch)

For each MIDI channel, specify whether MIDI Modulation messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Volume (Receive Volume Switch)

For each MIDI channel, specify whether MIDI Volume messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Pan (Receive Pan Switch)

For each MIDI channel, specify whether MIDI Pan messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Expression (Receive Expression Switch)

For each MIDI channel, specify whether MIDI Expression messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it off.

Hold-1 (Receive Hold 1 Switch)

For each MIDI channel, specify whether MIDI Hold 1 messages will be received (ON), or not (OFF). Assigning a check mark (✓) will turn it on, and removing the check mark will turn it 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.

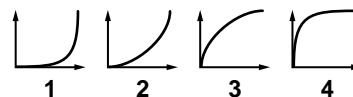
NOTE

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.

Velocity Curve

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.

Value: 1-4



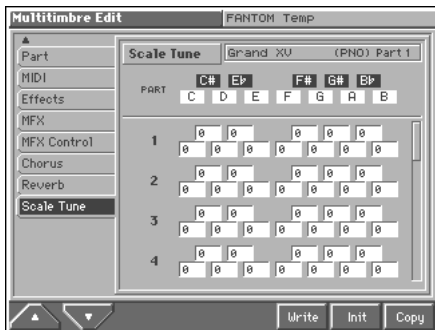
Setting Effects for a Multitimbre (Effects/MFX/MFX Control/Chorus/Reverb)



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

- “Applying Effects in Performance Mode or Multitimbre Mode” (p. 170)
- “Making Multi-Effects Settings (MFX/MFX Control)” (p. 174)
- “Making Chorus Settings (Chorus)” (p. 176)
- “Making Reverb Settings (Reverb)” (p. 177)

Scale Tune Settings (Scale Tune)



For details on the setting, refer to “How to Make the Multitimbre Settings” (p. 112).

C-B (Part Scale Tune C-B)

Make scale tune settings for each part.

Value: -64- +63



Scale Tune is switched on/off by means of the Scale Tune Switch parameter (SYSTEM/Scale Tune) (p. 186).

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 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, 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

Changing the Settings of the Patch Assigned to a Part

When using patches in Multitimbre mode, some settings such as effects settings will be affected by multitimbre settings. If you wish to edit a patch while hearing how it will sound in the multitimbre, 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 is the same.
 Substitute "rhythm set" wherever "patch" appears in a sentence.

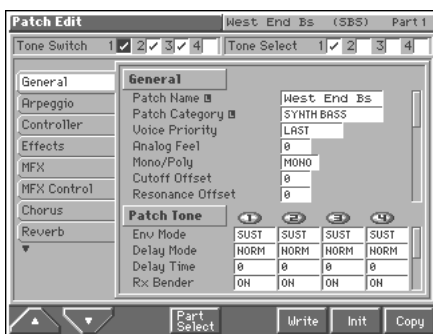
1. Make sure the MULTITIMBRE PLAY screen is displayed.
2. Move the cursor to the part list, and press ▲ or ▼ to select the part whose assigned patch you want to change.
3. Press [MENU].

The Menu window appears.

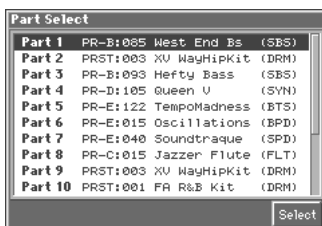


4. Press ▲ or ▼ to select a "Part Patch Edit," and then press [8 (Select)].

The Patch Edit screen will appear for the patch that is assigned to the part you selected in step 2.



5. If you want to make settings for a different part, press [4 (Part Select)], and select it in the Part Select window that appears.



6. The rest of the procedure is the same as when making changes in Patch mode (p. 42).

Playing Back a Song

This chapter explains how you can use the Fantom's sequencer to play back a song.

HINT

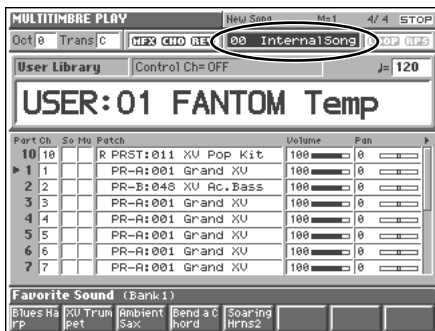
When you play back a song, we recommend that you use the sound generator in **Multitimbre mode** (p. 106). In Multitimbre mode, up to sixteen different sounds can be played separately by the sixteen parts, making this mode ideal for playing songs that are multi-instrument ensembles of drums, bass, piano, etc.

Playing a Song Immediately from Disk (Quick Play)

The Fantom is able to play a song from disk immediately, without first loading the song into internal memory. This is called the **Quick Play** function.

Quick Play can be used with MRC Pro songs (extension: .SVQ) and Standard MIDI Files (extension: .MID).

1. Into the disk drive, insert the disk that contains the song you want to play.
2. Use [CURSOR] to move the cursor to the song file name in the upper part of the PLAY screen.



3. Turn the VALUE dial or press [INC]/[DEC] to select the song that you want to play.

HINT

When the cursor is located at the song file name, you can press [LIST] to access the Song List window, and choose from a list of songs on the disk.

4. Press [STOP/PLAY] to start playback. When the song finishes playing, it will stop automatically. If you want to stop playback midway through the song, press [STOP/PLAY].

MEMO

If you have interrupted song playback, "+" may be displayed at the right of the measure number. This indicates that the song is stopped in mid measure.

Playing Back Songs Consecutively (Chain Play)

The **Chain Play** function lets you consecutively play back (Quick Play) songs on disk in the order you specify. This is analogous to the programmed playback feature found on some CD players.

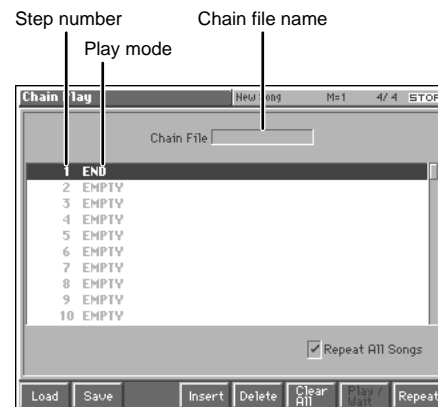
Since not only songs but also sounds (data files) can be loaded, you can play back songs using a wide variety of sounds.

Creating a Chain

Before you use Chain Play, you must create a **chain** that contains the playback order of songs or data files. One chain can contain up to 99 "steps" of songs or data files.

1. Into the disk drive, insert the disk that contains the songs you want to play back.
2. Press [MENU] to access the Menu window.
3. Use ▲ or ▼ to select "Chain Play," and then select [8 (Select)].

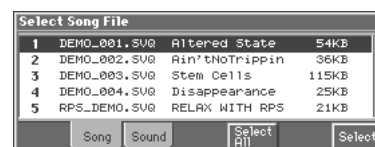
The Chain Play screen appears.



HINT

- If a chain already exists in internal memory, and you want to create a new chain, you will need to erase the existing chain. To erase the chain, press [6 (Clear All)]. The display will ask "Clear All Steps. OK?," so press [8 (Execute)]. If you decide not to erase the chain, press [EXIT].
 - To delete a specific step, move the cursor to the step that you want to delete, and press [5 (Delete)].
4. Press [4 (Insert)].

The Select Song File window appears.



NOTE

If the Select Sound window appears, press [3 (Song)].

5. Use ▲ or ▼ to specify the songs in the chain, in the desired order of playback.

HINT

- By holding down [SHIFT] and pressing ▲ or ▼ you can jump to the beginning or end of the song list.
- By pressing [6 (Select All)] you can add all songs on the disk to the chain.
- To add sounds (data files) to the chain, press [4 (Sound)], and make your selection in the Select Sound window that appears.

6. When you are finished selecting songs for the chain, press [EXIT] to close the Select Song File window.

HINT

- If a chain already exists in internal memory, you can insert additional songs at the cursor location (the current step).
 - By holding down [SHIFT] and pressing ▲ or ▼ you can jump to the first or last step.
7. Next, specify how the songs registered in the chain are to begin playing (Play Mode). In the chain, move the cursor to the song whose Play Mode you want to set, and press [7 (Play/Wait)] to switch the setting.

PLAY: The song will begin playing automatically.

WAIT: The song will begin playing when you press [STOP/PLAY].

Saving a Chain to Disk (Save)

Any chain you create can be saved to disk as a Chain file.

1. Into the disk drive, insert the disk on which you want to save the chain file.

2. Access the Chain Play screen (p. 122).

3. Press [2 (Save)].

The Save Chain File window appears.



4. Assign a file name (up to 8 characters). Press [5 (Name)], and in the Name window that appears, assign the desired file name.



For details on assigning a name, refer to “Assigning a Name” (p. 30).

HINT

If you want to see a list of the chain files saved on the disk, press [6 (List)]. If you want to select one of these file names, move the cursor to the desired chain name, and press [8 (Select)].

5. Press [8 (Execute)] to save the file.

MEMO

The chain file will be given a filename extension of “.SVC”.

NOTE

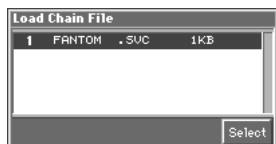
- If you assign a file name that is the same as the name of a file already existing on the disk, and attempt to perform a save, a message of “File “****” Already Exists! Over Write OK?” will appear. If it is OK to overwrite the existing file, press [7 (OK)]. To cancel the Save operation, press [8 (Cancel)].
- If you attempt to save data on a disk that has not been formatted by the Fantom, a message of “Unformatted Disk” will appear. Please format the disk on the Fantom (p. 191).

Loading a Chain from Disk (Load)

Here's how to load a previously saved Chain file from disk.

1. **Into the disk drive, insert the disk that contains the desired chain file.**
2. **Access the Chain Play screen (p. 122).**
3. **Press [1 (Load)].**

The Load Chain File window appears.



4. **Use ▲ or ▼ to select to select the chain file that you want to load, and then press [8 (Select)].**

The selected chain file will be loaded, then you'll be returned to the Chain Play screen.

Playing a Chain

Here's how to play back the songs in the order of the chain you created.

1. **Access the Chain Play screen (p. 122).**
2. **Either create a chain (p. 122), or load a chain from disk.**
3. **If you want to perform Chain Play repeatedly, press [8 (Repeat)] and assign a check mark (✓) to "Repeat All Songs."**
4. **Press [STOP/PLAY] to start Chain Play.**
Playback will begin, starting from the song of step 1. If you want to stop playback before it is finished, press [STOP/PLAY].

HINT

- If you want to begin playback from midway through the chain, use ▲ or ▼ to move to the desired step, and then press [STOP/PLAY].
 - If you want to proceed to the next step during Chain Play, press ►. If you want to return to the beginning of the current step during Chain Play, press ◀.
5. **When you are finished with Chain Play, press [STOP/PLAY].**

NOTE

Chain Play cannot be started or stopped by a Start or Stop message from an external MIDI device. Nor will MIDI Continue, Song Position Pointer, Song Select, or Clock messages be received.

Various Playback Methods

Fast-Forward and Rewind During Playback

Fast-forward, rewind, and jump can be performed during playback, as well as while stopped. Use the following procedures for each operation.

Fast-forward: Press [FWD].

Continuous fast-forward: Press and hold [FWD].

Rapid fast-forward: Press [FWD] and then press [BWD].

Rewind: Press [BWD].

Continuous rewind: Press and hold [BWD].

Rapid rewind: Press [BWD] and then press [FWD].

Jump to the previous locate position: Hold down [SHIFT] and press [BWD].

Jump to the next locate position: Hold down [SHIFT] and press [FWD].

Jump to the beginning of the song: Press [RESET].

NOTE

- A certain amount of time may be required for fast-forward, rewind, or jump during Quick Play.
- Song playback will be interrupted if you jump to the beginning or end of the song while the song is playing.

Playing Back Correctly from the Middle of the Song (MIDI Update)

When you play back from the middle of a song, for example after fast-forward or rewind, the correct patch may not be selected, or the pitch may be incorrect. This is because the MIDI messages in the area that you skipped have not been transmitted to the sound generator. In such cases, you can use the **MIDI Update** function. When you perform **MIDI Update**, the MIDI messages (other than Note messages) from the beginning of the song until the location to which you moved will be transmitted to the sound generator, ensuring that the sound generator will be in the correct state for the resumption of playback.

1. **Make sure that song playback is stopped.**

NOTE

It is not possible to perform MIDI Update while the song is playing.

2. **Hold down [SHIFT] and press [STOP/PLAY].**

The display will indicate "MIDI Update..." while processing takes place, and when finished, will indicate "Complete!"

Muting the Playback of a Specific Instrument

If you want to silence the playback of a specific instrument, you can mute the phrase track that contains the sequencer data for that instrument.



For details on the procedure, refer to “**Silencing the Playback of a Track (Mute)**” (p. 137).

Changing the Playback Tempo of a Song

The tempo at which a song will play back is recorded on its tempo track, but the tempo of the entire song can be adjusted during playback. The tempo at which the song actually plays is called the **playback tempo**.



The playback tempo is a temporary setting. It will be lost if you switch to another song or turn off the power. If you want the song to always play back at this tempo, you must re-save the song to disk (p. 135).

1. Use [CURSOR] to move the cursor to the tempo display (↓ =**) in the upper part of the PLAY screen.
2. Turn the VALUE dial or press [INC]/[DEC] to set the playback tempo.



The playback tempo can be adjusted over a range from one half to double the tempo change values recorded in the tempo track.



If you want to reset the playback tempo to the tempo change values recorded in the tempo track, hold down [JUMP] and turn the VALUE dial or press [INC]/[DEC].

Using a Controller to Change the Playback Tempo

You can assign the Tempo Control function to any one of the following controllers, which then makes it easy to adjust the tempo during song playback. For details on how to make this setting, refer to the explanatory page for each controller.

- Realtime controllers (p. 163)
- D Beam controller (p. 162)
- A pedal connected to the CTL 1/CTL 2 PEDAL jack (p. 164)

Playing a Song Back at a Fixed Tempo (Muting the Tempo Track)

If the tempo changes while a song is being played back, this is because those tempo changes have been recorded in the Tempo track. If you want to override these tempo changes and play back at a fixed tempo, you can mute the Tempo track.



For details on this operation, refer to “**Silencing the Playback of a Track (Mute)**” (p. 137).

Playing Back a S-MRC Format Song

The Fantom is able to play back S-MRC format songs created on the MC-50 in the same way as MRC Pro songs or Standard MIDI Files. However, S-MRC format songs cannot be Quick Played. You must first load them into internal memory and convert them to MRC Pro song format before playing them.

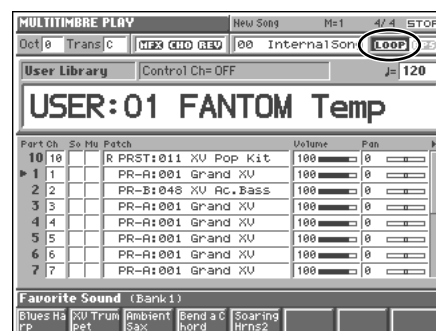


For details on the procedure, refer to “**Loading a File from Disk into the Fantom (Load)**” (p. 188).

Playing Back a Song Repeatedly (Loop Play)

Use the Loop function when you want to repeatedly play back an entire song or just a specified portion of a song.

1. Use [CURSOR] to move the cursor to “LOOP” in the upper part of the PLAY screen.
2. Turn the VALUE dial or press [INC] to turn the Loop switch on.



Now you can perform Loop playback for the region and number of times specified in the Loop window.



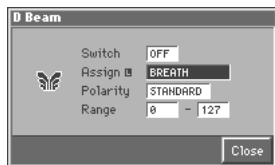
For details on making settings in the Loop window, refer to “**Specifying the Area of a Song that will Repeat (Loop Points)**” (p. 139).

Using the D Beam Controller to Start/Stop Song Playback

You can start/stop song playback by passing your hand over the D Beam controller.

1. Select the song that you want to play back (p. 122).
2. Hold down [JUMP] and press D BEAM [ON/OFF].

The D Beam window appears.



3. Use [CURSOR] to move the cursor to "Assign."
4. Turn the VALUE dial or press [INC]/[DEC] to set this to "START/STOP."
5. Press D BEAM [ON/OFF] to turn on the D Beam controller.
6. When you pass your hand across the D Beam controller, song playback will start. When you pass your hand across it once again, playback will stop.

HINT

You can also start/stop song playback by using a pedal connected to the CTL 1/CTL 2 PEDAL jack (p. 184).

Recording Songs

This chapter explains the procedure for using the Fantom's sequencer to record a song.

HINT

Normally, when recording or playing back a song, you will put the sound generator in **Multitimbre mode**. The reason for this is that in this mode, only the sound of the specified MIDI channel will be heard when you record while playing the keyboard of the Fantom, and that when the song is played back, the parts can independently play up to 16 different sounds. Thus, Multitimbre mode is suitable for recording and playing back a song that uses an ensemble of multiple instruments, such as drums, bass, and piano.

Two Recording Methods

You can use one of two methods of recording: **realtime recording** or **step recording**. Select the method that is appropriate for your situation.

Realtime Recording (p. 129)

Realtime recording is the recording method in which your keyboard playing and controller operations are recorded just as you perform them.

Step Recording (p. 132)

Step recording is the recording method in which you can input notes and rests one by one. This method is suitable for inputting drums or bass with precise timing. In addition to using notes, you can also create a song by putting patterns together.

Before You Record a New Song

Overview of the Recording Process

1. Select a sound
2. Clear the internal memory
3. Specify the time signature of the song (p. 128)
4. Use realtime recording (p. 129) or step recording (p. 132) to record
5. Use track edit (p. 139) or micro edit (p. 153) to edit the song
6. Save the song to disk (p. 135)

Select the Sound to be Used for Recording

Before you record a song, select the sound that you want to use for recording. Select the recording method that is appropriate for your situation.

Multitimbre

Select a multitimbre when you want to record an ensemble performance using multiple instruments. When recording a song, we recommend that you normally select a multitimbre.

Performance

Select a performance if you want to use multiple patches sounded together (a Layer) to create a richer sound when you record your playing, or if you want to play separate patches in different areas of the keyboard (a Split).

Patch/Rhythm set

Select a patch or rhythm set if you want to use a single patch or rhythm set to record your playing.

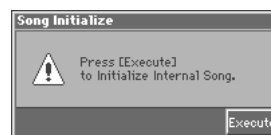
Erasing the Song from Internal Memory (Song Initialize)

When you record a song, the sequencer data is temporarily recorded in internal memory. If you want to record a new song, you must erase any existing sequencer data from internal memory.

NOTE

If internal memory contains an important song that you want to keep, you should first save that song to disk (p. 135).

1. Access the Song Edit screen (p. 136).
2. Press [3 (Init)].
The Song Initialize window appears.

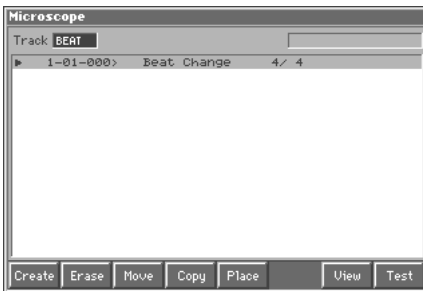


3. Press [8 (Execute)] to execute the operation.
When the operation has been completed, the display will briefly indicate "Complete!"

Specify the Time Signature

Before you record a new song, you must specify the time signature. However, a time signature of 4/4 is automatically specified when you perform the Song Initialize operation or when the power is turned on, so you will need to make this setting only if you want to record a new song in a different time signature.

1. **Access the Song Edit screen (p. 136).**
2. **Press [7 (Micro Edit)].**
The Microscope window appears.
3. **Move the cursor to "Track," and select "BEAT" (beat track).**
The Microscope window for the beat track appears.



4. **Move the cursor to "Beat Change," and specify the time signature.**



If you want to change time signatures midway through the song, refer to "Changing the Time Signature Midway Through the Song" (p. 158).

HINT

When you are recording a pattern and want the pattern to have a time signature other than 4/4, you will need to set the time signature of the pattern separately from the time signature of the song. Refer to "Specifying the time signature of a pattern," below.

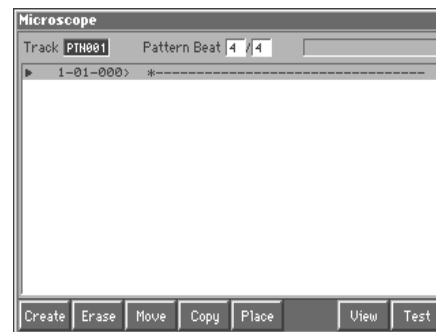
Specifying the Time Signature of a Pattern

Each pattern has a Pattern Beat setting that manages the time signature of that pattern. The pattern beat acts as a guide when the pattern is played or recorded, and is handled independently of the time signature of the song (i.e., the time signature recorded in the beat track).

The pattern beat is normally set to a time signature of 4/4, but you can change this setting when the song has a time signature other than 4/4, or when you want to record a pattern with a time signature different than that of the song.

Only one pattern beat setting can be specified at the beginning of each pattern. This means that it is not possible to change time signatures midway through a pattern. Nor is it possible to delete the pattern beat, or move or copy it.

1. **Press [MENU] to access the Menu window.**
2. **Use ▲ or ▼ to select "Pattern Edit," and then press [8 (Select)].**
The Pattern Edit screen appears.
3. **Press [7 (Micro Edit)].**
The Microscope window appears.
4. **Move the cursor to "Track," and select the pattern whose time signature you want to specify.**



5. **Move the cursor to "Pattern Beat," and set the time signature.**

Recording Your Performance as You Play It (Realtime Recording)

Realtime Recording is the recording method in which your keyboard playing and controller operations are recorded just as you perform them. Use this recording method when you want to capture the nuances of your own performance.

Basic Operation for Realtime Recording

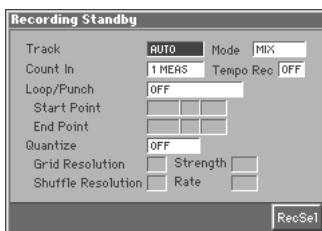
1. Make sure that the preparations for recording have been completed as described in “Before You Record a New Song” (p. 127).

HINT

If you want to record into an existing song, load the desired song into internal memory (p. 136). Then press [FWD] or [BWD] to specify the measure at which you want to begin recording. The measure at which recording will begin is indicated by the “M=” in the upper part of each PLAY screen.

2. Press [REC].

The [REC] indicator will blink, and the Recording Standby window appears.



This window lets you set various parameters for realtime recording.

MEMO

If you want to record a pattern, access the Pattern Edit screen (p. 139) and then press [REC].

3. As basic settings, specify the following three parameters. Use [CURSOR] to move the cursor to each parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting.

Track

Specify the phrase track or pattern on which you want to record.

Value: AUTO, TRK 1-TRK 16

PTN001-PTN100 (* when recording on a pattern)

NOTE

“AUTO” can be selected only when recording in Multitimbre mode. If you select “AUTO,” the part (current part) selected in the MULTITIMBRE PLAY screen will automatically be specified as the recording-destination phrase track.

Mode (Recording Mode)

Select 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 track, 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 track, it will be erased as you record your new performance. Use this when you want to re-record.

Count In

Select how recording is to begin.

Value

OFF: Recording will begin immediately when you press [STOP/PLAY].

1 MEAS: When you press [STOP/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 [STOP/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: Recording will begin when you play the keyboard or press the Hold pedal.

4. When you are finished making settings in the Recording Standby window, press [STOP/PLAY].

MEMO

When recording begins, the Realtime Recording window will appear. In this window, you can specify the Punch-in/out points (p. 130), perform Realtime Erase (p. 132), and use the Rehearsal function (p. 132). For details on these operations, refer to the corresponding reference page. To close this window, press [REC].

5. When you are finished recording, press [STOP/PLAY]. The [REC] indicator will go dark.

HINT

If you are not satisfied with the realtime recording you just made, you can press [MENU], and from the Menu window that appears, select “Undo Realtime Recording” to return to the state prior to recording (Undo).

Recording Tempo Changes in a Song (Tempo Recording)

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 in the tempo track, they will be rewritten. Set the following recording parameters in addition to the basic settings described in step 3 of “Basic Operation for Realtime Recording” (p. 129).

Tempo Rec (Tempo Recording Switch)

Specify whether tempo changes will be recorded (ON), or not (OFF).

Value: OFF, ON



If you assign “TEMPO” as the function to be controlled by a realtime control knob ([1]–[4]), you will be able to use knob movements to control the tempo easily.

Loop Recording and Punch-In Recording

You can record repeatedly over a specified area (Loop recording), or re-record just that area (Punch-in recording).

Set the following recording parameters in addition to the basic settings described in step 3 of “Basic Operation for Realtime Recording” (p. 129).

Loop/Punch

Specify how loop recording or punch-in recording is to take place.

Value

OFF: Loop recording or punch-in recording will not occur.

LOOP (POINT): Recording takes place repeatedly, according to the loop point settings.

LOOP (1 MEAS): The one-measure area starting at the record-start measure will be recorded repeatedly.

LOOP (2 MEAS): The two-measure area starting at the record-start measure will be recorded repeatedly.

LOOP (4 MEAS): The four-measure area starting at the record-start measure will be recorded repeatedly.

LOOP (8 MEAS): The eight-measure area starting at the record-start measure will be recorded repeatedly.

LOOP (16 MEAS): The sixteen-measure area starting at the record-start measure will be recorded repeatedly.

LOOP SONG ALL: The entire song from beginning to end will be recorded repeatedly.

AUTO PUNCH IN: Auto punch-in recording will be performed. You must pre-specify the area (punch points) in which recording is to take place. This is convenient when you want to re-record over a mistake. The song will play back when you begin recording. When you reach the punch-in point, playback will switch to record mode.

MANUAL PUNCH IN: Manual punch-in recording will be performed. Recording takes place (erasing the existing data) in the area that you specify by pressing a pedal or button. This is convenient when you want to re-record more than one location in which you made a mistake. The song will play back when you begin recording. When you press a pedal or button, playback will switch to record mode, and will switch back to play mode when you press the pedal or button once again. By pressing the pedal or button, you can toggle between record and play modes.

Start Point

Specify the measure and beat at which loop recording or auto punch-in recording is to begin. It is not possible to specify the Clock.

End Point

Specify the measure and beat at which loop recording or auto punch-in recording is to begin. It is not possible to specify the Clock.

Using Auto Punch-In Recording

1. In the Recording Standby window, set the Loop/Punch parameter to “AUTO PUNCH IN.”
2. Set the Start Point/End Point parameters to the desired punch points.
3. Move to a measure earlier than the specified Start Point, and press [STOP/PLAY].
The song will begin playing. Recording will begin at the location specified by the Start Point parameter. Playback will resume at the location specified by the End Point parameter.
4. Press [STOP/PLAY] to stop playback.

Using Manual Punch-In Recording



If you want to use a pedal connected to the CTL 1/CTL 2 PEDAL jack to specify the area for recording, you must first set the Pedal 1 or 2 Assign parameter (SYSTEM/Controller) to “PUNCH I/O” (p. 184).

1. In the Recording Standby window, set the Loop/Punch parameter to “MANUAL PUNCH IN.”
 2. Press [STOP/PLAY].
Song playback will begin, and the Realtime Recording window will appear.
-
3. At the point where you want to begin recording, press [6 (Punch In)] or step on the pedal.
Playback will switch to record mode.
 4. At the point where you want to stop recording, once again press [6 (Punch Out)] or step on the pedal.
You will return to playback mode.
 5. Press [STOP/PLAY] to stop playback.

Correct the Timing of Your Playing as You Record (Recording Quantize)

The **Quantize** function automatically corrects inaccuracies in the timing of your keyboard performance, aligning the notes to accurate timing intervals. During realtime recording, you can quantize while you record.

Set the following recording parameters in addition to the basic settings described in step 3 of “**Basic Operation for Realtime Recording**” (p. 129).

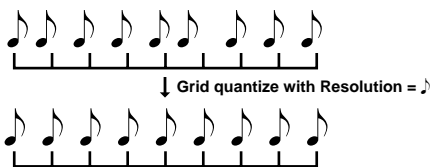
Quantize

Specify whether to quantize while recording.

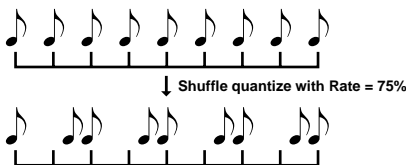
Value

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: ♩, ♪, ♪, ♪, ♪, ♪, ♪, ♪, ♪

Strength (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: ♩, ♪

Rate (Shuffle Quantize 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. **Access the Recording Standby window (p. 129).**

2. **Press [8 (RecSel)].**

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, such as sound parameters.

4. **Press [8 (On/Off)] to specify whether the message will be recorded or not recorded.**

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 [5 (All Off)], no sequencer data will be recorded.

If you press [6 (All On)], all of the sequencer data will be recorded.

5. **Press [EXIT] to close the Recording Select window.**

Erasing Unwanted Data While You Record (Realtime Erase)

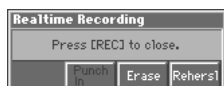
Realtime Erase is a function that erases unwanted data during realtime recording. This is particularly convenient during loop recording, since it lets you erase data without stopping recording.

NOTE

Realtime Erase can be executed only if the Recording Mode is set to "MIX."

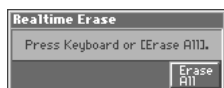
1. Begin realtime recording (p. 129).

The Realtime Recording window appears.



2. Press [7 (Erase)].

The Realtime Erase window appears.



3. Erase unwanted data.

To erase all data (except for Pattern Call messages), press [8 (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 [EXIT] to close the Realtime Erase window.

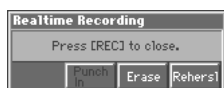
You will return to the normal recording state.

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 audition the sound that you will use next, or to practice the phrase that you will record next.

1. Begin realtime recording (p. 129).

The Realtime Recording window appears.



2. Press [8 (Rehearsl)].

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 [8 (Rehearsl)] once again.

Inputting Data One Step at a Time (Step Recording)

Step Recording is the method of inputting notes and rests individually, as if you were writing them onto a musical staff. In addition to inputting notes, this method can also be used to create a song by joining patterns.

Inputting Notes and Rests

1. Make sure that the preparations for recording have been performed as described in "Before You Record a New Song" (p. 127).

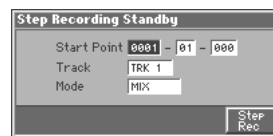
HINT

If you will be recording into an existing song, load the desired song into internal memory (p. 136). Then use [FWD] or [BWD] to specify the measure at which you want to start recording. The recording-start measure is indicated by "M=" at the top of each PLAY screen.

2. Access the Song Edit screen or the Pattern Edit screen (p. 136).

3. Press [6 (Step Rec)].

The [REC] indicator will blink, and the Step Recording Standby window appears.



4. Make settings for step recording. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to set it.

Start Point

Specify the location (measure-beat-clock) at which recording will begin.

Track

Specify the recording-destination phrase track or pattern.

Value

TRK 1–TRK 16: The specified phrase track

PTN 001–PTN 100: The specified pattern

Mode (Recording Mode)

Select 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 track, 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 track, it will be erased as you record your new performance. Use this when you want to re-record.

5. Press [8 (Step Rec)].

The [REC] indicator will light, and the Step Recording window appears.

6. Press [3 (Note)].

The following window appears.



7. Specify the note that you want to input. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting.

Step Time

Specify 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, ♪, ♪, ♪₃, ♪, ♪, ♪

Gate Time (Gate Time Ratio)

Specify the proportion of the gate time relative to the step time. The gate time is the length between note-on and note-off. Specify 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 %

Velocity

Specify the strength with which the note will be played. If you want this to be the strength with which you actually pressed the key, select "REAL." Otherwise, use settings of p (piano)=60, mf (mezzo forte)=90, or f (forte)=120 as general guidelines.

Value: 1-127

8. Press a key on the keyboard.

When you press a key, the display will indicate the MIDI channel "Ch," note name "Note," velocity "Vel," and gate time "Gate" of that note.



The note will not be finalized as long as you hold down the key. This means that you will be able to modify the various parameters of the note (Step Time, Gate Ratio, Velocity).

9. When you release the key, the note you input will be finalized, and you will be ready to input the next note.



If you input a note or a rest by mistake, press [BWD] or [6 (Step Back)] to delete it. When you delete a note, the deleted note will sound by way of confirmation.

10. Repeat the above steps to continue inputting.



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 Velocity parameter, it is not normally necessary to change them, so all you have to do is set the Step Time parameter and specify the pitch (note) of each note.

11. When you are finished step recording, press [EXIT] or [STOP/PLAY].

The [REC] indicator will go dark.



If you are not happy with the results of the previous step recording, you can press [MENU], and from the Menu window that appears, select "Undo Step Recording" to return to the state prior to recording (Undo).

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's sequencer uses a TPQN (Ticks Per Quarter Note; i.e., resolution) of 480, a quarter note gate time is 480 clocks.

Note	Gate time
♩	30
♩ ₃	40
♪	45
♪	60
♪ ₃	80
♪	90
♪	120
♪ ₃	160
♪	180
♪	240
♪ ₃	320
♪	360
♪	480
♪ ₃	640
♪	720
♪	960



The gate time that is recorded in step recording will be the original gate time value multiplied by the value of the Gate Ratio parameter. For example, if the Gate Ratio parameter is set to "80%," inputting a quarter note will mean that the gate time is 480 x 0.8=384.

Inputting a Chord

Press the chord. A chord will be input when you release all keys simultaneously. The chord will not be input as long as even one key remains pressed, so you can change the keys being pressed to correct the chord.

Inputting a Tie

After specifying the Step Time parameter for the note that you want to tie, press [7 (Tie)]. For example, if you want to tie a quarter note after a half note, input the half note, and then set the Step Time parameter to “ ♩ ” and press [7 (Tie)].

Inputting a Rest

Set the Step Time parameter to the length of the desired rest, and press [8 (Rest)].

Assigning a Pattern to a Phrase Track

You can create a song by combining previously recorded patterns. This is done using step recording to assign patterns to a phrase track. However, please be aware that the patterns themselves are not placed in the phrase track. Rather, **Pattern Call messages** are placed in the phrase track to specify which pattern should be played back. This means that if you later modify the contents of a pattern, the song playback will also be affected.

NOTE

When you assign a pattern to a phrase track, its pattern beat will be ignored, and the pattern will use the time signature of the beat track. If the pattern beat and the beat track have different settings, the length of the measures will not match, and the playback may become incorrectly aligned. If this occurs, re-specify the time signature of the beat track (p. 128).

1. Follow the procedure for “Inputting Notes and Rests” (p. 132) up through step 5.
2. Press [4 (Pattern)].
The following window appears.



3. Turn the VALUE dial or press [INC]/[DEC] to select the pattern number (1–100) that you want to assign to the phrase track.

The pattern name of the selected pattern is displayed in “Name.” “Beat” indicates the pattern beat, and “Length” shows the number of measures in the pattern.

4. Press [8 (Put Pattern)].

A Pattern Call message for the pattern selected by the Pattern parameter will be recorded. You will advance by the length of the measures in that pattern, and will be ready to input the next pattern.

HINT

If you input the wrong pattern, you can press [BWD] or [6 (Step Back)] to delete the previously input Pattern Call message.

5. Repeat the above steps to assign additional patterns.
6. When you are finished with step recording, press [EXIT] or [STOP/PLAY].

The [REC] indicator will go dark.

HINT

If you are not satisfied with the step recording that you just performed, press [MENU], and from the Menu window that appears, select “Undo Step Recording” to return to the state prior to recording (Undo).

Saving a Recorded Song on Disk

A song you record is temporarily stored in internal memory. A song in internal memory will be lost when the power is turned off or when you load another song. If you want to keep the song, you must save it to disk.

1. Into the disk drive, insert the disk on which you will save the song.
2. Press [MENU] to access the Menu window.
3. Use ▲ or ▼ to select “Song Edit,” and then press [8 (Select)].

The Song Edit screen appears.

4. Press [2 (Save)].

The Select Command window appears.



5. Use ▲ or ▼ to select the format in which the song will be saved.

Save Song File: The song will be saved to disk in MRC Pro song format. The settings of the currently selected multitimbre/performance will also be saved with the data. An extension of “.SVQ” will be added automatically.

Save SMF (Format 0): The song will be converted into a Format 0 Standard MIDI File (in which all sequencer data is saved in a single phrase track), and saved to disk. An extension of “.MID” will be added automatically.

Save SMF (Format 1): The song will be converted into a Format 1 Standard MIDI File (in which the sequencer data is saved in multiple phrase tracks), and saved to disk. An extension of “.MID” will be added automatically.

NOTE

- The extension will be “.MID” for both “Save SMF (Format 0)” and “Save SMF (Format 1).” These two cannot be distinguished.
- When you save the data using “Save Song File,” the settings of the patches and rhythm sets assigned to each part of the multitimbre/performance will not be saved.
- When you save the data using “Save Song File,” the multitimbre/performance settings at the time you saved the data will be saved. This means that if the multitimbre/performance was modified midway through the song, and you save immediately after recording, the song will start with the multitimbre/performance sounds that were selected at the time of saving. If you modify the multitimbre/performance during the song, use the Microscope window to record the desired bank select and program number data (corresponding to the multitimbre/performance settings from which you will start) at the beginning of the song (p. 156).

- Even if you save using “Save Song File,” the song will not use the correct sounds when played back on a MRC Pro sequencer other than the Fantom. In order to make the song play back with the correct songs, you must record the appropriate bank select and program number in the song.

6. After specifying the format in which the song will be saved, press [8 (Select)].

The Save **** window appears.



MEMO

The window title will depend on the format in which the song is being saved.

7. Assign a file name (up to 8 characters). Press [5 (Name)], and use the Name window that appears to assign a file name.



For details on assigning a name, refer to “Assigning a Name” (p. 30).

MEMO

If a song name has already been assigned to the song, the first eight characters of the song name will be used to automatically assign a file name. If no song name has been assigned, “SONG_000” will be assigned automatically.

HINT

If you want to view a list of the files stored on disk, press [6 (List)]. To select a file name from this list, move the cursor to the desired file and press [8 (Select)].

File Name and Song Name

MRC Pro songs and Standard MIDI Files have a song name in addition to a file name. The file name is used to distinguish between files, and must be assigned when you save a file. It will help you manage songs if you use the file name to distinguish between types of song, and use the song name to assign a title.



Use the Song Name window to assign a song name (p. 137).

8. Press [8 (Execute)] to execute the operation.

NOTE

- If you assign a file name that is the same as the name of a file already existing on the disk, then attempt to save it, a message of “File “*****” Already Exists! Over Write OK?” will appear. If you want to overwrite the existing file, press [7 (OK)]. If you decide to cancel without saving, press [8 (Cancel)].
- If you attempt to save data to a disk that has not been formatted by the Fantom, a message of “Unformatted Disk” will appear. Please format the disk on the Fantom (p. 191).

Editing Songs

This chapter explains the procedure for editing songs.

Loading the Song You Want to Edit

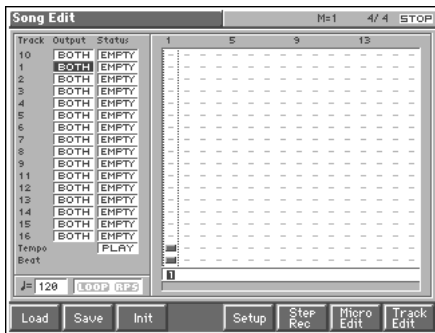
When you edit a song, you're modifying a song that's already recorded into internal memory. When you're going to edit a song saved to disk, you have to first load it into the internal memory.

NOTE

The internal song will be lost if you turn power off or load another song into internal memory. If internal memory contains a song you wish to keep, you must save that song to disk (p. 135).

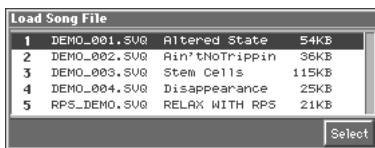
1. Into the disk drive, insert the disk that contains the song you want to edit.
2. Press [MENU] to open the Menu window.
3. Press ▲ or ▼ to select "Song Edit," and then press [8 (Select)].

The Song Edit screen appears.



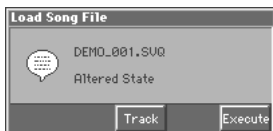
4. Press [1 (Load)].

The Load Song File window appears.



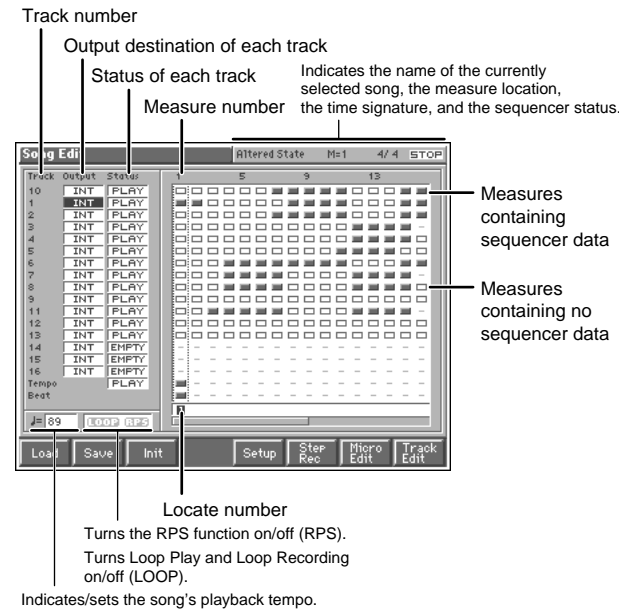
5. Use ▲ or ▼ to select the song that you want to edit, and then press [8 (Select)].

The Load Song File window appears.



6. Press [8 (Execute)].

When the song has finished loading, the performance data of the loaded song will be displayed in the Song Edit screen.



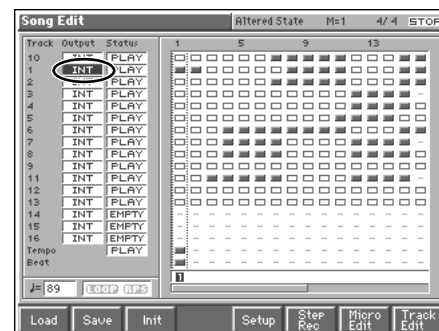
MEMO

If you play back the song while the Song Edit screen is displayed, the screen will scroll in keeping with the song playback location.

Using Different Sound Generators for Each Track

By specifying the output destination for each track, you can use a variety of sound generators when playing back a song.

1. Access the Song Edit screen.
2. Use [CURSOR] to move the cursor to "Output" for the track whose output destination you want to specify.



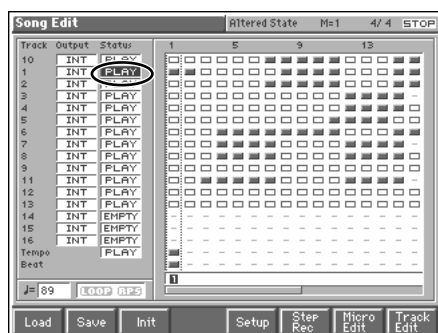
- By turning the VALUE dial or by pressing [INC]/[DEC], set the value.
OFF: The track will not be sounded.
INT: The track will be sounded by the Fantom's internal sound generator.
MIDI: The track will be sounded by an external sound generator connected to the MIDI OUT connector.
BOTH: The track will be sounded by both the internal and external sound generators.

NOTE
 This setting will be ignored for tracks whose "Status" is set to "MUTE."

Silencing the Playback of a Track (Mute)

If you wish to silence specific instruments during playback, you can mute the appropriate Phrase track containing that sequencer data.

- Access the Song Edit screen (p. 136).
- Use [CURSOR] to move the cursor to "Status" for the track that you want to silence.



MEMO
 Tracks in which no sequencer data has been recorded are displayed as "EMPTY."

- Turn the VALUE dial or press [DEC] to select "MUTE."

NOTE
 Note that if you save a song with a Phrase track muted in the Standard MIDI File format, that Phrase track's data will not be saved. If you save a song that has a muted Phrase track in the MRC Pro song format, the mute status of the track will also be saved.

HINT
 If you set the tempo track (Tempo) "Status" to "MUTE," the tempo track will be muted. If tempo changes have been recorded in a song, but you want to play the song at a fixed tempo, you can mute the tempo track.

Overall Settings for the Song

Here you can assign a song name, make Locate Position settings, and make other settings that affect the entire song. These settings are saved when you save the song to disk.

Basic Procedure

- Access the Song Edit screen, and then load the song for which you are going to make settings (p. 136).
- Press [5 (Setup)].
 The Song Setup window appears.



- Use ▲ or ▼ to select the parameter that you want to set, and then press [8 (Select)].
 A window for the selected parameter setting appears.
- Set the parameter.

NOTE
 Details on how to set each parameter are given below. For details on settings for the RPS function, refer to "Settings for the RPS Function" (p. 159).

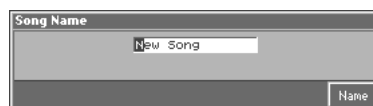
- When you have finished making settings, press [EXIT] to return to the Song Edit screen.
- If you want to save the settings you made, press [2 (Save)] to save the song to disk (p. 135).

Assigning a Name to a Song (Song Name)

You can assign a song name to a song, or edit the song name. This song name is independent of the file name assigned when saving a song to disk. Although you are not required to assign a song name, you can assign one using up to 15 characters, and you may find it a convenient way to store a title or memo that will help you organize your songs.

NOTE
 Some commercially available Standard MIDI Files contain copyright data. It is not possible to assign or modify the song name for such songs.

- Access the Song Edit screen, and then load the song whose song name you want to assign (p. 136).
- Access the Song Setup window.
- Use ▲ or ▼ to select "Song Name," and then press [8 (Select)].
 The Song Name window appears.



4. Press ◀ or ▶ to move the cursor to the location where you want to input a character.
5. Turn the VALUE dial or press [INC]/[DEC] to select a character.
6. Repeat steps 4 and 5 to assign a song name.

HINT

You can press [8 (Name)] and use the Name window to assign a song name (p. 30).

Assigning a Name to a Pattern (Pattern Name)

You can assign or modify the pattern name of each pattern. A pattern name of up to 10 characters can be assigned.

1. Load the song containing the pattern for which you want to assign a name (p. 136).
2. Access the Song Setup window (p. 137).
3. Use ▲ or ▼ to select “Pattern Name,” and then press [8 (Select)].

The Pattern Name window appears.



4. Move the cursor to “Pattern,” and select the pattern for which you want to assign a name.
5. Move the cursor to the pattern name.
6. Press ◀ or ▶ to move the cursor to the location of the character that you want to input.
7. Turn the VALUE dial or press [INC]/[DEC] to select a character.
8. Repeat steps 6 and 7 to assign the pattern name.

HINT

You can press [8 (Name)] and use the Name window to assign a pattern name (p. 30).

Assigning Markers (Locate Positions) to a Song

Markers can be assigned to any location in a song. These are called **Locate Positions**. Normally, locations in a song are indicated as “measure-beat-clock,” but a locate position is also displayed as an absolute time of “hours:minutes:seconds:frames.”

Assigning a Locate Position

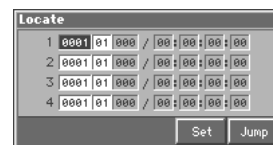
Up to four locate positions can be assigned in each song.

NOTE

It is not possible to assign a locate position to a pattern.

1. Load the song in which you want to specify a locate position (p. 136).
2. Access the Song Setup window (p. 137).
3. Use ▲ or ▼ to select “Locate,” and then press [8 (Select)].

The Locate window appears.



4. Move the cursor to the “measure” or “beat” value of the locate number that you want to set.
 5. Turn the VALUE dial or press [INC]/[DEC] to set each value.
- At the bottom of the Song Edit screen, you will see the locate numbers (1-4) of the locate positions you have specified.

HINT

When you press [7 (Set)], the locate position will be stored as the current location of the song. You can also set this by pressing [7 (Set)] while you listen during song playback.

Moving to a Locate Position

Use the following procedure to change the song location to a Locate Position.

1. Access the Locate window.
2. Use ▲ or ▼ to move the cursor to the locate number of the locate position to which you want to move.
3. Press [8 (Jump)].

You will move to the specified locate position.

HINT

You can hold down [SHIFT] and press [BWD] to jump to the preceding location position, or hold down [SHIFT] and press [FWD] to jump to the next locate position.

Specifying the Area of a Song that will Repeat (Loop Points)

When using Loop Play or Loop Recording, you can use the loop points you specify here to specify the repeated area, as an alternative to repeating the specified number of measures.

NOTE

If the song time signature is different than the pattern time signature (pattern beat), the loop points will be displayed differently in the song and pattern.

1. Load the song for which you want to set loop points (p. 136).
2. Access the Song Setup window (p. 137).
3. Use ▲ or ▼ to select "Loop," and then press [8 (Select)].
The Loop window appears.



4. Move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting.

Repeat

Select the number of repeats (1–99). If you want repetition to continue until you press [STOP/PLAY], set this to "INFINIT."

Start

Specify the location at which repetition is to begin.

HINT

If you press [7 (Set)], the current location of the song will be set as the starting location.

End

Specify the location at which repetition will end. The location you specify here will not be included in the repeated area.

HINT

If you press [7 (Set)], the current location of the song will be set as the ending location.

5. If you press [8 (Loop)] to assign a check mark (✓), looping will be turned on.

Editing Sequencer Data Over the Specified Range (Track Edit)

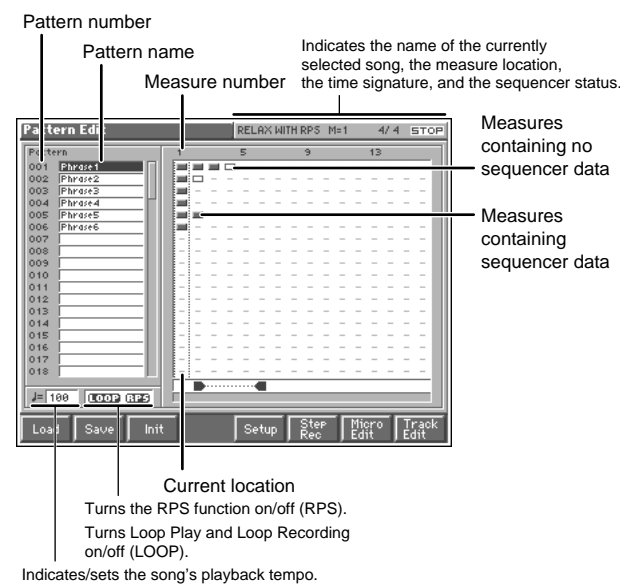
Track Edit lets you edit areas of sequencer data that you specify.

Basic Operation for Track Editing

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).

MEMO

If you want to edit the pattern, access the Pattern Edit screen by selecting "Pattern Edit" from the Menu window.

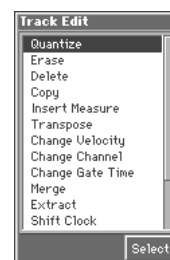


NOTE

If you select a song that is stored on disk, a message of "The Song "*****" is not Internal Song. Load anyway for Song Edit?" will ask you for confirmation. If you want to erase the song from the internal memory and load the new song, press [7 (OK)]. If you decide not to erase the song from the internal memory, press [EXIT].

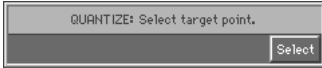
2. Press [8 (Track Edit)].

The Track Edit window appears.



- Use **▲** or **▼** to select the desired function, and press **[8 (Select)]**.

A message like the following appears, prompting you to specify the region that is to be affected by the track editing operation.



- Specify the region that you want to edit. Use **[CURSOR]** to move the cursor to the measure of the track or pattern that you want to edit. If you want to specify all tracks, press **[7 (TrkAll)]**. To specify a range of measures, hold down **[SHIFT]** and press **▶**.

The region you specify here will be reflected in the editing region setting in the window of the track edit function.

- Once you've specified the region you intend to edit, press **[8 (Select)]**.

A window with settings for the desired function appears. Verify that the object of editing is as you specified earlier, and make changes here if necessary.

- Set the parameters for each function. Use **[CURSOR]** to move the cursor to the desired parameter, and turn the **VALUE** dial or press **[INC]/[DEC]** to set the value.



For details on the setting windows of each track editing function, refer to the following explanations of each function.

- Press **[8 (Execute)]** to execute the operation.

When the operation is completed, the display will briefly indicate "Complete!"

HINT

- If you decide not to execute the operation, press **[EXIT]**.
- If you are not satisfied with the results of executing the function, you can press **[MENU]**, and from the Menu window that appears, select "Undo Track Edit" to return to the state prior to executing the operation (Undo).

- If you want to save the edited result, press **[2 (Save)]** to save the song to disk (p. 135).

Aligning a Song's Timing (Quantize)

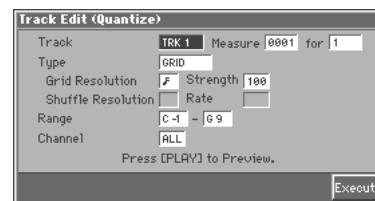
In the chapter "Recording Songs" (p. 127), we explained **Recording Quantize**, which lets you quantize during realtime recording. Alternatively, it is also possible to quantize a song that has already been recorded.

The Fantom has a **Preview function** that allows playing back the results of a Quantize operation while you are still setting parameters (before actual execution). This helps to make optimal Quantize settings.

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.

- Access the Song Edit screen, and then load the song you want to edit (p. 136).
- Press **[8 (Track Edit)]**.
The Track Edit window appears.
- Press **▲** or **▼** to select "Quantize," and then press **[8 (Select)]**.
A message of "QUANTIZE: Select target point." appears.
- Use **[CURSOR]** to move the cursor to the first measure of the track or pattern that you want to quantize.
- Hold down **[SHIFT]** and press **▶** to move the cursor to the last measure of the track or pattern that you want to quantize, and press **[8 (Select)]** to specify it.
The Track Edit (Quantize) window appears.



- Use **[CURSOR]** to move the cursor to the desired parameter, and turn the **VALUE** dial or press **[INC]/[DEC]** to make the setting. First check the region that is to be affected by the editing operation, and then make corrections if you want to change it.

Track

Check/modify the phrase track(s) or pattern that is to be quantized.

Value

TRK 1–TRK 16: The specified phrase track

PTN001–PTN100: The specified pattern

Measure, for (Edit Range)

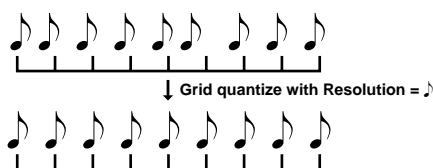
Check/modify the range of measures that are to be quantized. If you set "for" to "ALL," all measures will be specified.

Type (Quantize Type)

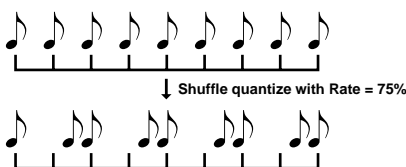
Specifies the Quantize range.

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.



Grid 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: ♩, ♪, ♫, ♮, ♯, ♭, ♭♭, ♮

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.

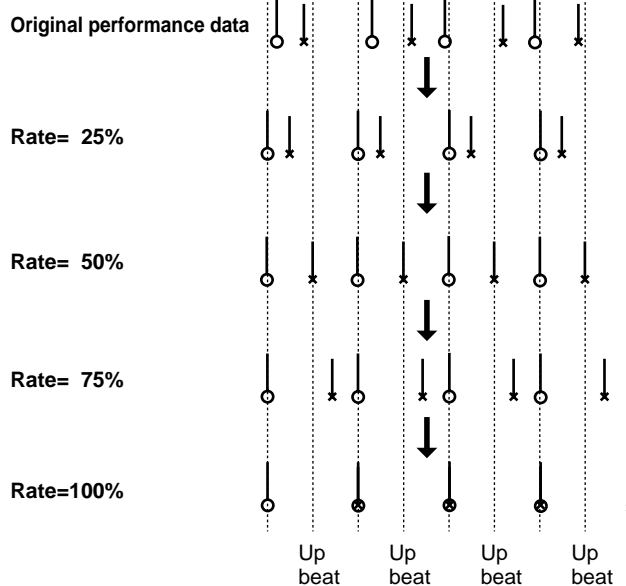
Shuffle Resolution

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.



Range

Specifies the range of note numbers to be quantized.

For example, if you want to quantize the notes between C3 and C4, specify "C3-C4." You can also specify the key range by pressing keys on the keyboard.

Channel (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, 1-16

7. When you are finished making settings, press [8 (Execute)] to execute.

Preview Function

The Preview function allows you to hear how quantizing will work while you are still setting Quantize parameters (before you execute operation). This is called the **Preview function**. If you modify parameter values during preview playback, the next preview playback will include those latest value changes. Try various parameter settings to find the one that works best.

NOTE

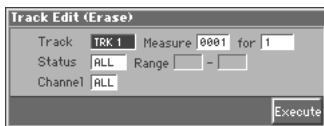
Pattern Call events assigned to a phrase track or muted phrase tracks cannot be previewed.

Pressing [STOP/PLAY] when the Track Edit (Quantize) window is displayed selects Preview mode. The two measures from the current location of the song will play back repeatedly. The preview start location can also be specified by pressing [FWD] or [BWD]. To exit Preview mode, press [STOP/PLAY] once again.

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.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).
2. Press [8 (Track Edit)].
The Track Edit window appears.
3. Press ▲ or ▼ to select "Erase," and then press [8 (Select)].
A message of "ERASE: Select target point." will be displayed.
4. Use [CURSOR] to move the cursor to the first measure of the track or pattern that you want to erase. To specify all tracks, press [7 (TrkAll)].
5. Hold down [SHIFT] and press ► to move the cursor to the last measure of the track or pattern that you want to erase, and press [8 (Select)] to specify it.
The Track Edit (Erase) window appears.



6. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the editing operation, and make corrections if you want to change it.

Track

Check/modify the track(s) or pattern that is to be erased.

Value

ALL: Phrase tracks 1–16, the beat track, and the tempo track

TRK 1–TRK 16: The specified phrase track

TEMPO: Tempo track

PTN001–PTN100: The specified pattern

Measure, for (Edit Range)

Check/modify 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: All types of sequencer data

NOTE: Note

P.AFT: Polyphonic Aftertouch

C.C: Controller numbers

PROG: Program numbers

C.AFT: Channel Aftertouch

BEND: Pitch Bend

EXC: System Exclusive messages

Tune: Tune Request

PTN: Pattern Call Message data



If the Track parameter is set to "TEMPO," the Status parameter will not be available.

Range

If you have set the Status parameter to "NOTE," "P.AFT," "C.C," or "PROG," specify the range. Set the minimum value of the range at the left, and the maximum value at the right.



- To erase all Note or Polyphonic Aftertouch data, specify "C-1–G9." To erase C4 Note/Polyphonic Aftertouch data, specify "C4–C4."
- If you wish to delete all controller numbers, select "0–127." If you wish to delete all program numbers, select "1–128." To erase number 4, specify "4–4." To erase numbers from 3 to 14, specify "3–14."

Channel (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, 1–16



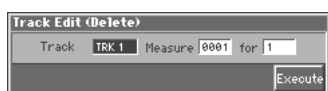
If you set the Track parameter to "TEMPO," or if the Status parameter is set to "EXC," "TUNE" or "PTN," the Channel parameter will not be available.

7. When you have finished making settings, press [8 (Execute)] to execute the operation.

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.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).
2. Press [8 (Track Edit)].
The Track Edit window appears.
3. Press ▲ or ▼ to select "Delete," and then press [8 (Select)].
A message of "DELETE: Select target point." will be displayed.
4. Use [CURSOR] to move the cursor to the first measure of the track or pattern that you want to delete. If you want to specify all tracks, press [7 (TrkAll)].
5. Hold down [SHIFT] and press ► to move the cursor to the last measure of the track or pattern that you want to delete, and press [8 (Select)] to specify it.
The Track Edit (Delete) window appears.



6. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the operation, and correct it if necessary.

Track

Check/correct the track(s) or pattern that is to be deleted.

Value

ALL: Phrase tracks 1–16, the beat track, and the tempo track

TRK 1–TRK 16: The specified phrase track

TEMPO: Tempo track

PTN001–PTN100: The specified pattern

Measure, for (Edit Range)

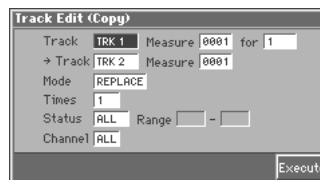
Check/correct the range of measures that are to be deleted. If you set "for" to "ALL," all measures will be specified.

7. When you have finished making settings, press [8 (Execute)] to execute the operation.

Copying Phrases (Copy)

This function copies a specified area of sequencer data. It is convenient for repeating the same phrase several times. You can copy patterns to a phrase track, or copy data from a phrase track to a pattern.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).
2. Press [8 (Track Edit)].
The Track Edit window appears.
3. Press ▲ or ▼ to select "Copy," and then press [8 (Select)].
A message of "COPY: Select source point." appears.
4. Use [CURSOR] to move the cursor to the first measure of the copy-source track or pattern. If you want to specify all tracks, press [7 (TrkAll)].
5. Hold down [SHIFT] and press ► to move the cursor to the last measure of the copy-source track or pattern, and press [8 (Select)] to specify it.
A message of "COPY: Select destination point." appears.
6. Use [CURSOR] to move the cursor to the measure of the copy-destination track or pattern, and press [8 (Select)] to specify it.
The Track Edit (Copy) window appears.



7. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the operation, and correct it if necessary.

Track (Source Track)

Check/modify the copy-source track(s) or pattern.

Value

ALL: Phrase tracks 1–16, the beat track, and the tempo track

TRK 1–TRK 16: The specified phrase track

TEMPO: Tempo track

PTN001–PTN100: The specified pattern

Measure, for (Edit Range)

Check/modify the range of copy-source measures. If you set "for" to "ALL," all measures will be specified.

→ Track (Destination Track)

Check/modify the copy-destination track or pattern.

Value

ALL: Phrase tracks 1–16, the beat track, and the tempo track

TRK 1–TRK 16: The specified phrase track

TEMPO: Tempo track

PTN001–PTN100: The specified pattern

MEMO

- If you set the source track to “ALL,” the destination track can be set to either “ALL” or “PTN001–PTN100.” If you select “PTN001–PTN100,” the data from the 16 phrase tracks will be merged as it is copied.
- If “TEMPO” is selected as the source track, then only “Tempo” can be selected for the destination track.

→ Measure (Destination Measure)

Check/modify the copy-destination measure.

If you want the copy destination to be right after the last measure of a song, set this parameter to “END.”

Mode (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.

Times (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: All types of sequencer data

NOTE: Note

P.AFT: Polyphonic Aftertouch

C.C: Controller numbers

PROG: Program numbers

C.AFT: Channel Aftertouch

BEND: Pitch Bend

EXC: System Exclusive messages

Tune: Tune Request

PTN: Pattern Call Message data

NOTE

If the source track is set to “TEMPO,” the Status parameter will not be available.

Range

If you have selected “NOTE,” “P.AFT,” “C.C,” or “PROG” for the Status parameter, specify the range. Specify the minimum value of the range at the left, and the maximum value at the right.

HINT

- To copy all Note or Polyphonic Aftertouch data, specify “C-1–G9.” To copy C4 Note/Polyphonic Aftertouch data, specify “C4–C4.”
- If you want to copy all controller numbers, set this to “0–127.” If you want to copy all program numbers, set this to “1–128.” To copy number 4, set “4–4.” To copy numbers from 3 to 14, specify “3–14.”

Channel (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, 1–16

NOTE

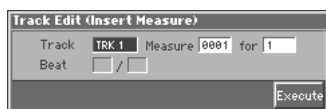
If you set the source track to “TEMPO,” or if the Status parameter is set to “EXC,” “TUNE” or “PTN,” the Channel parameter will not be available.

8. When you have finished making settings, press [8 (Execute)] to execute the operation.

Inserting a Blank Measure (Insert Measure)

This function inserts blank measures into a specified song position. As you can set the time signature of the blank measures, this is convenient when inserting a phrase having a different time signature in the middle of a song.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).
2. Press [8 (Track Edit)].
The Track Edit window appears.
3. Press ▲ or ▼ to select "Insert Measure," and then press [8 (Select)].
A message of "INSERT MEASURE: Select target point." appears.
4. Use [CURSOR] to move the cursor to the first measure of the track or pattern into which you want to insert blank measures. If you want to specify all tracks, press [7 (TrkAll)].
5. Hold down [SHIFT] and press ► to move the cursor to the last measure of the track or pattern into which you want to insert blank measures, and press [8 (Select)] to specify it.
The Track Edit (Insert Measure) window appears.



6. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the operation, and correct it if necessary.

Track

Check/modify the track(s) or pattern into which blank measures will be inserted.

Value

ALL: Phrase tracks 1–16, the beat track, and the tempo track

TRK 1–TRK 16: The specified phrase track

TEMPO: Tempo track

PTN001–PTN100: The specified pattern

Measure, for (Edit Range)

Check/modify the range of measures into which blank measures will be inserted. If you set "for" to "ALL," all measures will be specified.

Beat

In general, the time signature of the measure immediately before insertion will be used for the blank measures. To change the time signature of the blank measures to be inserted, use the Beat parameter.

NOTE

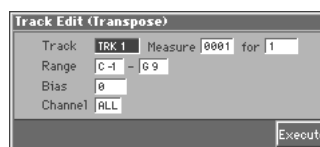
Beat can be specified only when you have set the Track parameter to "ALL."

7. When you have finished making settings, press [8 (Execute)] to execute the operation.

Transpose the Key (Transpose)

This transposes the pitch of notes within a specified area, over a +/- 99 semitone range. Use this function to modulate from one key to another in a song, or to transpose the entire song.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).
2. Press [8 (Track Edit)].
The Track Edit window appears.
3. Press ▲ or ▼ to select "Transpose," and then press [8 (Select)].
A message of "TRANSCOPE: Select target point." appears.
4. Use [CURSOR] to move the cursor to the first measure of the track or pattern that you want to transpose. If you want to specify all tracks, press [7 (TrkAll)].
5. Hold down [SHIFT] and press ► to move the cursor to the last measure of the track or pattern that you want to transpose, and press [8 (Select)] to specify it.
The Track Edit (Transpose) window appears.



6. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the operation, and correct it if necessary.

Track

Check/modify the phrase track(s) or pattern that is to be transposed.

Value

ALL: Phrase Tracks 1–16

TRK 1–TRK 16: The specified phrase track

PTN001–PTN100: The specified pattern

Measure, for (Edit Range)

Check/modify the range of measures that are to be transposed. If you set "for" to "ALL," all measures will be specified.

Range

Specifies the range of note numbers to be transposed. For instance if you wish to transpose all notes within the C3 to C4 range, set this parameter to "C3–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

Channel (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, 1-16

7. When you have finished making settings, press [8 (Execute)] to execute the operation.

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."

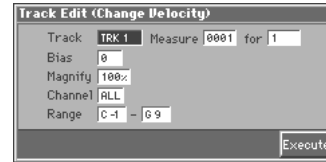
Changing the Velocity (Volume) (Change Velocity)

This function modifies the keyboard playing dynamics (velocity) of a specified note area.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).
2. Press [8 (Track Edit)].
The Track Edit window appears.
3. Press ▲ or ▼ to select "Change Velocity," and then press [8 (Select)].
A message of "CHANGE VELOCITY: Select target point." appears.
4. Use [CURSOR] to move the cursor to the first measure of the track or pattern whose velocity you want to change. If you want to specify all tracks, press [7 (TrkAll)].

5. Hold down [SHIFT] and press ► to move the cursor to the last measure of the track or pattern whose velocity you want to change, and press [8 (Select)] to specify it.

The Track Edit (Change Velocity) window appears.



6. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the operation, and correct it if necessary.

Track

Check/modify the phrase track(s) or pattern whose velocity will be changed.

Value

ALL: Phrase Tracks 1-16

TRK 1-TRK 16: The specified phrase track

PTN001-PTN100: The specified pattern

Measure, for (Edit Range)

Check/modify 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 %

Channel (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, 1-16

Range

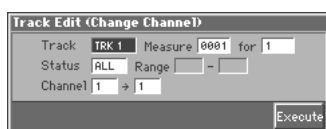
Specifies the range of note numbers for which velocity will be modified. For instance, to modify velocity for C3 to C4 note range, set this parameter to "C3-C4." You can also specify the key range by pressing keys on the keyboard.

7. When you have finished making settings, press [8 (Execute)] to execute the operation.

Changing the MIDI Channel (Change Channel)

This function transfers the MIDI channel of a specified area of sequencer data into a different MIDI channel.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).
2. Press [8 (Track Edit)].
The Track Edit window appears.
3. Press ▲ or ▼ to select "Change Channel," and then press [8 (Select)].
A message of "CHANGE CHANNEL: Select target point." appears.
4. Use [CURSOR] to move the cursor to the first measure of the track or pattern whose MIDI channel you want to change. If you want to specify all tracks, press [7 (TrkAll)].
5. Hold down [SHIFT] and press ► to move the cursor to the last measure of the track whose MIDI channel you want to change, and press [8 (Select)] to specify it.
The Track Edit (Change Channel) window appears.



6. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the operation, and correct it if necessary.

Track

Check/modify the phrase track(s) or pattern in which the MIDI channel will be changed.

Value

ALL: Phrase Tracks 1-16

TRK 1-TRK 16: The specified phrase track

PTN001-PTN100: The specified pattern

Measure, for (Edit Range)

Check/modify 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: All following sequencer data types

NOTE: Note

P.AFT: Polyphonic Aftertouch

C.C: Controller numbers

PROG: Program numbers

C.AFT: Channel Aftertouch

BEND: Pitch Bend

Range

If you have set the Status parameter to "NOTE," "P.AFT," "C.C," or "PROG," you can specify the range of data. Specify the minimum value of the range at the left, and the maximum value at the right.

HINT

- To change all MIDI channels of Note or Polyphonic Aftertouch data, specify "C-1-G9." To change the MIDI channel of C4 Note/Polyphonic Aftertouch data, specify "C4-C4." To change the MIDI channels of Note/Polyphonic Aftertouch data of a C3 to C4 range, specify "C3-C4."
- If you want to change the MIDI channel of all controller numbers, set this to "0-127" If you want to change the MIDI channel of all program numbers, set this to "1-128." To change the MIDI channel of number 4, set "4-4." To change the MIDI channels of numbers 3 to 14, set this parameter to "3-14."

Channel (MIDI Channel)

Set the source MIDI channel at the left section of this parameter and destination MIDI channel at the right section.

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.

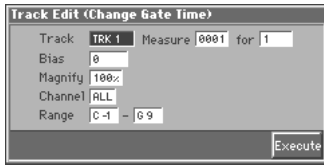
7. When you have finished making settings, press [8 (Execute)] to execute the operation.

Modifying the Length of Notes (Change Gate Time)

This function modifies the gate time (time from note-on to note-off) of notes within a specified area. Depending on the setting, you can also create staccato or tenuto.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).
2. Press [8 (Track Edit)].
The Track Edit window appears.
3. Press ▲ or ▼ to select "Change Gate Time," and then press [8 (Select)].
A message of "CHANGE GATE TIME: Select target point." appears.
4. Use [CURSOR] to move the cursor to the first measure of the track or pattern whose gate times you want to change. If you want to specify all tracks, press [7 (TrkAll)].
5. Hold down [SHIFT] and press ► to move the cursor to the last measure of the track or pattern whose gate times you want to change, and press [8 (Select)].

The Track Edit (Change Gate Time) window appears.



- Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the operation, and correct it if necessary.

Track

Check/modify the phrase track(s) or pattern whose gate times will be changed.

Value

ALL: Phrase Tracks 1–16

TRK 1–TRK 16: The specified phrase track

PTN001–PTN100: The specified pattern

Measure, for (Edit Range)

Check/modify the range of measures whose gate times 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 gate times by a fixed amount. If you want to extend all gate times by 10, set this to “+10.”

Value: -4800– +4800

Magnify

Set this parameter if you wish to increase or decrease gate times by a specified ratio. When set to “100%,” no change is made. A value of “101%” or higher increases the gate time; values of “99%” or lower decrease the gate time. For example, to halve gate times, set this parameter to “50%.” To double gate times, set this parameter to “200%.”

Value: 0–200 %

Channel (MIDI Channel)

Specifies the MIDI channel(s) of notes for which gate time will be modified.

If you wish to modify the gate time for notes of all MIDI channels, set this parameter to ALL. When changing the gate time for notes of a specific MIDI channel only, select that MIDI channel using this parameter.

Value: ALL, 1–16

Range

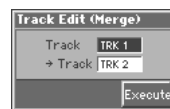
Specifies the range of note numbers for which gate time will be modified. For instance if you wish to modify the gate time for a note range from C3 to C4, set this parameter to “C3–C4.” You can also specify the key range by pressing keys on the keyboard.

- When you have finished making settings, press [8 (Execute)] to execute the operation.

Combining Two Phrase Tracks or Patterns into One (Merge)

The sequencer data of two phrase tracks or patterns will be combined into one.

- Access the Song Edit screen, and then load the song you want to edit (p. 136).
- Press [8 (Track Edit)].
The Track Edit window appears.
- Press ▲ or ▼ to select “Merge,” and then press [8 (Select)].
A message of “MERGE: Select source point.” appears.
- Use [CURSOR] to move the cursor to the track or pattern that you want to merge, and press [8 (Select)] to specify it.
A message of “MERGE: Select destination point.” appears.
- Use [CURSOR] to move the cursor to the merge-destination track or pattern, and press [8 (Select)] to specify it.
The Track Edit (Merge) window appears.



- Check the tracks or patterns that you want to merge. Should you need to make a change, use [CURSOR] to move the cursor to the desired parameter, and either turn the VALUE dial or use [INC] or [DEC] to alter the setting.

Track (Source Track)

Check/modify the phrase track or pattern that is to be merged. After the Merge operation has been executed, no sequencer data will remain in this track.

Value

TRK 1–TRK 16: The specified phrase track

PTN001–PTN100: The specified pattern

→ Track (Destination Track)

Check/modify the merge-destination phrase track or pattern. After the Merge operation has been executed, the sequencer data will be combined into this track.

Value

TRK 1–TRK 16: The specified phrase track

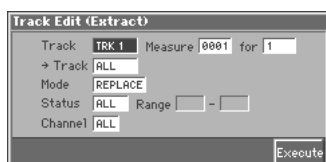
PTN001–PTN100: The specified pattern

- When you have finished making settings, press [8 (Execute)] to execute the operation.

Extracting and Moving a Part of Sequencer Data (Extract)

This function extracts a specified sequencer data area from a phrase track or pattern and moves it to the same Song position of another phrase track or pattern. Additionally, just as with Standard MIDI File Format 0, when sequencer data from multiple MIDI channels is recorded on one track, you can also assign one MIDI channel to a single phrase track.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).
2. Press [8 (Track Edit)].
The Track Edit window appears.
3. Press ▲ or ▼ to select “Extract,” and then press [8 (Select)].
A message of “EXTRACT: Select source point.” appears.
4. Use [CURSOR] to move the cursor to the first measure of the track or pattern from which you want to extract sequencer data.
5. Hold down [SHIFT] and press ► to move the cursor to the last measure of the track or pattern from which you want to extract sequencer data, and press [8 (Select)].
A message of “EXTRACT: Select destination point.” appears.
6. Use [CURSOR] to move the cursor to the track or pattern to which the data will be moved, and press [8 (Select)] to specify it. If you want to specify all tracks, press [7 (TrkAll)].
The Track Edit (Extract) window appears.



7. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the operation, and correct it if necessary.

Track (Source Track)

Check/modify the phrase track or pattern from which the sequencer data will be extracted. After Extract is executed, the selected sequencer data no longer remains on this phrase track or pattern.

Value

TRK 1–TRK 16: The specified phrase track

PTN001–PTN100: The specified pattern

Measure, for (Edit Range)

Check/modify the range of measures from which sequencer data will be extracted. If you set “for” to “ALL,” all measures will be specified.

→ Track (Destination Track)

Check/modify the move-destination track or pattern.

Value

ALL: According to its MIDI channel, the sequencer data will be divided among phrase tracks 1–16.

TRK 1–TRK 16: The specified phrase track

PTN001–PTN100: The specified pattern

Mode (Extract mode)

Specifies whether you want to keep the sequencer data at the destination.

Value

MIX: The data at the destination will combine with the extracted data.

REPLACE: The data at the destination will be erased and replaced by the extracted data.

MEMO

If you select “REPLACE,” only the sequencer data on the MIDI channel specified by the Channel parameter will be the object of the operation. Sequencer data of all other MIDI channels will be unaffected.

Status

Selects the type of data to be extracted.

Value

ALL: All types of sequencer data

NOTE: Note

P.AFT: Polyphonic Aftertouch

C.C: Controller numbers

PROG: Program numbers

C.AFT: Channel Aftertouch

BEND: Pitch Bend

EXC: System Exclusive messages

Tune: Tune Request

PTN: Pattern Call Message data

Range

If you set the Status parameter to “NOTE,” “P.AFT,” “C.C,” or “PROG,” specify the range of data. Specify the minimum value of the range at the left, and the maximum value at the right.

HINT

- To extract all Note or Polyphonic Aftertouch data, specify “C-1–G9.” To extract C4 Note/Polyphonic Aftertouch data, specify “C4–C4.” To extract Note/Polyphonic Aftertouch data over the range from C3 to C4, specify “C3–C4.”
- If you want to extract all controller numbers, set this to “0–127.” If you want to extract all program numbers, set this to “1–128.” To extract Controller/Program number 4, specify “4–4.” To extract Controller/Program numbers from 3 to 14, specify “3–14.”

Channel (MIDI Channel)

Selects the MIDI channel(s) of the data to be extracted.

To extract all sequencer data, set this parameter to ALL. To extract just the sequencer data of a specific MIDI channel, select that MIDI channel.

Value: ALL, 1-16

NOTE

If you set the Status parameter to "EXC," "TUNE" or "PTN," the Channel parameter will not be available.

- When you have finished making settings, press [8 (Execute)] to execute the operation.

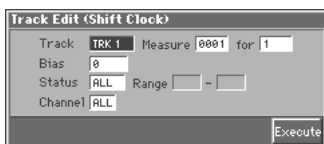
Shifting Performance Data Forward and Back (Shift Clock)

This function shifts the timing of sequencer data backward or forward in time within a specified area in steps of 1 clock. 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 song will automatically shift to the beginning of the song. If data would be moved to a point past the end of the song, 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.

- Access the Song Edit screen, and then load the song you want to edit (p. 136).
- Press [8 (Track Edit)].
The Track Edit window appears.
- Press ▲ or ▼ to select "Shift Clock," and then press [8 (Select)].
A message of "SHIFT CLOCK: Select target point." appears.
- Use [CURSOR] to move the cursor to the first measure of the track or pattern whose sequencer data you want to move. If you want to specify all tracks, press [7 (TrkAll)].
- Hold down [SHIFT] and press ► to move the cursor to the last measure of the track or pattern whose sequencer data you want to move, and press [8 (Select)] to specify it.
The Track Edit (Shift Clock) window appears.



- Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the operation, and correct it if necessary.

Track

Check/modify the track(s) or pattern whose sequencer data will be moved in units of one clock.

Value

ALL: Phrase tracks 1-16, the beat track, and the tempo track

TRK 1-TRK 16: The specified phrase track

TEMPO: Tempo clock

PTN001-PTN100: The specified pattern

Measure, for (Edit Range)

Check/modify the range of measures in which the sequencer data will be moved in units of one clock. If you set "for" to "ALL," all measures will be specified.

Bias

Specify the amount (number of clocks) by which the sequencer data will be moved.

Value: -4800- +4800

Status

Selects the type of data to be shifted in time.

Value

ALL: All types of sequencer data

NOTE: Note

P.AFT: Polyphonic Aftertouch

C.C: Controller numbers

PROG: Program numbers

C.AFT: Channel Aftertouch

BEND: Pitch Bend

EXC: System Exclusive messages

Tune: Tune Request

PTN: Pattern Call Message data

NOTE

If the Track parameter is set to "TEMPO," the Status parameter will not be available.

Range

If you set the Status parameter to "NOTE," "P.AFT," "C.C," or "PROG," specify the range of data. Specify the minimum value of the range at the left, and the maximum value at the right.

HINT

- To shift all Note or Polyphonic Aftertouch data, set "C1-G9." To shift the timing of C4 Note/Polyphonic Aftertouch data, specify "C4-C4." To shift the timing of Note/Polyphonic Aftertouch data from C3 to C4, specify "C3-C4."
- If you want to shift all controller numbers, set this to "0-127." If you want to move all program numbers, set this to "1-128." To shift the timing of number 4, specify "4-4." To shift the timing of numbers from 3 to 14, specify "3-14."

Channel (MIDI Channel)

Selects the MIDI channel of the data to be shifted in time.

To shift clocks of all sequencer data, set this parameter to ALL. To shift the sequencer data clock of just one specific MIDI channel, select that MIDI channel.

Value: ALL, 1-16

NOTE

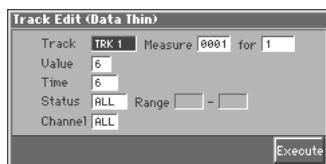
If you set the Track parameter to "TEMPO," or if the Status parameter is set to "EXC," "TUNE" or "PTN," the Channel parameter will not be available.

7. When you have finished making settings, press [8 (Execute)] to execute the operation.

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.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).
2. Press [8 (Track Edit)].
The Track Edit window appears.
3. Press ▲ or ▼ to select "Data Thin," and then press [8 (Select)].
A message of "DATA THIN: Select target point." appears.
4. Use [CURSOR] to move the cursor to the first measure of the track or pattern whose sequencer data you want to thin. If you want to specify all tracks, press [7 (TrkAll)].
5. Hold down [SHIFT] and press ► to move the cursor to the last measure of the track or pattern whose sequencer data you want to thin, and press [8 (Select)] to specify it.
The Track Edit (Data Thin) window appears.



6. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the operation, and correct it if necessary.

Track

Check/modify the track(s) or pattern whose sequencer data will be thinned.

Value

ALL: Phrase tracks 1-16, the beat track, and the tempo track

TRK 1-TRK 16: The specified phrase track

PTN001-PTN100: The specified pattern

Measure, for (Edit Range)

Check/modify the range of measures whose sequencer data will be thinned. If you set "for" to "ALL," all measures will be specified.

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.

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: All following sequencer data types

P.AFT: Polyphonic Aftertouch

C.C: Controller numbers

C.AFT: Channel Aftertouch

BEND: Pitch Bend

Range

If you set the Status parameter to "P.AFT" or "C.C," specify the range of data. Specify the minimum value of the range at the left, and the maximum value at the right.

HINT

- To thin all Polyphonic Aftertouch data, set "C-1-G9." To thin C4 Polyphonic Aftertouch data, set "C4-C4." To thin Polyphonic Aftertouch data from C3 to C4, set "C3-C4."
- To thin all Controller numbers, set "0-127." To thin number 4, set "4-4." To thin numbers from 3 to 14, set "3-14."

Channel (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.

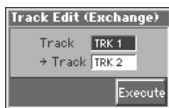
Value: ALL, 1-16

7. When you have finished making settings, press [8 (Execute)] to execute the operation.

Swapping Two Phrase Tracks or Patterns (Exchange)

The phrase tracks or patterns will be exchanged in their entirety.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).
2. Press [8 (Track Edit)].
The Track Edit window appears.
3. Press ▲ or ▼ to select “Exchange,” and then press [8 (Select)].
A message of “EXCHANGE: Select source point.” appears.
4. Use [CURSOR] to move the cursor to the track or pattern that you want to exchange, and press [8 (Select)] to specify it.
A message of “EXCHANGE: Select destination point.” appears.
5. Use [CURSOR] to move the cursor to the exchange-destination track or pattern, and press [8 (Select)] to specify it.
The Track Edit (Exchange) window appears.



6. Check the tracks that are to be exchanged. If you want to change the settings, use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to correct the settings.

Track (Source Track)

Check/modify the phrase track or pattern that will be exchanged.

Value

TRK 1–TRK 16: The specified phrase track

PTN001–PTN100: The specified pattern

→ Track (Destination Track)

Check/modify the exchange-destination track or pattern.

Value

TRK 1–TRK 16: The specified phrase track

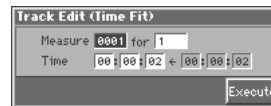
PTN001–PTN100: The specified pattern

7. When you have finished making settings, press [8 (Execute)] to execute the operation.

Adjusting the Song’s Playback Time (Time Fit)

This function calculates the playback time of a song or allows you to modify the tempo track data so that the song will play back in a specified time.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).
2. Press [8 (Track Edit)].
The Track Edit window appears.
3. Press ▲ or ▼ to select “Time Fit,” and then press [8 (Select)].
A message of “TIME FIT: Select target point.” appears.
4. Use [CURSOR] to move the cursor to the first measure for which you want to measure/adjust the playback time.
5. Hold down [SHIFT] and press ► to move the cursor to the last measure for which you want to measure/adjust the playback time, and press [8 (Select)] to specify it.
The Track Edit (Time Fit) window appears.



6. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the operation, and correct it if necessary.

Measure, for (Edit Range)

Measure the playback time, or check/modify the range of measures that are to be adjusted. If you set “for” to “ALL,” all measures will be specified.

Time

The current playback time will be displayed at the right of “←”. Set the playback time at the left of “←”. From left to right, the time display indicates “hours: minutes: seconds.”

7. When you have finished making settings, press [8 (Execute)] to execute the operation.

Deleting Blank Measures (Truncate)

Copying or merging may sometimes create blank measures at the beginning of a phrase track or pattern. Truncate deletes silent portions from the beginning of the specified phrase track 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 track, only the last data event of each type will be placed before the note-on.

1. Access the Song Edit screen, and then load the song you want to edit (p. 136).

2. Press [8 (Track Edit)].

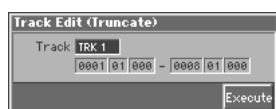
The Track Edit window appears.

3. Press ▲ or ▼ to select "Truncate," and then press [8 (Select)].

A message of "TRUNCATE: Select target point." appears.

4. Use [CURSOR] to move the cursor to the track or pattern from which blank measures will be deleted, and press [8 (Select)] to specify it.

The Track Edit (Truncate) window appears.



5. Use [CURSOR] to move the cursor to the desired parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting. First check the region that is to be affected by the operation, and correct it if necessary.

Track

Check/modify the phrase track or pattern from which blank measures will be deleted.

Value

TRK 1–TRK 16: The specified phrase track

PTN001–PTN100: The specified pattern

Below the Track parameter is displayed the location of the beginning of the specified track, and the position of the first note-on.

6. When you have finished making settings, press [8 (Execute)] to execute the operation.

Editing Individual Items of Sequencer Data (Micro Edit)

Micro Edit lets you edit individual items of sequencer data recorded in a song, such as MIDI messages and tempo data.

Viewing Sequencer Data (in the Microscope Window)

Access the Microscope window when you want to view the sequencer data recorded in a song. Each line indicates the location (measure-beat-clock) at which the sequencer data is recorded, and the data recorded at that location.

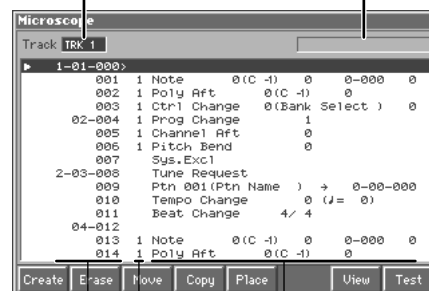
1. Access the Song Edit screen or the Pattern Edit screen, and then load the song that contains the sequencer data you want to view/edit (p. 136).

2. Press [7 (Micro Edit)].

The Microscope window appears.

Select the track or pattern.

Displays the parameter data at the cursor location.



MIDI channel Sequencer data

Location of the sequencer data (measure-beat-clock)

3. Move the cursor to "Track," and select the track or pattern whose sequencer data you want to view/edit.

TRK 1–TRK 16: The specified phrase track

TEMPO: Tempo track

BEAT: Beat track

PTN001–PTN100: The specified pattern

MEMO

In order to make efficient use of screen space, display is normally omitted for locations in which no sequencer data is recorded.



For an explanation of each type of sequencer data, refer to "Sequencer Data Handled by a Phrase Track/Pattern," below.

4. Use ▲ or ▼ to move "■" upward or downward, and view each data item.

HINT

- If you want to move the current location in steps of a measure, move the cursor to the measure position, and turn the VALUE dial or press [INC]/[DEC]. You can also move in steps of a measure by pressing [BWD] or [FWD].
- If you want to move the current location in steps of a beat, move the cursor to the beat position, and turn the VALUE dial or press [INC]/[DEC].
- When you press [8 (Test)], the sequencer data currently shown at the "■" will be transmitted from the MIDI OUT connector. In the case of a note message, the note will sound as long as you hold down [8 (Test)]. A note-off will be transmitted when you release [8 (Test)].

5. To close the Microscope window, press [EXIT].

Sequencer Data Handled by a Phrase Track/Pattern

Phrase tracks or patterns can record the following nine types of sequencer data. The recorded location (measure-beat-clock) 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; Gate Time, which specifies the duration of the note; and Off Velocity, which determines the speed with which the key is released.

Poly Aft (Polyphonic 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.

Ctrl Change (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.



For the function corresponding to each controller number, refer to "MIDI Implementation" (Sound/Parameter List).

Prog Change (Program Change)

This MIDI message switches sounds. The program number (PC#) selects the sound.

Channel Aft (Channel Aftertouch)

This MIDI message applies aftertouch to an entire MIDI channel. Value specifies the depth of the aftertouch.

Pitch Bend

This MIDI message changes the pitch. The value specifies the amount of pitch change.

Tune Request

This MIDI message causes an analog synthesizer to tune itself.

Ptn (Pattern Call message)

This is data that causes a pattern to play back. Use the Number parameter to select the pattern number. The pattern name is shown in parentheses (), and the location at which the pattern will finish playing is shown at the right of the "→" symbol.

NOTE

- If the pattern called by the Pattern Call message extends beyond the last measure of the song, the pattern playback will be interrupted at that point.
- Only one pattern can be played at a time by Pattern Call messages in a given phrase track. This means that if a Pattern Call message is recorded at a location before the previous pattern has finished playing, the pattern that was playing will be interrupted, and the next pattern will begin playing. If more than one Pattern Call message is recorded at the same location, the message that is displayed last in the Microscope window will be played.
- Although it is possible to record Pattern Call messages in a pattern, they will not be played. If you want to place the data of another pattern into a pattern, use Track Edit to copy the data.

Ex. (System Exclusive messages)

These are MIDI messages used to make settings unique to the Fantom, such as sound settings. Input the data between "F0" and "F7."



For details on system exclusive messages, refer to "MIDI Implementation" (Sound/Parameter List).

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 back according to the "Value" of the tempo change.

The value displayed in "♪ =**" is the tempo at which the song will actually play (the playback tempo), and can be changed only 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, since the tempo change value has not been rewritten, this setting will be lost if you select another song or turn off the power. If you want to play back at this tempo the next time as well, you must re-save the song to disk. This will rewrite the tempo change value so that it matches the playback tempo.

Data Handled by the Beat Track

The Beat track records time signature data.

Beat Change

This specifies the time signature (Beat).

Viewing sequencer data (View)

Since a phrase track or pattern contains a large amount of sequencer data, the display may be cluttered and difficult to read. For this reason, the Fantom 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 window.
2. Press [7 (View)].

The View Select window appears.



3. Move the cursor to "Channel," and select the MIDI channel of the sequencer data that you want to view.

If you want to view sequencer data of all MIDI channels, select "ALL." If you want to view only sequencer data of a specific MIDI channel, select "1"–"16."

4. 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, such as those for the sound parameters.

Pattern Call: Pattern Call messages. This data causes a pattern to play back.

5. Press [8 (On/Off)] to specify whether each type of message will be displayed or not.

The message will be displayed if the check mark (✓) is assigned, and will not be displayed if the check mark is removed.

If you press [5 (All Off)], none of the sequencer data will be displayed.

If you press [6 (All On)], all of the sequencer data will be displayed.

6. Press [EXIT] to close the View window.

Editing the Sequencer Data

You can edit the parameters of the sequencer data recorded in a phrase track or pattern. However, it is not possible to change the type of MIDI message itself, such as changing a control change message into a pitch bend message.



For details on each type of sequencer data refer to "Sequencer Data Handled by a Phrase Track/Pattern" (p. 154).

1. Access the Microscope window for the track or pattern whose sequencer data you want to edit (p. 153).
2. Use ▲ or ▼ to move the cursor to the sequencer data that you want to edit.
3. Press ◀ or ▶ to move the cursor to the parameter you wish to modify.
4. Turn the VALUE dial or press [INC]/[DEC] to edit the value.



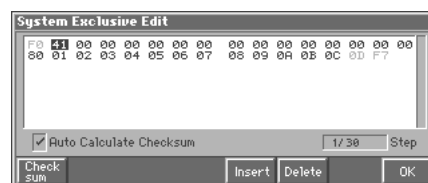
When editing the Note Number of note or polyphonic aftertouch data, or the On Velocity or Off Velocity of a note, you can also specify the value by playing a key on the keyboard.



If you want to edit a system exclusive message, refer to "Editing a System Exclusive Message," below.

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 ▶ to move the cursor to "Ex."
- 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 [5 (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 [6 (Delete)].

5. When you are finished editing, press [8 (OK)] to finalize the values of the system exclusive message.

HINT

- If you decide to discard the changes you made to the system exclusive message and return to the Microscope window, 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 [1 (Checksum)] to remove the check mark (✓) from “Auto Calculate Checksum.”

Inserting Sequencer Data (Create)

You can insert new sequencer data into a desired location of a phrase track or pattern.



For details on the sequencer data that can be inserted, refer to “Sequencer Data Handled by a Phrase Track/Pattern” (p. 154).

1. Access the Microscope window for the track or pattern into which you want to insert sequencer data (p. 153).
2. Press ▲ or ▼ to move the cursor to the location at which you want to insert sequencer data.

HINT

If the location at which you want to insert sequencer data is not shown in the display, move the cursor to the appropriate location (measure-beat-clock), and then specify the insert location for the sequencer data.

3. Press [1 (Create)].

The Create Event window appears.



4. Press ▲ or ▼ to select the sequencer data that will be inserted.

HINT

If you want to insert a system exclusive message, select “Sys.Excl (Default).” However, if you want to insert a General MIDI System On message or General MIDI 2 System On message in order to initialize the sound generator to the GM default state, select “Sys.Excl (GM ON)” or “Sys.Excl (GM2 ON),” and to exit the GM state select “Sys.Excl (GM OFF).”

5. Press [8 (Execute)] to insert the sequencer data.

Once the sequencer data has been inserted, you’ll be returned to the Microscope window.

6. The sequencer data that was inserted will have the default parameter values, so edit them as necessary.

HINT

If you are not satisfied with the results of executing this operation, press [MENU], and from the Menu window that appears, select “Undo Micro Edit” to return to the state prior to execution (Undo).

Erasing Sequencer Data (Erase)

If desired, you can erase just an individual event of sequencer data. You can also use the same operation to erase individual items of data from the tempo track or beat track.

NOTE

It is not possible to erase the tempo change located at the beginning of the tempo track, the beat change and key signature located at the beginning of the beat track, or the pattern beat.

1. Access the Microscope window for the track or pattern from which you want to erase sequencer data (p. 153).
2. Press ▲ or ▼ to move the cursor to the sequencer data that you want to erase.

HINT

To erase a multiple consecutive data, hold down [SHIFT] and press ▼ to select the sequencer data.

3. Press [2 (Erase)] to erase the sequencer data.

HINT

If you are not satisfied with the results of executing this operation, press [MENU], and from the Menu window that appears, select “Undo Micro Edit” to return to the state prior to execution (Undo).

Moving Sequencer Data (Move)

You can move an individual item of sequencer data to a different location. Data recorded in the tempo track or beat track can also be moved in the same way.

NOTE

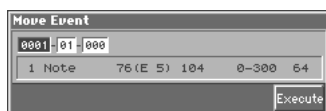
It is not possible to move the tempo change located at the beginning of the tempo track, the beat change and key signature located at the beginning of the beat track, or the pattern beat.

1. Access the Microscope window for the track or pattern whose data you want to move (p. 153).
2. Press ▲ or ▼ to move the cursor to the sequencer data that you want to move.

HINT

To move a multiple consecutive data, hold down [SHIFT] and press ▼ to select the sequencer data.

3. Press [3 (Move)].
The Move Event window appears.



4. Move the cursor to measure, beat, and clock, and set these values to specify the move destination.
5. Press [8 (Execute)] to move the sequencer data.
When the sequencer data has been moved, you will return to the Microscope window.

HINT

If you are not satisfied with the results of executing this operation, press [MENU], and from the Menu window that appears, select "Undo Micro Edit" to return to the state prior to execution (Undo).

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. Data recorded in the tempo track or beat track can also be copied in this way.

1. Access the Microscope window for the track or pattern whose sequencer data you want to copy (p. 153).
2. Press ▲ or ▼ to move the cursor to the sequencer data that you want to copy, and press [4 (Copy)] to copy it.

HINT

To copy a multiple consecutive data, hold down [SHIFT] and press ▼ to select the sequencer data.

3. Press ▲ or ▼ to move the cursor to the location at which you want to insert the copied sequencer data.

HINT

If the location at which you want to insert the sequencer data is not shown in the display, move the cursor to the appropriate location (measure-beat-clock), and then specify the insert location for the sequencer data.

4. Press [5 (Place)] to paste the data.

HINT

If you are not satisfied with the results of executing this operation, press [MENU], and from the Menu window that appears, select "Undo Micro Edit" to return to the state prior to execution (Undo).

Changing the Tempo Midway Through the Song

If you want to change the tempo midway through the song, insert a new Tempo Change into the tempo track. The song will play back at that tempo following the location at which the tempo change was inserted. However, if you want to create gradual tempo changes such as ritardando or accelerando, it is more convenient to use Tempo Recording (p. 130).

HINT

If you want to make the entire song faster or slower, modify the playback tempo in one of the PLAY screens.

1. Access the Microscope window for the tempo track (p. 153).
2. Press ▲ or ▼ to move the cursor to the location at which you want to insert a tempo change.

HINT

If the location at which you want to insert a tempo change is not shown in the display, move the cursor to the appropriate location (measure-beat-clock), and specify the location of the tempo change.

3. Press [1 (Create)] to insert a tempo change.
4. The inserted tempo change will have the default value, so modify it as necessary.

HINT

If you are not satisfied with the results of executing this operation, press [MENU], and from the Menu window that appears, select "Undo Micro Edit" to return to the state prior to execution (Undo).

Changing the Time Signature Midway Through the Song

If you want to change the time signature midway through the song, insert a new Beat Change. The song will play back using that time signature for measures following the inserted beat change.

NOTE

- It is not possible to change the time signature in the middle of a measure. You must change the time signature at the beginning of a measure.
- If the time signature of the beat track differs from the pattern beat (p. 128) setting, the setting of the beat track will be used. For example, if a pattern with a 3/4 time signature is assigned in the middle of a 4/4 song, the pattern will not be aligned correctly with the other phrase tracks. To make this play back correctly, insert a 3/4 beat change into the beat track. To return the time signature to 4/4, insert a 4/4 beat change into the measure that follows the last measure of the pattern.

HINT

If you want to change the time signature from a measure that is later than the end of the song, or if it is ok to change the length of the song, you will find it more convenient to use the track edit Insert Measure function (p. 145).

1. Access the Microscope window for the beat track (p. 153).
2. Press ▲ or ▼ to move the cursor to the location at which you want to insert a beat change.

HINT

If the location at which you want to insert the beat change is not shown in the display, move the cursor to the appropriate location (measure-beat-clock), and specify the location at which the beat change is to be inserted.

3. Press [1 (Create)] to insert the beat change.
4. The inserted beat change will have the default values, so edit it as necessary.

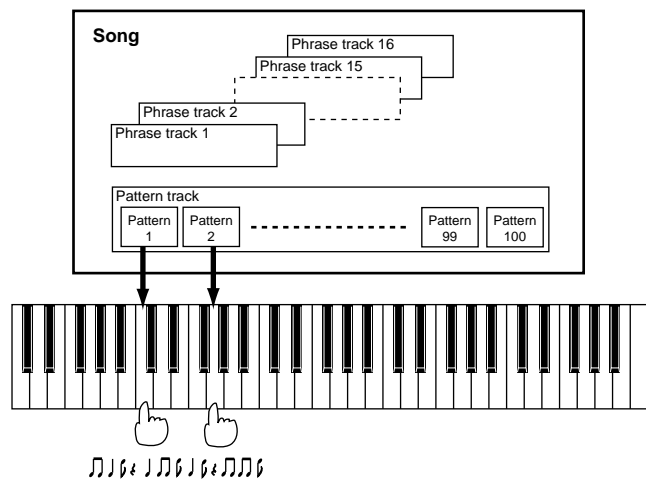
HINT

If you are not satisfied with the results of executing this operation, press [MENU], and from the Menu window that appears, select "Undo Micro Edit" to return to the state prior to execution (Undo).

Playing a Phrase at the Touch of a Finger (RPS Function)

The **RPS (Realtime Phrase Sequence)** function lets you assign patterns to the keyboard, and play a pattern by pressing a single note. For example, a complex phrase that would be difficult to play live can be assigned to a note of the keyboard, and played with one finger at the appropriate moment.

Since up to eight patterns can be playing at once, you can create patterns for separate instruments such as drums, bass, and keyboard, and combine them to create a new song. This performance can also be recorded, allowing you to use it in a way similar to phrase sampling.



Before You Use the RPS Function

Record a Pattern

Before you use the RPS function, you must record the desired phrase in a pattern. For details on recording, refer to “**Recording Your Performance as You Play It (Realtime Recording)**” (p. 129) or “**Inputting Data One Step at a Time (Step Recording)**” (p. 132).

NOTE

Only note messages should be recorded in a pattern. If a large amount of MIDI data is recorded in a pattern, using RPS to play back the pattern can cause notes to be delayed. MIDI messages other than note messages should be recorded in a phrase track.

Settings for the RPS Function

You can assign a pattern to each note of the keyboard, and specify how the pattern will be played. These settings are made independently for each song, and will be saved when you save the song in MRC Pro song format.

1. Load the song for which you want to make RPS settings (p. 136).
2. Press [MENU] to access the Menu window.
3. Use ▲ or ▼ to select “Song Edit,” and then press [8 (Select)].

The Song Edit screen appears.

NOTE

If you select a song that is stored on disk, a message of “The Song “*****” is not Internal Song. Load anyway for Song Edit?” will ask you for confirmation. If you want to erase the song from the internal memory and load the new song, press [7 (OK)]. If you decide not to erase the song from the internal memory, press [EXIT].

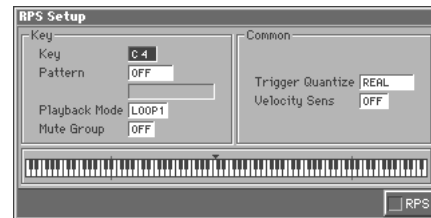
4. Press [5 (Setup)].

The Song Setup window appears.



5. Use ▲ or ▼ to select “RPS Setup,” and then press [8 (Select)].

The RPS Setup window appears.



In this window you can set various parameters related to the RPS function.

6. Use [CURSOR] to move the cursor to each parameter, and turn the VALUE dial or press [INC]/[DEC] to make the setting.

MEMO

The Key parameter, Pattern parameter, Playback Mode parameter, and Mute Group parameter are set for each key. Although the Fantom has a 76-note keyboard, you can also make settings for all keys in the range of C-1 to G9. Settings for the Trigger Quantize parameter and Velocity Sens parameter are for the entire song.

Key

Specify the key to which the pattern will be assigned. You can also specify this by pressing a key on the keyboard.

Pattern

Select the pattern number that will be assigned to the key. The name of the selected pattern will be displayed below the pattern number. Select “OFF” for keys to which you do not want to assign a pattern. If you select “STOP,” that key will be a Stop Trigger key that stops the currently playing patterns.

Valid Settings: STOP, OFF, PTN001–PTN100

MEMO

The state of settings is shown graphically in the display. The key being set is indicated by “▼,” keys to which a pattern is assigned are indicated by “■”, and keys set to “STOP” are indicated by “+”. Keys for which nothing is displayed are turned “OFF.”

Playing a Phrase at the Touch of a Finger (RPS Function)

Playback Mode

Specify how the pattern will be played.

Value

LOOP1: The pattern will play back repeatedly as long as the key is held down.

LOOP2: The pattern will play back repeatedly. To stop playback, press a Stop Trigger key or press the same key once again.

ONCE: The pattern will play back once.

Mute Group

This function lets you prevent patterns of the same group from sounding together. For example, a fill-in and bridge should never be played at the same time, and to ensure that this does not occur, you can set the fill-in and bridge to the same mute group number.

Thirty-one mute groups can be specified. Select "OFF" if you do not want to use a mute group for a pattern.

Value: OFF, 1-31

Trigger Quantize

This parameter specifies how pattern playback is to begin when a key is pressed during song playback or recording.

Value

REAL: The pattern will begin playing at the moment you press the key.

BEAT: If the song is being played or recorded, the pattern will begin playing at the beginning of the next beat if you press the key in the middle of the beat.

MEASURE: If the song is being played or recorded, the pattern will begin playing at the beginning of the next measure if you press the key in the middle of the measure.

Velocity Sens (Velocity Sensitivity)

Turn this "OFF" if you want the pattern to play back at the volume at which it was recorded.

If you want to vary the pattern playback volume according to the strength with which you pressed the key, select either "LOW," "MID," or "HIGH."

Value: OFF, LOW, MID, HIGH

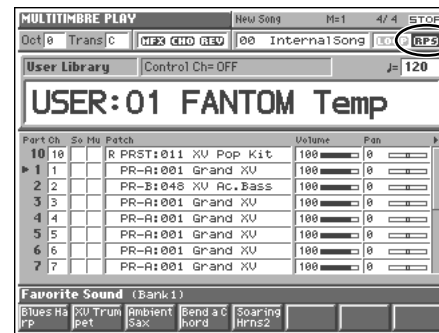
7. When you press [8 (RPS)] to assign a check mark (✓), the RPS function will be turned on.
8. When you are finished making settings, press [EXIT] to return to the Song Edit screen.
9. To save the settings you made, press [2 (Save)] to save the song to disk (p. 135).

Using the RPS Function While You Perform

Normally, when playing patterns individually, the song containing the patterns must be loaded into internal memory. However, when using the RPS function to play back patterns, you can use Quick Play.

1. Make sure that the preparations for using the RPS function have been made correctly.
2. Access the PLAY screen for the mode in which you want to perform.
3. Use [CURSOR] to move the cursor to "RPS" in the upper part of the screen, and press [INC].

The RPS function will be turned on, and you will be able to perform using RPS.



MEMO

If you save the song in MRC Pro song format when the RPS function is turned on, this state will also be saved. This means that you will always be able to perform using RPS simply by selecting that song.

4. Press [STOP/PLAY] to play back the song.

HINT

- You must play back the song if you want patterns to play back in synchronization with the song, or if you want multiple patterns to play in synchronization.
 - If the song is not playing, the pattern will begin playing the instant you press the key, regardless of the Trigger Quantize parameter setting.
 - The pattern will be played back according to the time signature of the song (beat track). This means that if the phrase track contains no sequencer data, the song will not play, and it will not be possible to play back patterns in synchronization. In such cases, you can insert several blank measures into a phrase track, and play them as a loop.
5. Press a key to which a pattern is assigned, making the pattern play.

If you want to stop playback midway through the pattern, press the Stop Trigger key. Alternatively if the Playback Mode parameter is set to "LOOP2," you can stop the pattern playback by pressing the same key once again.

MEMO

Up to eight patterns can play back simultaneously.

NOTE

If you turn off the RPS function while a pattern is playing, the keyboard will return to the normal playing state, but the pattern will continue playing. If you want to stop playback of this pattern, turn on the RPS function once again, and perform the appropriate operation.

Performing with the RPS Function from an External MIDI Keyboard

You can use the keys of an external MIDI keyboard to play patterns. For example, you could refrain from assigning patterns to the keys of the Fantom (E1–G7), but assign pattern to the remaining keys (note numbers). This would let you use an external MIDI keyboard to control pattern playback, and use the keyboard of the Fantom to play normally.

1. Use a MIDI cable to connect the Fantom’s MIDI IN connector to the MIDI OUT connector of your external MIDI keyboard.
2. Access the PLAY screen of the mode in which you want to perform.
3. Press [MENU] to access the Menu window.
4. Use ▲ or ▼ to select “System Edit,” and then press [8 (Select)].

The System Edit screen appears.

5. Press [1 (▲)] or [2 (▼)] to select the “MIDI” tab. A screen like the following appears.



6. Use [CURSOR] to move the cursor to “Remote Keyboard Sw,” and press [INC] to turn it “ON.”
7. Press [EXIT] to return to the PLAY screen. With this setting, patterns can be played back from your external MIDI keyboard.
8. Turn on the RPS function (p. 160).
9. Press keys on your external MIDI keyboard to play back patterns.

Recording a Performance Using the RPS Function

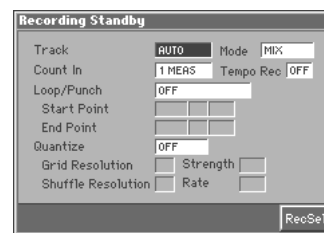
A performance that uses the RPS function can be recorded in real time in the same way as a conventional performance. This provides an easy way to remix patterns and create a song.

MEMO

If you use the RPS function during realtime recording, the pattern performance will be recorded just as it occurs.

1. Make sure that preparations for the RPS function have been made correctly.
2. Access the PLAY screen for the mode in which you want to perform.
3. Turn on the RPS function (p. 160).
4. Press [REC].

The [REC] indicator will blink, and the Recording Standby window appears. In this window you can make various settings for realtime recording.



5. Specify how recording is to take place.



For details on these settings, refer to “Recording Your Performance as You Play It (Realtime Recording)” (p. 129).

6. Press [STOP/PLAY].

The Recording Standby window will close, the [REC] indicator will change from blinking to lit, and recording will begin.

7. Press a key to which a pattern is assigned.

The assigned patterns will be played back according to the keys you press, and their performances will be recorded.

NOTE

If the Count In parameter is set to “WAIT NOTE” in the Recording Standby window, recording will not begin even if you press a key that is assigned to a pattern, or a key that is assigned as a Stop Trigger key.

8. When you are finished recording, press [STOP/PLAY].

The [REC] indicator will go dark.

Modifying the Sound in Real Time

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

MEMO

Here we will explain the procedures and settings for using these functions in Patch mode. The operations are the same in Multitimbre mode or Performance 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.

1. Access the PATCH PLAY screen (p. 31).

The “D Beam” area will indicate the function that is assigned to the D Beam controller.



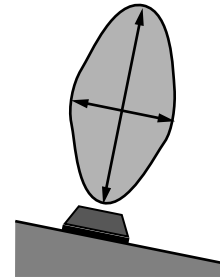
NOTE

The MULTITIMBRE PLAY screen does not have a “D Beam” display.

2. Press **D BEAM [ON/OFF]** to turn on the D Beam controller.
3. While playing the keyboard to produce sound, place your hand over the D Beam, and slowly move it 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, press **[ON/OFF]** once again to make the indicator go dark.

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 **[ON/OFF]** indicator will blink while the D Beam controller is responding. When your hand leaves the usable range of the D Beam controller, the **[ON/OFF]** indicator will stop blinking, and will remain lit.

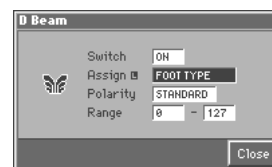
The response of the D Beam Controller can also be checked in the “D Beam” area of the display. This is displayed graphically as a bar that lengthens as you move your hand closer, and shortens as you move your hand away.

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.

Making Settings for the D Beam Controller

1. Hold down **[JUMP]** and press **D BEAM [ON/OFF]**. The D Beam window appears.



In this window you can set the following parameters for the D Beam controller.

Switch: Switch the D Beam controller on/off.

Assign: Specify the function that will be controlled by the D Beam controller.

Polarity: Switch the polarity of the D Beam controller.

Valid Settings: Adjust the variable range (upper limit - lower limit) of the D Beam controller.

MEMO

When using this in Performance mode, **Zone** will be added in addition to the above parameters. This parameter specifies the zone that will be controlled by the D Beam controller.

HINT

For details on each parameter, refer to “Realtime Controller / D Beam Controller Settings (Controller)” (p. 52).

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 [8 (Close)] to close the D Beam window.

HINT

Settings for the D Beam controller are saved independently for each patch/performance as part of the patch/performance settings. This lets you create patches/performances that make effective use of controller settings.

Using Knobs or Buttons to Modify the Sound (Realtime Controller)

You can use the REALTIME CONTROL knobs and buttons to modify the sound in real time.

1. Access the PATCH PLAY screen (p. 31).

The “Realtime Control” area shows the function that is assigned to each realtime controller knob and button. [1]-[4] indicate the knobs, and [1]-[4] indicate the buttons.



NOTE

The MULTITIMBRE PLAY screen does not have a “Realtime Control” display.

2. While playing the keyboard to produce sound, operate the REALTIME CONTROL knobs and buttons.

The sound will change according to the function assigned to each knob or button.

Making Realtime Controller Settings

Realtime Controller Knob Settings

1. Hold down [JUMP] and turn one of the REALTIME CONTROL knobs.

The Knob window appears.



In this window you can set the following parameters for the REALTIME CONTROL knobs.

Assign: Specify the function that will be controlled by the realtime control knob.

MEMO

If you are using this in Performance mode, a **Zone** parameter will be added to the parameters listed above. This parameter specifies the zone that will be controlled by the realtime control knob.

HINT

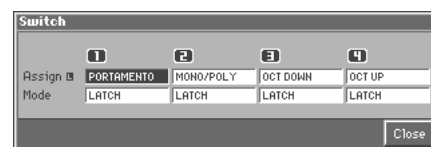
For details on each parameter, refer to “Realtime Controller / D Beam Controller Settings (Controller)” (p. 52).

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. Press [8 (Close)] to close the Knob window.

Realtime Controller Button Settings

1. Hold down [JUMP] and press a REALTIME CONTROL button.

The Switch window appears.



In this window you can set the following parameters for the realtime control buttons.

Assign: Specify the function that will be controlled by the realtime control button.

Mode: Specify how the realtime control button will operate.

MEMO

If you are using this in Performance mode, a **Zone** parameter will be added to the parameters listed above. This parameter lets you specify the zone that will be controlled by the realtime control button.

HINT

For details on each parameter, refer to “Realtime Controller / D Beam Controller Settings (Controller)” (p. 52).

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.

Modifying the Sound in Real Time

3. Press [8 (Close)] to close the Switch window.

HINT

Realtime controller settings are saved independently for each patch/performance as part of the patch/performance settings. This lets you create patches/performances that make effective use of controller settings.

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 CTL 1/CTL 2 PEDAL jack.

Pedal such as expression pedals (EV-5; available separately), pedal switches (DP-2/6; available separately), or foot switches (BOSS FS-U; available separately) can be connected to the Fantom.

1. Access the PATCH PLAY screen (p. 31).
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] to access the Menu window.
2. Use ▲ or ▼ to select “System Edit,” and then press [8 (Select)].

The System Edit screen appears.

3. Press [1 (▲)] or [2 (▼)] to select the “Controller” tab.

A screen like the following appears.



In this screen you can set the following parameters for the control pedals.

Pedal 1, 2 Assign: Specify the function that will be controlled by a pedal connected to the CTL 1 or CTL 2 PEDAL jack.

Pedal 1, 2 Polarity: Switch the polarity of the pedal.

HINT

For details on each parameter, refer to “Controller Settings (Controller)” (p. 184).

4. Turn the VALUE dial or press [INC]/[DEC] to make the setting.
5. Press [EXIT] to return to the PATCH PLAY screen.

Adding Effects

This section explains the procedures and settings for applying effects in each mode.



For details of the Fantom's onboard effects, refer to “About the Onboard Effects” (p. 23).

Turning Effects On and Off

The Fantom's onboard effects can be turned on/off as a whole. 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.



Effect ON/OFF settings are global Fantom settings. These settings cannot be made for each Patch or Performance individually.

The PLAY screen for each mode provides effect switches that allow you to turn the three effects on/off. Use [CURSOR] to move the cursor to the effect switches located in the upper part of the screen, and turn the VALUE dial or press [INC] or [DEC] to turn the switch on/off.



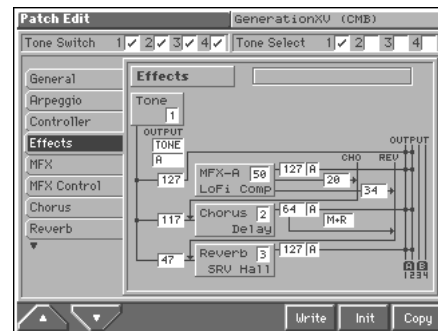
- **MFX:** Switches multi-effects on and off.
- **CHO:** Switches chorus on and off.
- **REV:** Switches reverb on and off.

Applying Effects in Patch Mode

Specifying How the Sound Will Be Output (Effects)

Here you can make overall settings for effects, and the output destination and level of each signal.

1. Select the sound for which you want to make output settings (p. 32, p. 40).
2. Press [MENU] to access the Menu window.
3. Press ▲ or ▼ to select a “Patch Edit” or “Rhythm Edit,” and then press [8 (Select)].
The Patch Edit screen appears.
4. Press [1 (▲)] or [2 (▼)] to select the “Effects” tab.
A screen like the one shown below appears.



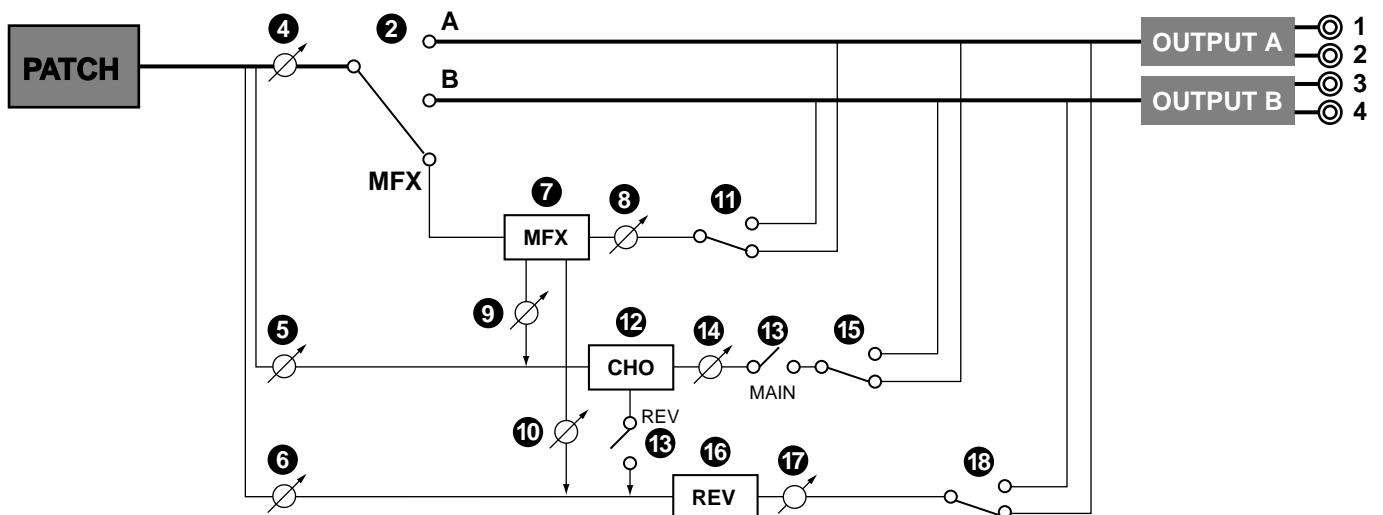
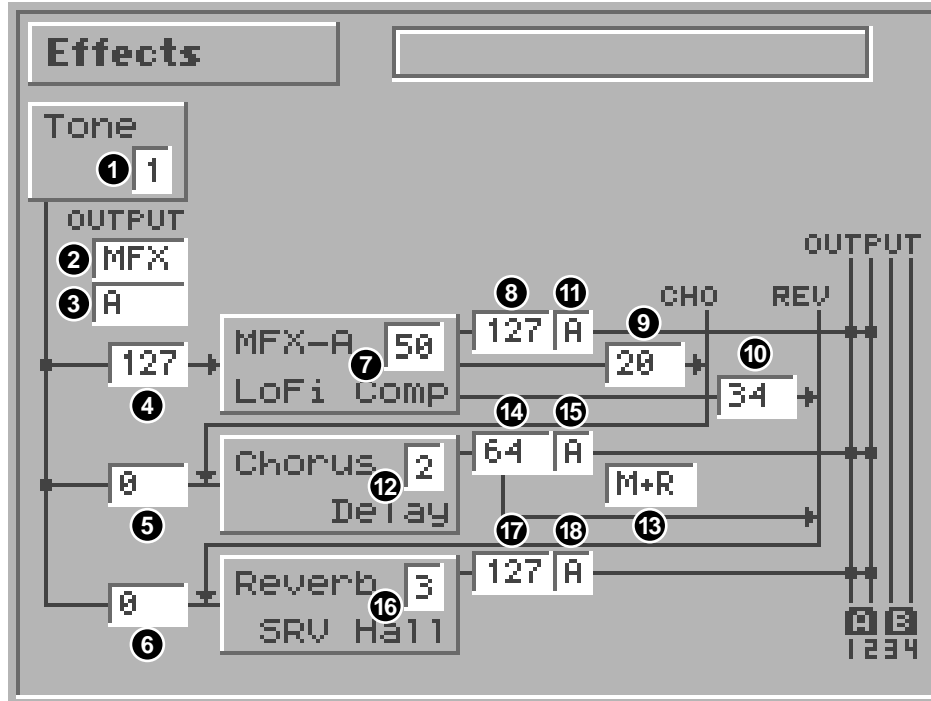
MEMO

When “MFX,” “CHO,” “REV” (effect switches) are turned off, effects processors that are turned off will be indicated by a dashed outline in the “Effects” setting screen.

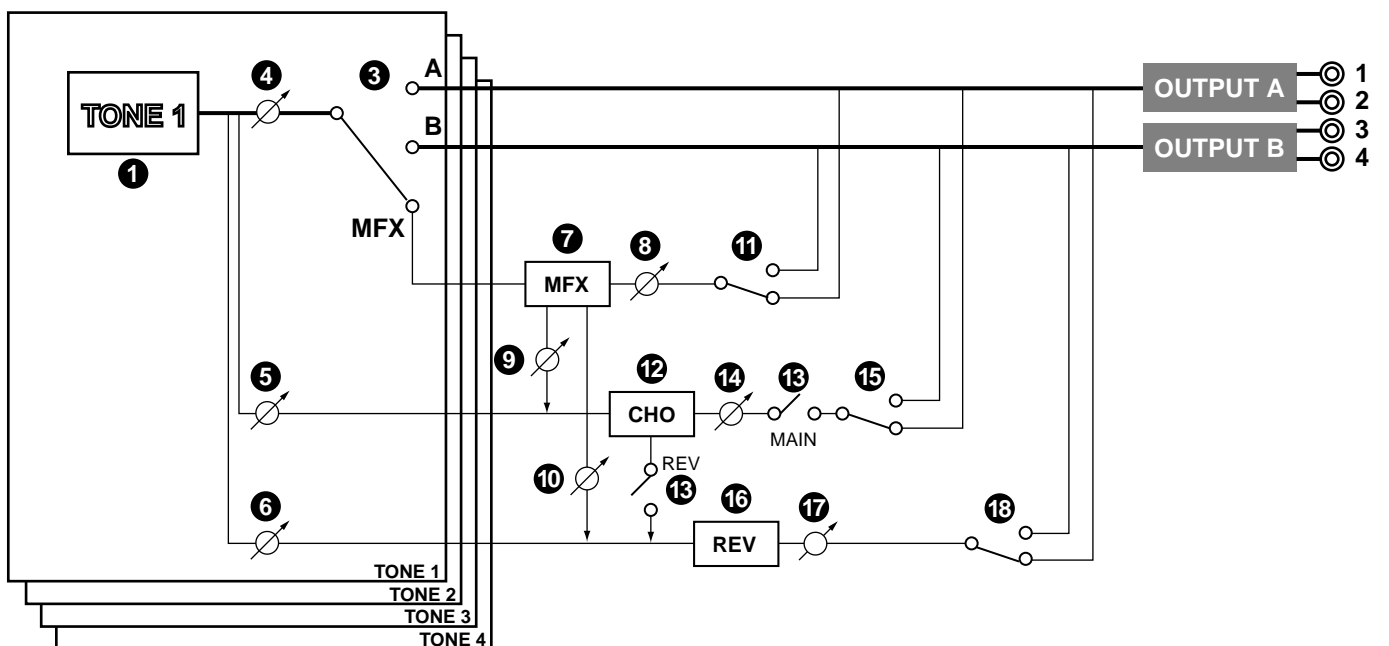
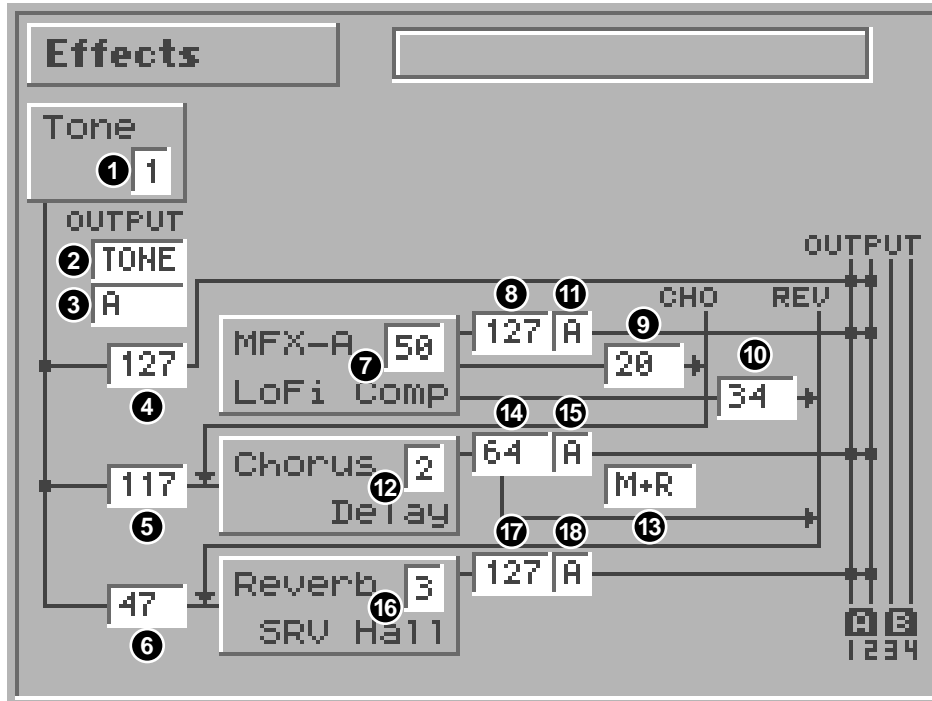
5. Use [CURSOR] to move the cursor to the parameter you wish to modify.
6. Turn the VALUE dial or press [INC]/[DEC] to get the value you want.
7. Repeat steps 5–6 to specify how the sound will be output.
8. If you wish to save the changes you've made, press [6 (Write)] to perform the Save operation (p. 45). If you do not wish to save changes, press [EXIT] to return to the previous screen.

Signal Flow Diagram and Parameters

When the Patch Output Assign (2) is Set to Something Other than "TONE"



When the Patch Output Assign (2) is Set to "TONE"



1 Tone Select

Select the tone for which you want to make settings.

Value: 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.

2 Patch Output Assign

Specifies for each patch how the direct sound will be output.

Value:

MFX: Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects.

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.

TONE: Outputs according to the settings for each tone.

MEMO

- When the settings are such that signals are split and output from the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, and no plug is inserted in the INDIVIDUAL 2 jack, the sounds from INDIVIDUAL 1 and INDIVIDUAL 2 are mixed together, then output from the INDIVIDUAL 1 jack. This sound comprises the sounds from the INDIVIDUAL 1 and 2 jacks.
- This parameter is **Rhythm Output Assign** when a rhythm set is being selected. You can specify for each rhythm set how the direct sound will be output.

MEMO

If the Mix/Parallel parameter (SYSTEM/General) is set to “MIX,” all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 179).

3 Tone Output Assign

Sets the direct sound’s output method for each tone.

Value:

MFX: Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects.

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 the Patch Output Assign (2) is set to anything other than “TONE,” these settings will be ignored.
- When the Structure Type parameter (PATCH/TMT) has a setting of Type “2”–“10,” the outputs of tones 1 and 2 will be combined with tone 2, and the outputs of tones 3 and 4 will be combined with 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. 56).

- When the settings are such that signals are split and output from the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, and no plug is inserted in the INDIVIDUAL 2 jack, the sounds from INDIVIDUAL 1 and INDIVIDUAL 2 are mixed together, then output from the INDIVIDUAL 1 jack. This sound comprises the sounds from the INDIVIDUAL 1 and 2 jacks.

MEMO

If the Mix/Parallel parameter (SYSTEM/General) is set to “MIX,” all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 179).

HINT

- When setting the “MFX,” set the output destination with the MFX Output Assign (11) for the sound after it has passed through the multi-effects.
- Chorus and reverb 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 (13) and the Chorus Output Assign (15).
- The output destination of the signal after passing through the reverb is set with the Reverb Output Assign (18).

4 Tone Dry Send Level

Set the level of the signal that is sent to the output destination specified by Output Assign (2, 3).

Value: 0–127

5 Tone Chorus Send Level

Sets the level of the signal sent to chorus for each tone.

Value: 0–127

6 Tone Reverb Send Level

Sets the level of the signal sent to reverb for each tone.

Value: 0–127

7 MFX Type (Multi-Effects Type)

Use this parameter to select from among the 90 available multi-effects. For details on multi-effects parameters, refer to “Multi-Effects Parameters” (Sound/Parameter List).

Value: 0 (Through)–90

8 MFX Dry Send Level (Multi-Effects Dry Send Level)

Adjusts the volume of the sound that has passed through the multi-effects.

Value: 0–127

9 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

10 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

11 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 (SYSTEM/General) is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 179).

12 Chorus Type

Selects either chorus or delay.

Value

0 (Off): Neither chorus or delay is used.

1 (Chorus): Chorus is used.

2 (Delay): Delay is used.

3 (GM2 Chorus): General MIDI 2 chorus

13 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.

HINT

When set to "MAIN" or "M+R," the OUTPUT jack from which the sound is output is set in Chorus Output Assign (15).

14 Chorus Level

Adjusts the volume of the sound that has passed through chorus.
Value: 0–127

15 Chorus Output Assign

Selects the pair of OUTPUT jacks to which the chorus sound is routed when Chorus Output Select (13) 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 (13) is set to "REV," this setting will have no effect.

16 Reverb Type

Selects the type of reverb.

Value

0 (Off): Reverb is not used.

1 (Reverb): Normal reverb

2 (SRV Room): This reverb simulates typical room acoustic reflections.

3 (SRV Hall): This reverb simulates typical concert hall acoustic reflections.

4 (SRV Plate): This reverb simulates a reverb plate, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate. You can also achieve unusual metallic-sounding reverbs using "SRV Plate."

5 (GM2 Reverb): General MIDI 2 reverb

17 Reverb Level

Adjusts the volume of the sound that has passed through reverb.

Value: 0–127

18 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

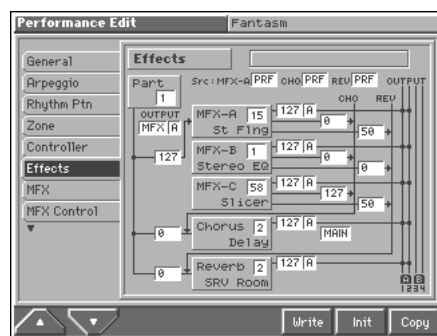
If the Mix/Parallel parameter (SYSTEM/General) is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 179).

Applying Effects in Performance Mode or Multitimbre Mode

Specifying How the Sound Will Be Output (Effects)

Here you can make overall settings for effects, and the output destination and level of each signal.

1. Select the sound for which you want to make output settings (p. 85, p. 107).
2. Press [MENU] to access the Menu window.
3. Press ▲ or ▼ to select a “Performance Edit” or “Multitimbre Edit,” and then press [8 (Select)].
The Performance Edit or the Multitimbre Edit screen appears.
4. Press [1 (▲)] or [2 (▼)] to select the “Effects” tab.
A screen like the one shown below appears.



MEMO

When “MFX,” “CHO,” “REV” (effect switches) are turned off, effects processors that are turned off will be indicated by a dashed outline in the “Effects” setting screen.

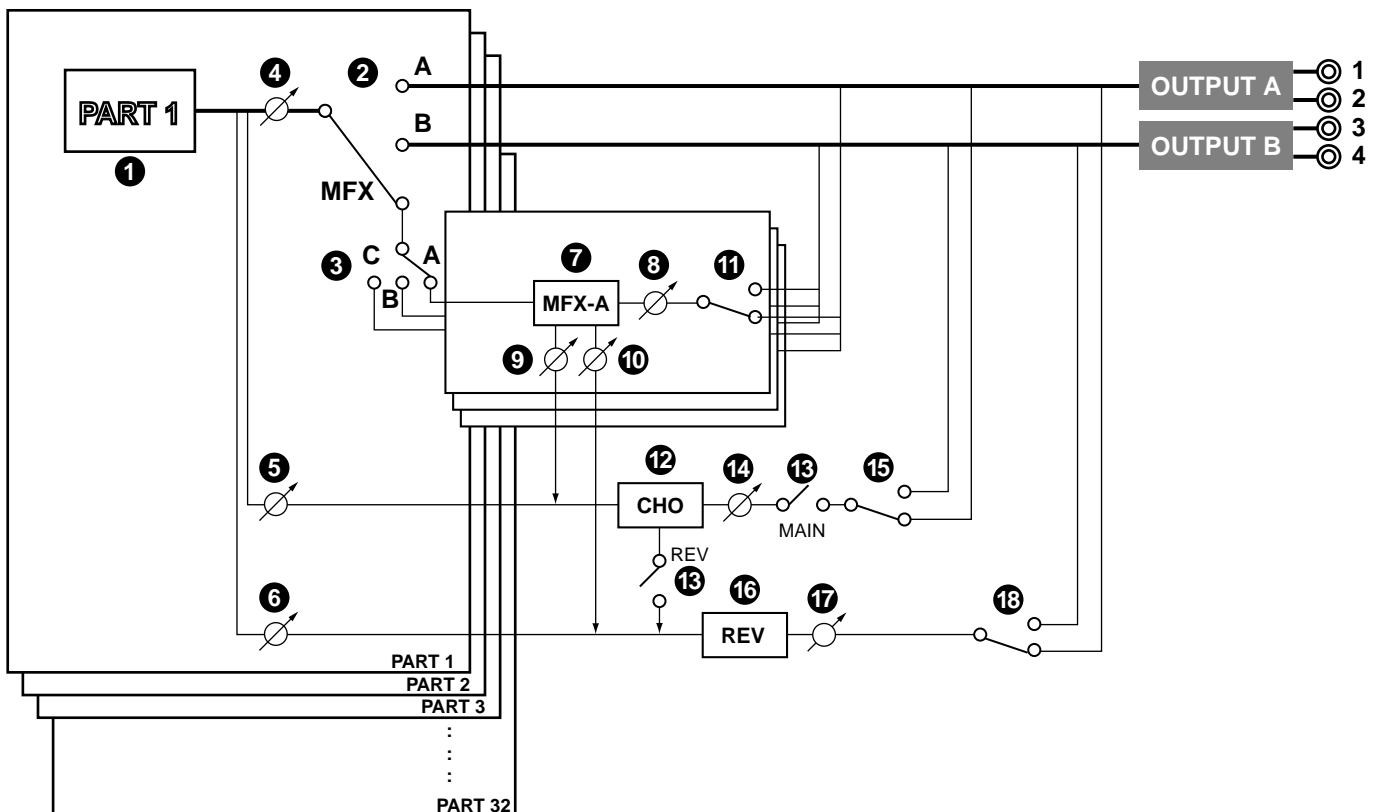
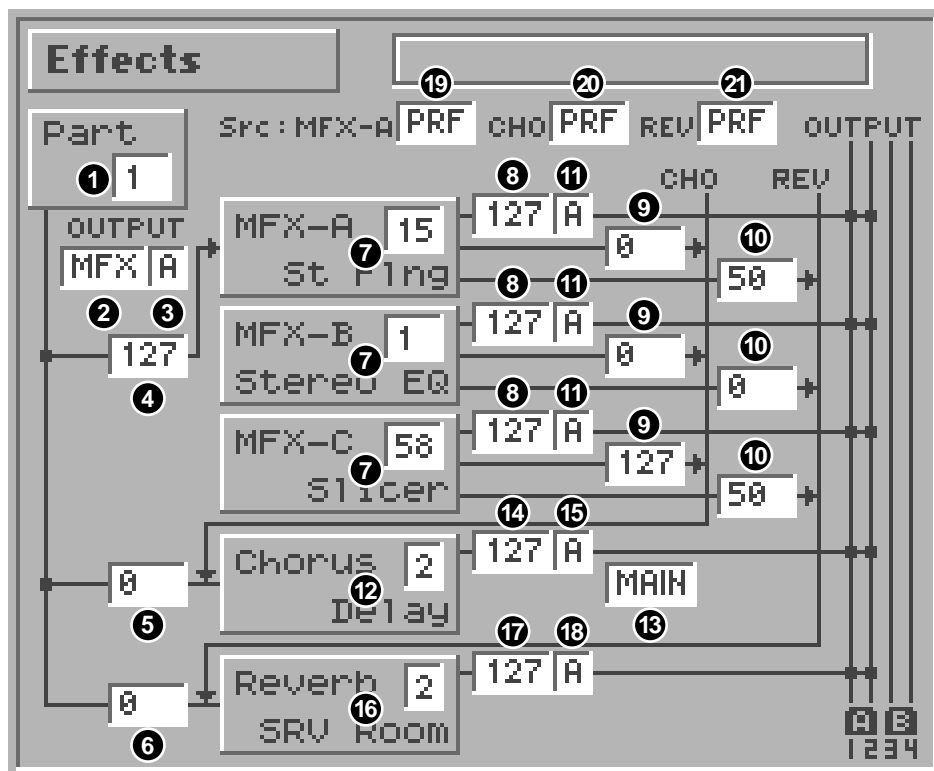
5. Use [CURSOR] to move the cursor to the parameter you wish to modify.
6. Turn the VALUE dial or press [INC]/[DEC] to get the value you want.
7. Repeat steps 5–6 to specify how the sound will be output.
8. If you wish to save the changes you’ve made, press [6 (Write)] to perform the Save operation (p. 93, p. 114). If you do not wish to save changes, press [EXIT] to return to the previous screen.

Using the MFX-A-C Simultaneously

Three types of multi-effects can be used simultaneously only if the MFX-A Source parameter is set to “PRF” or “MLT” (p. 173).

Only 50 of the 90 types of multi-effects allow three multi-effects to be used simultaneously. For details refer to “Multi-Effects Parameters” (Sound/Parameter List).

Signal Flow Diagram and Parameters



1 Part Select

Select the part for which you want to make settings.

Value: 1–16

2 Part Output Assign

Specifies for each part how the direct sound will be output.

Value

MFX: Output in stereo through multi-effects. You can also apply chorus or reverb to the sound that passes through multi-effects.

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.

PAT: The part's output destination is determined by the settings of the patch or rhythm set assigned to the part.

NOTE

When the settings are such that signals are split and output from the INDIVIDUAL 1 jack and INDIVIDUAL 2 jack, and no plug is inserted in the INDIVIDUAL 2 jack, the sounds from INDIVIDUAL 1 and INDIVIDUAL 2 are mixed together, then output from the INDIVIDUAL 1 jack. This sound comprises the sounds from the INDIVIDUAL 1 and 2 jacks.

MEMO

If the Mix/Parallel parameter (SYSTEM/General) is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 179).

HINT

- When setting the "MFX," set the output destination with the MFX Output Assign (11) for the sound after it has passed through the multi-effects.
- Chorus and reverb 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 (13) and the Chorus Output Assign (15).
- The output destination of the signal after passing through the reverb is set with the reverb Output Assign (16).

3 Part Output MFX Select (Part Output Multi-Effects Select)

Of the three types of multi-effects that can be used simultaneously, specify which multi-effects will be used.

Value: A–C (MFX-A–MFX-C)

4 Part Dry Send Level

Set the level of the signal that is sent to the output destination specified by Part Output Assign (2).

Value: 0–127

5 Part Chorus Send Level

Sets the level of the signal sent to chorus for each part.

Value: 0–127

6 Part Reverb Send Level

Sets the level of the signal sent to reverb for each part.

Value: 0–127

MEMO

For the following parameters 7–11, settings can be made individually for each multi-effects (MFX1–MFX3) selected in Part Output MFX Select (3).

7 MFX Type (Multi-Effects Type)

Use this parameter to select from among the 90 available multi-effects. For details on multi-effects parameters, refer to "Multi-Effects Parameters" (Sound/Parameter List).

Value: 0 (Through)–90

NOTE

Depending on the multi-effects you select here, it may not be possible to use three multi-effects simultaneously.

8 MFX Dry Send Level (Multi-Effects Dry Send Level)

Adjusts the volume of the sound that has passed through the multi-effects.

Value: 0–127

9 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

10 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

11 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 (SYSTEM/General) is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 179).

12 Chorus Type

Selects either chorus or delay.

Value

0 (Off): Neither chorus or delay is used.

1 (Chorus): Chorus is used.

2 (Delay): Delay is used.

3 (GM2 Chorus): General MIDI 2 chorus

13 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.

HINT

When set to "MAIN" or "M+R," the OUTPUT jack from which the sound is output is set in Chorus Output Assign (15).

14 Chorus Level

Adjusts the volume of the sound that has passed through chorus.

Value: 0–127

15 Chorus Output Assign

Selects the pair of OUTPUT jacks to which the chorus sound is routed when Chorus Output Select (13) 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 (13) is set to "REV," this setting will have no effect.

MEMO

If the Mix/Parallel parameter (SYSTEM/General) is set to "MIX," all sounds are output from the OUTPUT A (MIX) jacks in stereo (p. 179).

16 Reverb Type

Selects the type of reverb.

Value

0 (Off): Reverb is not used.

1 (Reverb): Normal reverb

2 (SRV Room): This reverb simulates typical room acoustic reflections.

3 (SRV Hall): This reverb simulates typical concert hall acoustic reflections.

4 (SRV Plate): This reverb simulates a reverb plate, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate. You can also achieve unusual metallic-sounding reverbs using "SRV Plate."

5 (GM2 Reverb): General MIDI 2 reverb

17 Reverb Level

Adjusts the volume of the sound that has passed through reverb.

Value: 0–127

18 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.

19 MFX-A Source (Multi-Effects A Source)

● When a performance is selected

Selects the multi-effects parameter settings that will be used by the performance. If you wish to use the performance settings, select "PRF." If you wish to use the settings of the patch/rhythm set assigned to one of the parts, select the part number.

Value: PRF, P1–P16

● When a multitimbre is selected

Selects the multi-effects parameter settings that will be used by the multitimbre. If you wish to use the multitimbre settings, select "MLT." If you wish to use the settings of the patch/rhythm set assigned to one of the parts, select the part number.

Value: MLT, P1–P16

NOTE

When the MFX-A Source parameter is set to "P1" – "P16," MFX-B and MFX-C will be disabled.

When Patch or Rhythm Set Settings Are Selected

When the patch or rhythm set's multi-effects settings are selected, those settings are shown in each of the multitimbre's/performance's multi-effects setting screens, and the settings can be then be changed as well. Changes to patch or rhythm set multi-effects parameter settings are lost when another patch or rhythm set is selected. To keep the modified settings, save the patch/rhythm set settings (p. 93, p. 114).

20 Chorus Source

● When a performance is selected

Selects the chorus parameter settings that will be used by the performance. If you wish to use the performance settings, select "PRF." If you wish to use the settings of the patch/rhythm set assigned to one of the parts, select the part number.

Value: PRF, P1-P16

● When a multitimbre is selected

Selects the chorus parameter settings that will be used by the multitimbre. If you wish to use the multitimbre settings, select "MLT." If you wish to use the settings of the patch/rhythm set assigned to one of the parts, select the part number.

Value: MLT, P1-P16

When Patch or Rhythm Set Settings Are Selected

When the patch or rhythm set's chorus settings are selected, those settings are shown in each of the multitimbre's/performance's chorus setting screens, and the settings can be then be changed as well. Changes to patch or rhythm set chorus parameter settings are lost when another patch or rhythm set is selected. To keep the modified settings, save the patch/rhythm set settings (p. 93, p. 114).

21 Reverb Source

● When a performance is selected

Selects the reverb parameter settings that will be used by the performance. If you wish to use the performance settings, select "PRF." If you wish to use the settings of the patch/rhythm set assigned to one of the parts, select the part number.

Value: PRF, P1-P16

● When a multitimbre is selected

Selects the reverb parameter settings that will be used by the multitimbre. If you wish to use the multitimbre settings, select "MLT." If you wish to use the settings of the patch/rhythm set assigned to one of the parts, select the part number.

Value: MLT, P1-P16

When Patch or Rhythm Set Settings Are Selected

When the patch or rhythm set's reverb settings are selected, those settings are shown in each of the multitimbre's/performance's reverb setting screens, and the settings can be then be changed as well. Changes to patch or rhythm set reverb parameter settings are lost when another patch or rhythm set is selected. To keep the modified settings, save the patch/rhythm set settings (p. 93, p. 114).

Making Multi-Effects Settings (MFX/MFX Control)

MEMO

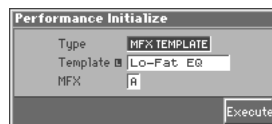
Here we will explain how to make multi-effects settings in Performance mode. The procedure is the same when making settings in Patch mode or Multitimbre mode.

Setting Procedure

1. Select the sound to which you want to apply the multi-effects (p. 85).
2. Press [MENU] to access the Menu window.
3. Press ▲ or ▼ to select a "Performance Edit," and then press [8 (Select)].
The Performance Edit screen appears.
4. Press [1 (▲)] or [2 (▼)] to select the "MFX" tab or the "MFX Control" tab.
The multi-effects parameter setting screen appears.
5. Use [CURSOR] to move the cursor to the parameter you wish to modify.
6. Turn the VALUE dial or press [INC]/[DEC] to get the value you want.
7. Repeat steps 5-6 to make the multi-effects settings.
8. If you wish to save the changes you've made, press [6 (Write)] to perform the Save operation (p. 93). If you do not wish to save changes, press [EXIT] to return to the previous screen.

MFX Template

The Fantom provides a variety of multi-effect settings in the form of **MFX templates**. Simply by pressing [7 (Init)] and selecting an MFX template, you can summon up just the right effects settings for the application you have in mind (p. 43, p. 69, p. 91, p. 112)



For more information about MFX template, refer to "MFX Template List" (Sound/Parameter List).

Functions of Parameters

MFX



Select (Multi-Effects Select)

Of the three types of multi-effects that can be used simultaneously, select the multi-effects for which you want to make settings.

Value: MFX-A-MFX-C



This parameter is not available when a patch or rhythm set is being selected.

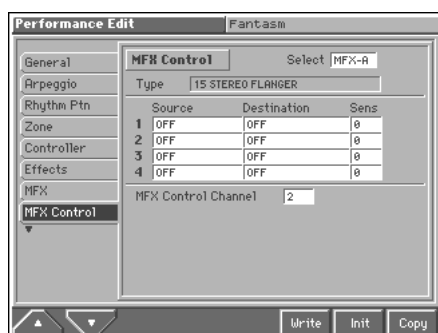
Type (Multi-Effects Type)

Use this parameter to select from among the 90 available multi-effects. For details on multi-effects parameters, refer to “Multi-Effects Parameters” (Sound/Parameter List).

Value: 00 THROUGH-90 3D MANUAL

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 “Multi-Effects Parameters” (Sound/Parameter List).

MFX Control



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. 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’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 “Multi-Effects Parameters” (Sound/Parameter List), these are indicated by a “#.”

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/multitimbre/performance. 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).



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. 55).

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, 33-95: Controller numbers 1-31, 33-95



For more information about Control Change messages, please refer to “MIDI Implementation” (Sound/Parameter List).

PITCH BEND: Pitch Bend

AFTERTOUCH: Aftertouch

SYS CTRL1-SYS CTRL4: MIDI messages used as common multi-effects controls.



If you want to use common controllers for the entire Fantom, 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 (SYSTEM/Control) (p. 184).

NOTE

- In patch/rhythm set mode, 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. 51). 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.”
- There are parameters that determine whether or not specific MIDI messages are received for each MIDI channel (p. 103, p. 119). When using the multi-effects control, confirm that any MIDI messages used for the multi-effects control will be received. If the Fantom is set up such that reception of MIDI messages is disabled, then the multi-effects control will not function.

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 “Multi-Effects Parameters” (Sound/Parameter List).

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. When both positive and negative are selected, the changes are greater as the value increases. To have no effect applied, select “0.”

Value: -63–+63

MFX Control Channel (Multi-Effects Control Channel)

This determines the channel that will be used for reception when using the Multi-effects Control to modify multi-effects parameters in real time, when the MFX Source parameter (p. 173) is set to “PRF” or “MLT.” Set this to “OFF” when the Multi-effects Control is not being used.

Value: 1–16, OFF

Making Chorus Settings (Chorus)

MEMO

Here we will explain how to make chorus settings in Performance mode. The procedure is the same when making settings in Patch mode or Multitimbre mode.

Setting Procedure

1. Select the sound to which you want to apply the chorus (p. 85).
2. Press [MENU] to access the Menu window.
3. Press ▲ or ▼ to select a “Performance Edit,” and then press [8 (Select)].
The Performance Edit screen appears.
4. Press [1 (▲)] or [2 (▼)] to select the “Chorus” tab.
The chorus parameter setting screen appears.
5. Use [CURSOR] to move the cursor to the parameter you wish to modify.
6. Turn the VALUE dial or press [INC]/[DEC] to get the value you want.
7. Repeat steps 5–6 to make the chorus settings.
8. If you wish to save the changes you’ve made, press [6 (Write)] to perform the Save operation (p. 93). If you do not wish to save changes, press [EXIT] to return to the previous screen.

Functions of Parameters

Chorus



Type (Chorus Type)

Selects either chorus or delay.

Value

- 0 OFF:** Neither chorus or delay is used.
- 1 CHORUS:** Chorus is used.
- 2 DELAY:** Delay is used.
- 3 GM2 CHORUS:** General MIDI 2 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**” (Sound/Parameter List).

Making Reverb Settings (Reverb)

MEMO

Here we will explain how to make reverb settings in Performance mode. The procedure is the same when making settings in Patch mode or Multitimbre mode.

Setting Procedure

1. Select the sound to which you want to apply the reverb (p. 85).
2. Press [MENU] to access the Menu window.
3. Press ▲ or ▼ to select a “Performance Edit,” and then press [8 (Select)].
The Performance Edit screen appears.
4. Press [1 (▲)] or [2 (▼)] to select the “Reverb” tab.
The reverb parameter setting screen appears.
5. Use [CURSOR] to move the cursor to the parameter you wish to modify.
6. Turn the VALUE dial or press [INC]/[DEC] to get the value you want.
7. Repeat steps 5–6 to make the reverb settings.
8. If you wish to save the changes you’ve made, press [6 (Write)] to perform the Save operation (p. 93). If you do not wish to save changes, press [EXIT] to return to the previous screen.

Functions of Parameters

Reverb



Type (Reverb Type)

Selects the type of Reverb.

Value

0 OFF: Reverb is not used.

1 REVERB: Normal Reverb

2 SRV ROOM: This reverb simulates typical room acoustic reflections.

3 SRV HALL: This reverb simulates typical concert hall acoustic reflections.

4 SRV PLATE: This reverb simulates a reverb plate, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate. You can also achieve unusual metallic-sounding reverbs using “SRV PLATE.”

5 GM2 REVERB: General MIDI 2 reverb

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**” (Sound/Parameter List).

Settings Common to All Modes (System Function)

Settings that affect the entire operating environment of the Fantom, 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 the System Function Settings

1. Press [MENU] to open the Menu window.
2. Press ▲ or ▼ to select “System Edit,” and then press [8 (Select)].
The System Edit screen appears.



MEMO

The lower part of the screen indicates the Wave Expansion Board installation status, and the program version.


3. The parameters are organized into several edit groups. Press [1 (▲)] or [2 (▼)] to select the tab of the edit group that contains the parameter you want to set.



For details on how the parameters are grouped, refer to “Parameter list” (Sound/Parameter List).

4. Use [CURSOR] to move the cursor to the parameter you wish to modify.

MEMO

- Some of the parameters have a “” symbol. This indicates that if you press [LIST] when setting one of these parameters, the related window will appear. For example if you press [LIST] at a parameter that requires you to specify a name, the Name window will appear.
 - 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 make the settings for the System function.
 7. To save the settings you modified, press [6 (Write)] and perform the Write operation. If you do not want to save, press [EXIT] to return to the previous screen.

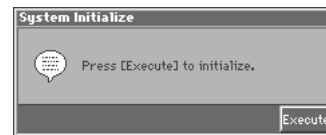
Initializing the System Settings (Init)

The current settings of the system functions can be restored to a set of standard settings, or to the factory settings.

1. Access the System Edit screen.

2. Press [7 (Init)].

The System Initialize window appears.



3. Press [8 (Execute)].

The settings will be initialized, then you'll be returned to the previous screen.

Saving the System Settings (Write)

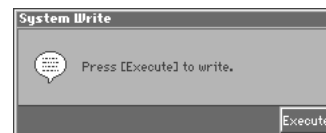
Changes you make to the System function settings are only temporary—they will be discarded as soon as the power is turned off. If you want to keep any changes you've made in the system settings, you must save them in internal system memory.

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 Initialization procedure.

1. Change the system function settings, and press [6 (Write)].

The System Write window appears.



2. Press [8 (Execute)].

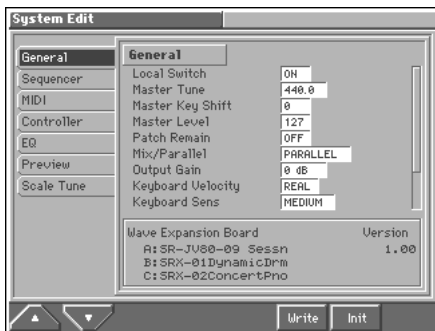
The display will indicate “Are you sure?”

3. Press [8 (OK)] to execute the save operation. To cancel the operation, press [EXIT].

Functions of System Parameters

This section explains what the different System parameters do, and also how these parameters are organized.

Settings Common to the Entire System (General)



For details on the setting, refer to “How to Make the System Function Settings” (p. 178).

General

Local Switch

The Local Switch determines whether the internal sound generator is disconnected (OFF) from the keyboard controller section (keyboard, 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’s keyboard and controllers to control only external sound modules, set it to “OFF.”

Value: OFF, ON

MEMO

When a performance is selected, if you want the keyboard controller section to be disconnected only from a specific part or parts, use the Int Switch parameter (PERFORMANCE/Zone) (p. 98).

Master Tune

Adjusts the overall tuning of the Fantom. The display shows the frequency of the A4 note (center A).

Value: 415.3–466.2 Hz

Master Key Shift

Shifts the overall pitch of the Fantom in semitone steps.

Value: -24– +24

Master Level

Adjusts the volume of the entire Fantom.

Value: 0–127

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). Also, when this is “ON,” changes produced by incoming MIDI messages such as Volume or Pan (CC 5, 7, 10, 65, 68, 71–74, RPN 0, 1, 2, MONO ON, POLY ON), as well as tonal quality and volume changes produced by the various controllers will be inherited.

Value: OFF, ON

NOTE

Effects settings change as soon as you switch to a new patch or rhythm set, without being influenced by the Patch Remain setting. Because of this, certain effects settings can cause notes that were until then sounding to no longer be heard, even though Patch Remain has been set to on.

Mix/Parallel

Specifies how the sound of the entire Fantom 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.

HINT

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.

Output Gain

This adjusts the output gain from the Fantom’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, -6, 0, +6, +12 dB

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

Settings Common to All Modes (System Function)

Keyboard Sens (Keyboard Sensitivity)

Adjusts the keyboard's touch.

Value

LIGHT: Light weight synthesizer keyboard like

MEDIUM: Standard

HEAVY: Acoustic piano simulation

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%

Power Up Mode

Specifies the condition that the Fantom will be in when the power is turned on.

Value

LAST SET: Reinstates the patch and performance selected at the time the Fantom was last turned off.

DEFAULT: The Fantom will be ready to play Performance "USER:01."

Backlight Saver

Specify the time to pass before the backlight saver function is activated. If you do not want to use the backlight saver, set it to "OFF."

If there are no panel operations or MIDI input for longer than the time specified here, the backlight will go dark. While the backlight is off, the display darkens, and the BEAT orange indicator lamp blinks.

Value: OFF, 5, 10, 20, 30, 40, 50, 60 minutes

The backlight saver function will be defeated when you play the keyboard or operate the panel of the Fantom, or when the following MIDI messages are received.

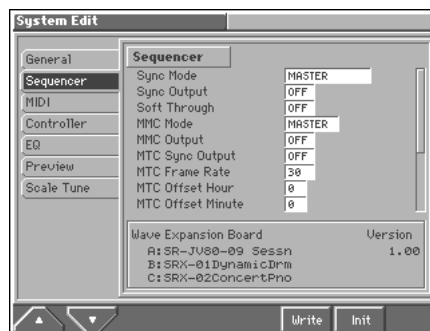
- Channel Voice Message
- Channel Mode Messages
- System Exclusive Message

Backlight Saver

This backlight saver extends the backlight's operational life. If the backlight becomes dim or fails to light, the display screen will be dark and difficult to read.

The factory default settings call for the Backlight Saver function to be switched off. However, in order to maximize the life of the backlight, we recommend that you turn the Backlight Saver function on.

Sequencer Settings (Sequencer)



For details on the setting, refer to "How to Make the System Function Settings" (p. 178).

Sequencer

Sync Mode

Specify the synchronization message that the Fantom's sequencer will use for operation.

Value

MASTER: The Fantom will be the master. Choose this setting when using the Fantom by itself without synchronizing to another device, or when you want other MIDI devices to synchronize to the Fantom.

SLAVE MIDI: The Fantom will be the slave. Choose this setting when you want the Fantom to synchronize to MIDI Clock messages received from another MIDI device.

SLAVE MTC: The Fantom will be the slave. Choose this setting when you want the Fantom 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/stop control. The tempo will be in accord with what has been set on the Fantom.

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. Since Roland VS Series workstations are hard disk recorders, they cannot send MIDI Clock. Therefore, using a MTC is convenient for synchronization of the hard disk recorder and the Fantom. However, VS Series devices also feature specialized tracks for recording MIDI Clock, so with the Fantom's MIDI Clock recorded in this manner, we have another synchronizing technique in which the VS device appears to be sending MIDI Clock (although it is actually playing back tracks to which MIDI Clock has been recorded). However, since the tempo must be recorded to the VS sync track beforehand, MTC is only convenient in synchronizing with songs that do not contain great amounts of tempo data.

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

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. Normally you'll leave this "OFF," but when using an external sequencer, you should set it "ON."

Value: OFF, ON

MMC Mode

When synchronizing the Fantom with a hard disk recorder, such as one from the Roland VS series, specify which synchronization signal the Fantom's sequencer will use for operation.

Value

MASTER: The Fantom will be the master. Use this setting when you want other devices to follow the operation of the Fantom.

SLAVE: The Fantom will be the slave. Use this setting when you want the Fantom 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

HINT

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. However, when synchronizing operation with video devices such as video decks, the video device's frame rate is fixed, so the Fantom's setting must correspond to that frame rate.

Types of MTC

The types of MTC that can be selected by the Fantom 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 is used.

MTC Offset Hour (MTC Offset Time Hour)

Coordinates the playback timing of the Fantom and the external device in an hour units.

Value: 00–23 hours

MTC Offset Minute (MTC Offset Time Minute)

Coordinates the playback timing of the Fantom and the external device in a minute units.

Value: 00–59 minutes

MTC Offset Second (MTC Offset Time Second)

Coordinates the playback timing of the Fantom and the external device in a second units.

Value: 00–59 seconds

Settings Common to All Modes (System Function)

MTC Offset Frame (MTC Offset Time Frame)

Coordinates the playback timing of the Fantom and the external device in a frame units.

Value: 00–29 frames

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)

NOTE

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.

Metronome Mode

Specifies when you want the metronome to 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

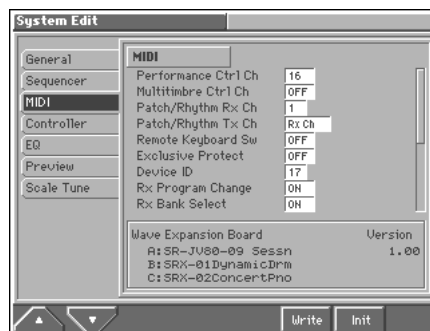
TYPE 1: A conventional metronome sound will be heard. A bell will sound on the first beat.

TYPE 2: Clicks will sound.

TYPE 3: Beeps will sound.

TYPE 4: Cowbell will sound for the first beat, and woodblock on other beats.

MIDI Settings (MIDI)



For details on the setting, refer to “How to Make the System Function Settings” (p. 178).

MIDI

Performance Ctrl Ch (Performance Control Channel)

Performance Ctrl Ch selects the MIDI receive channel used during switching of performances when MIDI messages (Program Change/Bank Select) are sent from an external MIDI device. Set this to “OFF” if performances 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 Performance Ctrl Ch parameter setting coincides with the MIDI receive channel of a part, priority will be given to switching the performance.

Multitimbre Ctrl Ch (Multitimbre Control Channel)

Multitimbre Ctrl Ch selects the MIDI receive channel used during switching of Multitimbres when MIDI messages (Program Change/Bank Select) are sent from an external MIDI device. Set this to “OFF” if Multitimbres 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 Multitimbre Ctrl Ch parameter setting coincides with the MIDI receive channel of a part, priority will be given to switching the multitimbre.

Patch/Rhythm Rx Ch (Patch/Rhythm Set Receive Channel)

Specifies the receive channel of MIDI messages in Patch mode.

Value: 1–16

Patch/Rhythm Tx Ch (Patch/Rhythm Set Transmit Channel)

Specifies the transmit channel of MIDI messages in Patch mode. If you do not want to transmit MIDI messages to external MIDI devices, turn this parameter "OFF." If you want the transmit channel to always match the Patch/Rhythm Set Receive Channel, set this parameter to "Rx Ch."

Value: 1–16, Rx Ch, OFF

Remote Keyboard Sw (Remote Keyboard Switch)

Set this parameter "ON" when you want to use an external MIDI keyboard instead of the Fantom'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."

HINT

Turn this "ON" when you want to control the Fantom from an external MIDI device when performing with the Arpeggiator or RPS function (p. 39, p. 161).

Exclusive Protect (Exclusive Protect Switch)

This prevents incoming System Exclusive messages from an external MIDI device from rewriting user memory settings. When this is set "ON," the data cannot be written. **Value:** OFF, ON

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

Rx Program Change (Receive Program Change Switch)

Specifies whether Program Change messages will be received (ON) or not (OFF).

Value: OFF, ON

Rx Bank Select (Receive Bank Select Switch)

Specifies whether Bank Select messages will be received (ON) or not (OFF).

Value: OFF, ON

Rx GM System On (Receive GM System On Switch)

Specifies whether General MIDI System On messages will be received (ON) or not (OFF).

Value: OFF, ON

Rx 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

Rx GS Reset (Receive GS Reset Switch)

Specifies whether GS Reset messages will be received (ON) or not (OFF).

Value: OFF, ON

Rx Exclusive (Receive System Exclusive Switch)

Specifies whether System Exclusive messages will be received (ON) or not (OFF).

Value: OFF, ON

Tx Program Change (Transmit Program Change Switch)

Specifies whether Program Change messages will be transmitted (ON) or not (OFF).

Value: OFF, ON

Tx Bank Select (Transmit Bank Select Switch)

Specifies whether Bank Select messages will be transmitted (ON) or not (OFF).

Value: OFF, ON

Tx Active Sensing (Transmit Active Sensing Switch)

Specifies whether Active Sensing messages will be transmitted (ON) or not (OFF).

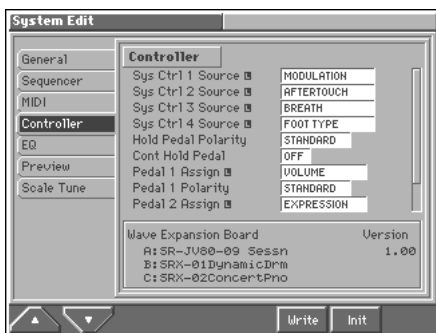
Value: OFF, ON

Tx Edit Data (Transmit Edit Data Switch)

Specify whether changes you make in the settings of a patch, multitimbre, or performance will be transmitted as system exclusive messages (ON), or will not be transmitted (OFF).

Value: OFF, ON

Controller Settings (Controller)



For details on the setting, refer to “How to Make the System Function Settings” (p. 178).

Controller

Sys Ctrl 1–4 Source (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. 54).

Similarly, the function allowing you to use MIDI messages to change multi-effects settings in realtime is called the **Multi-effects Control** (p. 175).

Normally, the Matrix Control is used for making patch settings, and the Multi-effects Control for making settings to patches, rhythm sets, multitimbres, and performances. However, if you do not need to change the MIDI messages used for matrix control or multi-effects control by each patch/rhythm set/multitimbre/performance, 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.

You can use up to four System Controls.

Value

OFF: The system control knob will not be used.

CC01–31, 33–95: Controller numbers 1–31, 33–95



For details on control change messages, refer to “MIDI Implementation” (Sound/Parameter List).

PITCH BEND: Pitch Bend

AFTERTOUCH: Aftertouch

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

Cont Hold Pedal (Continuous Hold Pedal Switch)

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 (EV-5, etc.), and employ pedal work to achieve even finer control in performances in which piano tones are used.

Value: OFF, ON

Pedal 1, 2 Assign

This specifies the function of each pedal connected to the CTL 1, CTL 2 PEDAL jacks.

Value

OFF: The control pedal will not be used.

CC01–31, 33–95: Controller numbers 1–31, 33–95



For details on control change messages, refer to “MIDI Implementation” (Sound/Parameter List).

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.

AFTERTOUCH: Aftertouch

OCT UP: Each pedal press raises the key range in octave steps (up to 3 octaves higher).

OCT DOWN: Each pedal press lowers the key range in octave steps (up to 3 octaves lower).

START/STOP: The sequencer will start/stop.

PUNCH I/O: Manual punch-in/out recording 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.

FAV UP: The favorite sound of the next number or bank will be selected ([1] → [8]).

FAV DOWN: The favorite sound of the previous number or bank will be selected ([8] → [1]).

ARP SW: Switches the Arpeggiator on/off.

PTN SW: Switch Rhythm pattern playback on/off.

Pedal 1, 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

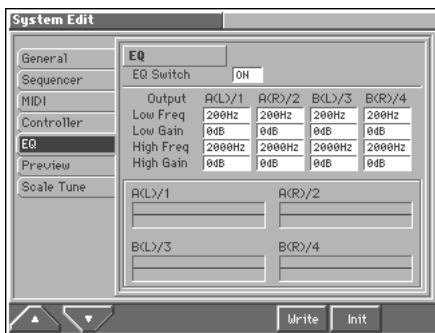
Beam Sens (D Beam Sensitivity)

This sets the D Beam Controller's sensitivity. The higher the value set, the more readily the D Beam Controller goes into effect.

Normally you will leave this at "5."

Value: 1-10

Equalizer settings (EQ)



For details on the setting, refer to "How to Make the System Function Settings" (p. 178).



Equalizer settings are made separately for each output jack

Output A(L)/1: OUTPUT A (MIX) jack (L (MONO))/INDIVIDUAL 1 jack

Output A(R)/2: OUTPUT A (MIX) jack (R)/INDIVIDUAL 2 jack

Output B(L)/3: OUTPUT B jack (L)/INDIVIDUAL 3 jack

Output B(R)/4: OUTPUT B jack (R)/INDIVIDUAL 4 jack

EQ

EQ Switch (Equalizer Switch)

Switch the equalizer on/off.

Value: BYPASS, ON

Low Freq (Low Frequency)

Selects the frequency of the low range.

Value: 200, 400 Hz

Low Gain

Adjusts the gain of the low frequency. Positive (+) settings will emphasize the low-frequency range.

Value: -15- +15 dB

High Freq (High Frequency)

Selects the frequency of the high range.

Value: 2000, 4000, 8000 Hz

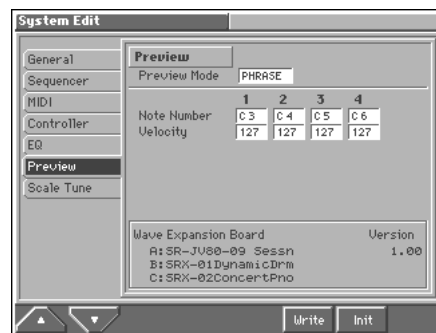
High Gain

Adjusts the gain of the high frequency. Positive (+) settings will emphasize the high-frequency range.

Value: -15- +15 dB

Phrase Preview Settings (Preview)

Specify how the phrase will sound when you press [8 (Prevu)] in the Patch List window.



For details on the setting, refer to "How to Make the System Function Settings" (p. 178).

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.

Note Number 1-4 (Preview Note Number 1-4)

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



If "PHRASE" is selected for the Preview Mode parameter, these settings will have no effect.

Velocity 1-4 (Preview Velocity 1-4)

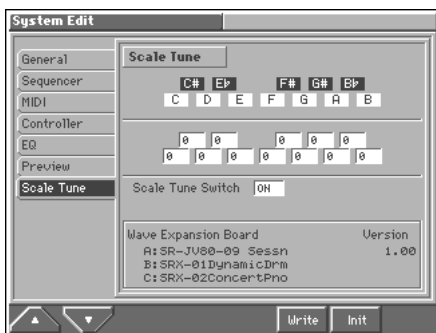
Specify the velocity of the four notes that will sound when the Preview Mode parameter is set to "SINGLE" or "CHORD."

Value: 0-127



If "PHRASE" is selected for the Preview Mode parameter, these settings will have no effect.

Scale Tune settings (Scale Tune)



For details on the setting, refer to “How to Make the System Function Settings” (p. 178).

Scale Tune

C-B (Patch Scale Tune C-B)

Make scale tune settings for Patch mode.

Value: -64- +63

Scale Tune Switch

Turn this on when you wish to use a tuning scale other than equal temperament.

Value: OFF, ON

One set of Scale Tune settings can be created in Patch mode. In Performance mode or Multitimbre mode, this can be set for each part of the performance or multitimbre (p. 104, p. 120).

The Fantom 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.

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 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, 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

Disk-Related Functions (Disk Utility)

Disk mode performs disk-related functions such as loading data from disk into the Fantom's memory (Load), and saving a song or sound generator settings to disk (Save). You can also format a disk or create a backup disk in this mode.

Before You Perform Disk Utility Operations

In order to perform disk utility operations, you will need a 3.5 inch 2DD or 2HD type disk.

Before using a new disk or one that has been used on another device, please initialize (format) it on the Fantom. A 3.5" 2DD disk should be formatted to 720 K bytes and 3.5" 2HD disk to 1440 K bytes. These are standard formats used with most song data software and computers/instruments. If you save a song created on the Fantom as a Standard MIDI File, you can use many devices to play your song.

About Disk Utility

Disk Utility includes the following functions, and these functions are executed by pressing [1]–[6].

Load

This function loads data from disk into the Fantom's memory. → (p. 188)

Save

This function saves data to disk. → (p. 189)

Copy (Copy File)

Saves the file under a different name. → (p. 190)

Rename

Modify the filename. → (p. 191)

Delete (Delete File)

This function deletes unwanted files from disk. → (p. 191)

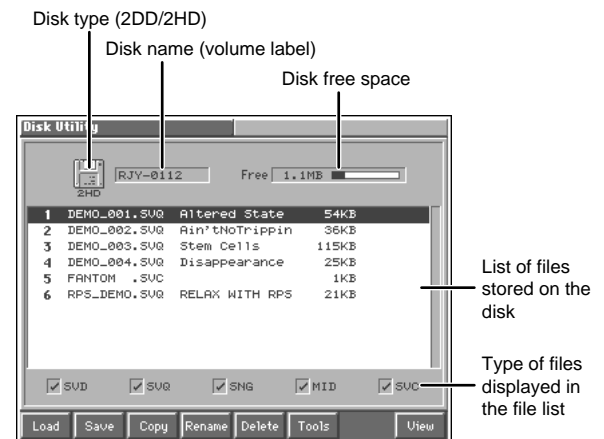
Tools

Execute disk-related functions such as formatting or modifying the name (volume label). → (p. 191)

Basic Disk Utility Operations

1. Insert the disk with the song into the disk drive.
2. Press [MENU] to open the Menu window.
3. Press ▲ or ▼ to select "Disk Utility," and then press [8 (Select)].

The Disk Utility window appears.



4. According to the function you want to execute, select the appropriate file from the file list. Press ▲ or ▼ to make your selection.

HINT

By holding down [SHIFT] and pressing ▲ or ▼ you can jump to the beginning or end of the file list.

5. Press [1]–[6] to select the desired function.

The window for the selected function appears.

6. Check the contents of the windows for the various functions, and press [8 (Execute)] to proceed.

When the operation is completed, the display will briefly indicate "Complete !"

HINT

To cancel the operation, press [EXIT].

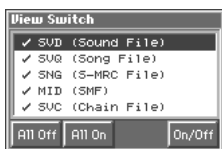
7. Press [EXIT] to return to the previous page.

Selecting the Type of Files Displayed in the File List (View)

By specifying the type of files that are displayed in the file list of the Disk Utility screen, you can locate a desired file on disk more rapidly.

1. Access the Disk Utility screen (p. 187).
2. Press [8 (View)].

The View Switch window appears.



3. Press ▲ or ▼ to select the type of files that will be displayed in the file list.

SVD (Sound File): These are data files that contain a complete collection of the patch, rhythm set, multitimbre, performance, system, and favorite list settings. The filename extension is “.SVD”.

SVQ (Song File): These are files in MRC Pro song format. The filename extension is “.SVQ”.

SNG (S-MRC File): These are files in S-MRC song format. The filename extension is “.SNG”.

MID (SMF): These are Standard MIDI Files. The filename extension is “.MID”.

SVC (Chain File): These are chain files containing Chain Play settings. The filename extension is “.SVC”.

4. Press [8 (On/Off)] to switch the file list between displayed or hidden.

This will be displayed if a check mark (✓) is assigned, and will not be displayed if the check mark is removed.

If you press [5 (All Off)], no files will be displayed in the file list.

If you press [6 (All On)], all types of files will be displayed in the file list.

5. Press [EXIT] to close the View Switch window.

Loading a File from Disk into the Fantom (Load)

This function loads a song on disk into the internal memory. As the Fantom loads MRC Pro songs as well as Standard MIDI Files and S-MRC format songs, it copes efficiently with different song data. And with MRC Pro songs, a Phrase track or Pattern can be specified for loading. A complete song can therefore be created by combining different MRC Pro song data.

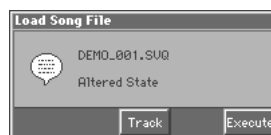
Besides songs, you can also load data files or chain files into internal memory.

NOTE

When a file is loaded, internal memory will be rewritten. If internal memory contains important data, you must save it to disk before you load other data.

1. Access the Disk Utility screen (p. 187).
2. Press ▲ or ▼ to select the file that you want to load.
3. Press [1 (Load)].

The Load **** File window appears.



MEMO

The title of the window will depend on the file being loaded.

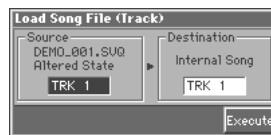
4. Press [8 (Execute)] to execute the operation.

Loading Individual Tracks/Patterns of Song Data

If you have selected a song file (extension “.SVQ”) or Standard MIDI File (extension “.MID”), you can load individual phrase tracks or patterns.

1. After step 3 of “Loading a File from Disk into the Fantom (Load),” press [6 (Track)].

The Load Song File (Track) window appears.



2. Move the cursor to the left of “▶” (load source), and select the track (TRK 1–16) or pattern (PTN001–100) that you want to load.

NOTE

If you are loading from a Standard MIDI File, it is not possible to select patterns (PTN001–100). Also, if you are loading from a Format 0 Standard MIDI File, this will be fixed at “TRK ALL,” and individual tracks cannot be selected.

3. Move the cursor to the right of "▶" (load destination), and select the load-destination track (TRK 1–16) or pattern (PTN001–100).
4. Press [8 (Execute)] to execute the operation.

Loading Individual Items of Sound Data

If you have selected a sound file (extension ".SVD"), you can load individual items of sound data. Patch, rhythm set, multitimbre, or performance settings will be loaded into user memory, and system settings will be loaded into system memory.

1. After step 3 of "Loading a File from Disk into the Fantom (Load)," press [6 (Xfer)].

The Load Sound File (Xfer) window appears.



2. Move the cursor to "Type," and select the type of data that will be transferred.

PATCH 001-128: Patch

RHYTHM 001-016: Rhythm Set

MULTITIMBRE 01-16: Multitimbre

PERFORMANCE 01-64: Performance

SYSTEM: System

FAVORITE PATCH: Favorite list for patches

FAVORITE PERFORMANCE: Favorite list for performances

3. If you will be loading patch, rhythm set, multitimbre, or performance settings, move the cursor to "Source," and specify the range of data that will be transferred. Then move the cursor to "Destination," and specify the starting number of the load destination.

NOTE

If you carry out this operation while set so there is more data at the load source than can fit into the load destination, as much of the source data as possible will be loaded into the destination, starting with the beginning of the source data.

(Example)



If the above settings are made and transmission is executed, only the two PR-A group patches 001 and 002 will be transmitted to USER group patches 127 and 128.

4. Press [8 (Execute)].

Saving Data on Disk (Save)

This function saves a song stored in internal memory (internal song), patch, rhythm set, multitimbre or performance settings, or a data file containing System settings to disk.

NOTE

- Data cannot be saved to the master disks of Standard MIDI File releases, etc. from Roland.
- Song data with copyrighted information cannot be re-saved in the Standard MIDI File format.
- When saving data in Standard MIDI File format, Pattern track and muted Phrase track data will not be saved. However, Pattern Call messages recorded on a Phrase track will be converted into actual sequencer data as they are saved.

1. Access the Disk Utility screen (p. 187).

2. Press [2 (Save)].

The Select Command window appears.



3. Press ▲ or ▼ to select the format in which the data will be saved.

Save Sound File: User memory patches, rhythm sets, multitimbres, performances, and the system settings and favorite list settings will be saved to disk as a single data file. The file name extension ".SVD" is automatically attached.

Save Song File: Saves song in internal memory to disk in the MRC Pro song format. The settings of the currently selected multitimbre/performance will also be saved together with this. The file name extension ".SVD" is automatically attached.

Save SMF (Format 0): Converts a song in internal memory to Standard MIDI File format 0 data (one Phrase track contains the entire sequencer data) and saves it to disk. The file name extension ".MID" is automatically attached.

Save SMF (Format 1): Converts a song in internal memory to Standard MIDI File format 1 data (sequencer data consists of two or more Phrase tracks) and saves it to disk. The file name extension ".MID" is automatically attached.

Save Chain File: Chain play settings will be saved to disk as a chain file. The file name extension ".SVC" is automatically attached.

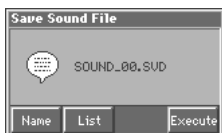
Disk-Related Functions (Disk Utility)

NOTE

- The filename extension will be “.MID” whether you use “Save SMF (Format 0)” or “Save SMF (Format 1).” These two formats cannot be distinguished through file name extension.
- When “Save Song File” is selected, the settings of the patch or rhythm set assigned to each part of the multitimbre/performance will not be saved.
- If you save using “Save Song File,” the multitimbre/performance settings will be saved in the state in which they were when the Save operation was executed. If you change the multitimbre/performance in the middle of a song and save the song after recording, the settings at the recording start will not be saved. In other words, even if you play back from the beginning of the song, it will begin with the multitimbre/performance sounds that were selected when the Save operation was executed. If you have switched multitimbres/performances during the song, you must use the Microscope window to store the bank select and program numbers for the desired multitimbre/performance at the beginning of the song.
- Even if you save using “Save Song File,” playback will not use the correct sounds on MRC Pro sequencers other than the Fantom. To play it back with correct sound, record the corresponding Bank Select and Program numbers.

4. Once you've selected the format in which the data is to be saved, press [8 (Select)].

The Save **** window appears.



MEMO

The title of the window will depend on the data saving format.

5. You can assign the file a name of up to eight characters. Press [5 (Name)], and assign a file name in the Name window that appears.



For details on assigning names, refer to “Assigning a Name” (p. 30).

MEMO

If a song name has already been assigned, the first eight characters of the song name will automatically be assigned for the file name. If no song name is assigned, “SONG_000” will be automatically be assigned for the file name. A sound file and chain file will automatically be named “SOUND_00” and “CHAIN_00,” respectively.

HINT

To view the list of files on the disk, press [6 (List)]. To select a chain file from the list, move the cursor to the desired file and press [8 (Select)].

File Names and Song Names

MRC Pro songs and Standard MIDI Files have song names in addition to file names. The file name is used to distinguish the file on disk, and must be specified before the file can be saved. You will find it easier to manage your songs if you use the file name to categorize the type of song, and use the song name to assign the title.



Assign a song name in the Song Name window (p. 137).

6. Press [8 (Execute)] to execute the operation.

NOTE

- If you assign a file name that is identical to a file name that already exists on the disk, and attempt to save the file, a message of “File “****” Already Exists! Over Write OK?” will appear. To overwrite the old file and save the new, press [7 (OK)]. If you wish to abort the saving operation, press [8 (Cancel)].
- If you attempt to save data on a disk that has not been formatted on the Fantom, a message of “Unformatted Disk” will appear. Please format the disk on the Fantom (p. 191).

Copying a File to Another Name (Copy)

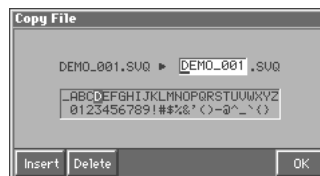
Here's how to copy a file to one having a different name.

NOTE

Master disks of Standard MIDI Files releases, etc. from Roland cannot be copied.

1. Access the Disk Utility screen (p. 187).
2. Press ▲ or ▼ to select the file that you want to copy.
3. Press [3 (Copy)].

The Copy File window appears.

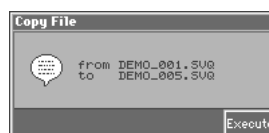


4. Modify the file name, and press [8 (OK)].



For details on assigning names, refer to “Assigning a Name” (p. 30).

The Copy File window appears.



5. Press [8 (Execute)] to execute the operation.

Renaming a File (Rename)

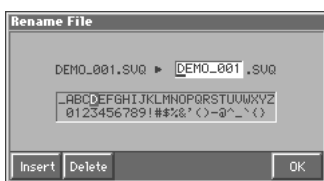
This function changes the name of a file.

NOTE

- File name extensions cannot be changed.
- Files on the master disks of the Standard MIDI File releases, etc. from Roland cannot be renamed.

1. Access the Disk Utility screen (p. 187).
2. Press ▲ or ▼ to select the file whose file name you want to copy.
3. Press [4 (Rename)].

The Rename File window appears.

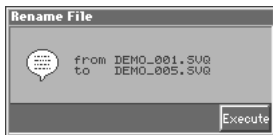


4. Modify the file name, and press [8 (OK)].



For details on assigning names, refer to “Assigning a Name” (p. 30).

The Rename File window appears.



5. Press [8 (Execute)] to execute the operation.

Deleting Unwanted Files (Delete)

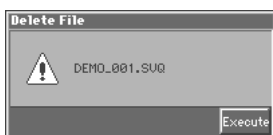
Use this function to delete unwanted files from disk.

NOTE

Master disks of Standard MIDI Files releases, etc. from Roland cannot be deleted.

1. Access the Disk Utility screen (p. 187).
2. Press ▲ or ▼ to select the file that you want to delete.
3. Press [5 (Delete)].

The Delete File window appears.



4. Press [8 (Execute)] to execute the operation.

Executing Disk-Related Functions (Tools)

You can execute a variety of disk-related functions, such as formatting (Format) or changing the name (Volume Label).

Preparing a Disk for Use by the Fantom

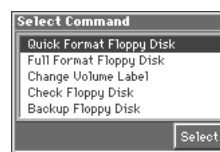
This function initializes (formats) a disk so that Fantom data can be saved to it. Before a new disk or a disk used on another device can be used on the Fantom, it must be formatted on the Fantom.

NOTE

- Please be aware that formatting will erase all the data already resident on the disk.
- Master disk releases of Standard MIDI Files from Roland, etc. cannot be formatted.

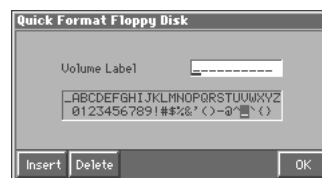
1. Access the Disk Utility screen (p. 187).
2. Press [6 (Tools)].

The Select Command window appears.



3. Press ▲ or ▼ to select “Quick Format Floppy Disk,” and then press [8 (Select)].

The Quick Format Floppy Disk window appears.

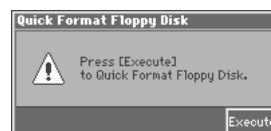


4. Assign a name (Volume Label) to the disk and press [8 (OK)].



For details on assigning names, refer to “Assigning a Name” (p. 30).

The Quick Format Floppy Disk window appears.



5. Press [8 (Execute)] to execute the operation.

NOTE

If it is not possible to format using “Quick Format Floppy Disk,” a message of “You Cannot Quick Format This Disk” will appear. In this case, select “Full Format Floppy Disk” in step 3, and format the disk.

Modifying the Name of the Disk

This function changes the volume label that was assigned when the disk was formatted.

NOTE

It is not possible to modify the volume label of the master disks of the Standard MIDI Files releases, etc. from Roland.

1. **Access the Disk Utility screen (p. 187).**
2. **Press [6 (Tools)].**
The Select Command window appears.
3. **Press ▲ or ▼ to select “Change Volume Label,” and then press [8 (Select)].**
The Change Volume Label window appears.

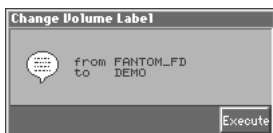


4. **Modify the volume label and press [8 (OK)].**



For details on assigning names, refer to “Assigning a Name” (p. 30).

The Change Volume Label window appears.

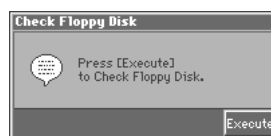


5. **Press [8 (Execute)] to execute the operation.**

Checking Files Recorded on Disk

If a disk is scratched, slightly bent or damaged in some way, song data or sound data files on it will no longer be readable, and functions such as quick play and chain play will be interrupted. To avoid such problems, this function checks all the files on disk to see whether they can be read correctly.

1. **Access the Disk Utility screen (p. 187).**
2. **Press [6 (Tools)].**
The Select Command window appears.
3. **Press ▲ or ▼ to select “Check Floppy Disk,” and then press [8 (Select)].**
The Check Floppy Disk window appears.



4. **Press [8 (Execute)] to execute the operation.**
After the disk has been checked, a message of “Disk Read Error !” will be displayed if there is a problem with the disk. For details on the appropriate action, refer to “Error Messages” (Sound/Parameter List).

Creating a Duplicate Disk

This function creates a complete copy of all data recorded on a disk and puts it on another disk (Backup). It is a good idea to make backup copies of disks containing important data to prevent data loss even if one of the disks should be damaged.

NOTE

- Backup operation uses internal memory. If you wish to keep the song data currently in internal memory, save it to disk before executing the backup operation.
- It is not possible to make a backup copy of the master disk of Standard MIDI Files releases, etc. from Roland.
- It is not possible to create a backup copy of a 2DD disk on a 2HD disk, and vice versa.

1. Use the Fantom to format the disk that you want to use as a backup disk (p. 191).

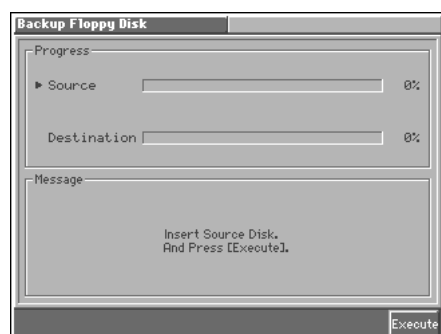
2. Access the Disk Utility screen (p. 187).

3. Press [6 (Tools)].

The Select Command window appears.

4. Press ▲ or ▼ to select “Backup Floppy Disk,” and then press [8 (Select)].

The Backup Floppy Disk window appears.



5. Insert the backup-source disk into the disk drive, and press [8 (Execute)].

The display will ask “Internal Song will be erased. OK?”

6. If you are sure that you want to erase the internal song to perform backup, press [7 (OK)].

MEMO

To cancel the backup operation, press [8 (Cancel)].

The display will indicate “Reading Source Disk...”, and the data stored on the backup disk will be loaded into internal memory.

7. When the display indicates “Eject Source Disk.”, remove the backup-source disk. Then insert the backup-destination disk you prepared in step 1, and press [8 (Execute)].

8. When the display shows “Eject Destination Disk” it’s time to remove the backup source disk and insert the backup destination disk, and press [8 (Execute)].

9. When the display once again indicates “Eject Source Disk.”, exchange the backup-source and backup-destination disks, and press [8 (Execute)].

10. Repeat steps 8 and 9.

MEMO

The frequency of repeating steps depends on the amount of data on disk.

When “Backup Complete.” is displayed, backup has been completed.

Transmitting Sound Settings/Reset to Default Factory Settings

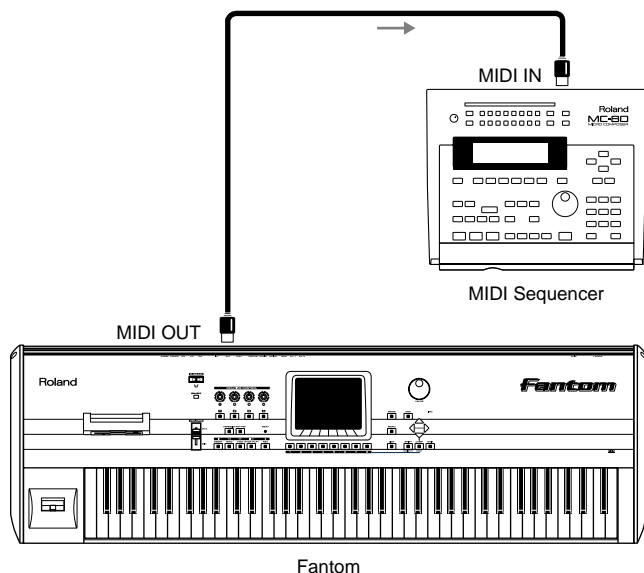
Transmitting Sound Settings (Data Transfer)

Sound generator settings and system settings stored in the Fantom's internal memory or on a Wave Expansion Board can be transmitted to an external MIDI device, or to user memory.

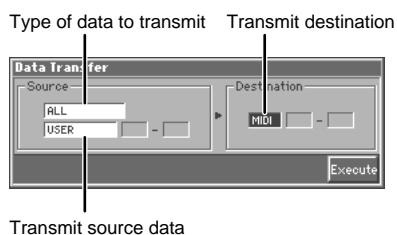
Transmitting Data to an External MIDI Device

Patch, rhythm set, multitimbre, performance, and setup and system settings will be transmitted to an external MIDI device. This operation is called **bulk dump**. Use this operation when you want to connect another Fantom and play it using the same settings, or to save your data on an external MIDI device as a precaution against possible loss of sound data or system settings.

To transmit data to an external MIDI device, connect the external MIDI device and Fantom as shown in the diagram.



1. Press [MENU] to open the Menu window.
2. Press ▲ or ▼ to select "Data Transfer," and then press [8 (Select)].
The Data Transfer window appears.
3. Move the cursor to "Destination" and select "MIDI."



4. Move the cursor to "Source" and use the following choices to specify the data that will be transmitted.

Type of data to transmit	Transmit source data	
ALL	USER	—
	TEMP	—
SETUP	—	—
SYSTEM	—	—
PATCH	USER	001-128
	TEMP	—
RHYTHM	USER	001-016
	TEMP	—
MULTITIMBRE	USER	01-16
	TEMP -PATCH	*1
	TEMP +PATCH	*2
	CTRL	—
PERFORMANCE	USER	01-64
	TEMP -PATCH	*1
	TEMP +PATCH	*2
	CTRL	—

*1 Only the current multitimbre/performance settings will be transmitted.

*2 The current multitimbre/performance settings and the setting of a patch or rhythm set assigned to the part will be transmitted.

Type of Data to Transmit

ALL: Patch, rhythm set, multitimbre, and performance

SETUP: Setup

SYSTEM: System

PATCH: Patch

RHYTHM: Rhythm set

MULTITIMBRE: Multitimbre

PERFORMANCE: Performance

Transmit Source Data

USER: Data from user memory will be transmitted.

TEMP: Transmit the data from the temporary area.

CTRL: The state of the multitimbre/performance (e.g., the multitimbre/performance bank select and program changes) will be transmitted as MIDI channel messages, not as exclusive messages.



Refer to "MIDI Implementation" (Sound/Parameter list) for more on the Control Change messages that are received.

5. Set the external MIDI device so that it will be ready to receive data, and press [8 (Execute)] to execute data transmission.

While the data is being transmitted, the display will indicate "Processing..." When "Complete !" is displayed, the transmission has been completed.



To halt during transmission, press [EXIT].

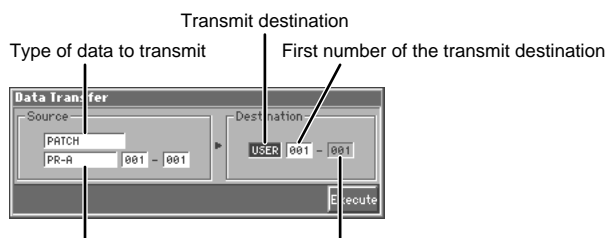
Transmitting Data to User Memory

Patch, rhythm set, multitimbre, and performance settings will be transmitted to user memory. Use this when you want to arrange sounds in user memory in the desired order.

NOTE

If the Fantom internal memory already contains important data that you have created, this operation will cause all of this data to be lost. If you wish to keep the data, you must save it on a disk (p. 189) or on an external MIDI device (p. 194).

1. Press [MENU] to open the Menu window.
2. Press ▲ or ▼ to select "Data Transfer," and then press [8 (Select)].
The Data Transfer window appears.
3. Move the cursor to "Destination," set it to "USER," and specify the first number of the transmission destination.



Transmit source data Last number of the transmit destination:
This is set automatically according to the number of transmit source data items.

4. Move the cursor to "Source," and use the following choices to specify the data that will be transmitted.

Type of data to transmit	Transmit source data	
PATCH	PR-A-E	001-128
	XP-A-C	001-*** (*)
RHYTHM	PRST	001-016
	XP-A-C	001-*** (*)
MULTITIMBRE	PRST	01-16
PERFORMANCE	PRST	01-64

* Depends on the Wave Expansion Board installed.

Type of Data to Transmit

PATCH: Patch

RHYTHM: Rhythm set

MULTITIMBRE: Multitimbre

PERFORMANCE: Performance

Transmit Source Data

USER: Data from user memory will be transmitted.

PR-A-E, PRST: Preset data will be transmitted.

XP-A-C: Data from an Wave Expansion Board will be transmitted.

5. Press [8 (Execute)] to execute data transmission.

While the data is being transmitted, the display will indicate "Processing..." When "Complete!" is displayed, the transmission has been completed.

NOTE

- "XP-A-C" can be selected only if the corresponding Wave Expansion Board is installed.
- If the specified data will not fit completely into the transmission destination, as much of the data as will fit will be transmitted, starting at the first number of the specified transmission destination.

(Example)



If the above settings are made and transmission is executed, only the two PR-A group patches 001 and 002 will be transmitted to USER group patches 127 and 128.

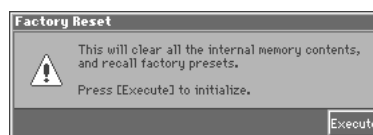
Reset to Default Factory Settings (Factory Reset)

This restores all data in the Fantom to the factory-set condition (Factory Reset).

NOTE

If there is important data you've created that's stored in the Fantom's internal memory, all such data is discarded when a Factory Reset is performed. If you want to keep the existing data, save it on a disk (p. 189) or transmit it to an external MIDI device and save it (p. 194).

1. Press [MENU] to open the Menu window.
2. Press ▲ or ▼ to select "Factory Reset," and then press [8 (Select)].
The Factory Reset window appears.



3. Press [8 (Execute)] to execute the Factory Reset.
When the display indicates "Complete!", the factory reset operation has been completed.

Installing the Wave Expansion Board

Up to three optional Wave Expansion Boards (one SR-JV80 series, two SRX series) can be installed in the Fantom.

Wave Expansion Boards store Wave data, patches, and rhythm sets, and by equipping the Fantom with these boards, you can greatly expand your sound palette.

Cautions When Installing an Wave Expansion Board

- To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the board.
 - Before you touch the board, always first grasp a metal object (such as a water pipe), so you are sure that any static electricity you might have been carrying has been discharged.
 - When handling the board, grasp it only by its edges. Avoid touching any of the electronic components or connectors.
 - Save the bag in which the board was originally shipped, and put the board back into it whenever you need to store or transport it.
- Use a Philips screwdriver that is suitable for the size of the screw (a number 2 screwdriver). If an unsuitable screwdriver is used, the head of the screw may be stripped.
- To remove a screw, rotate the screwdriver counter-clockwise. To tighten the screws, rotate the screwdriver clockwise.

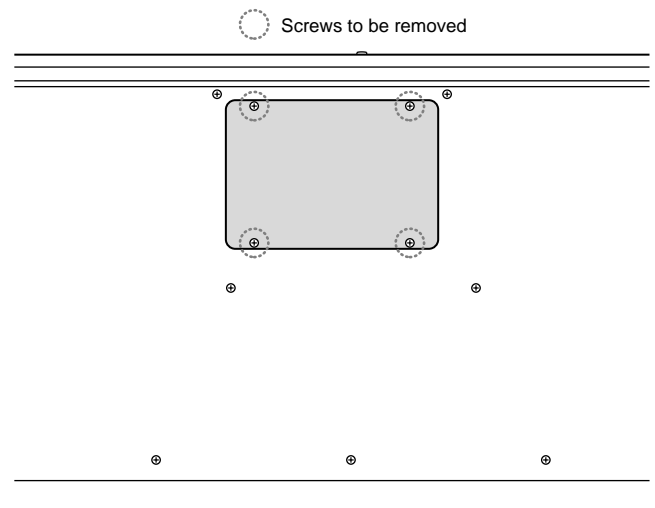


- When installing Wave Expansion Boards, remove only the specified screws.
- Be careful that the screws you remove do not drop into the interior of the Fantom.
- Do not leave the bottom cover removed. After installation of the Wave Expansion Boards is complete, be sure to replace the cover.
- Do not touch any of the printed circuit pathways or connection terminals.
- Be careful not to cut your hand on the opening for installing the board.
- 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 (SR-JV80/SRX series; Quick Start p. 3–4).
- Install only the specified circuit board(s) (SR-JV80/SRX series). Remove only the specified screws (p. 196).

How to Install a Wave Expansion Board

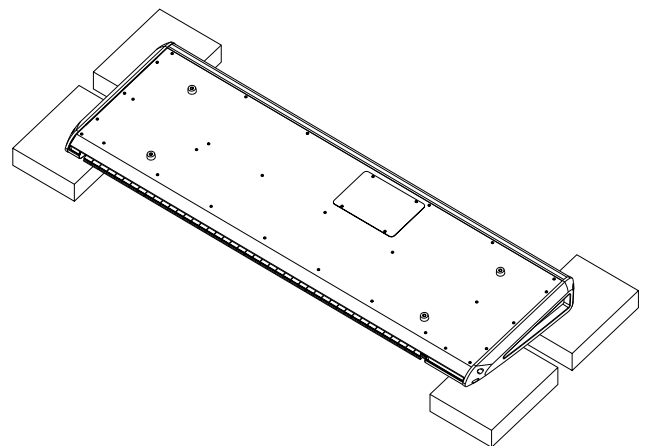
Install the Wave Expansion Boards after removing the bottom panel cover. SR-JV80 series boards are installed in the EXP A slot; SRX series boards are installed in the EXP B and EXP C slots. These slots correspond with the Wave Expansion Board groups (XP-A–XP-C) when the expansion Wave, patches, and rhythm sets are used.

1. Before installing the Wave Expansion Board, turn off the power of the Fantom and all connected devices, and disconnect all cables, including the Power cable, from the Fantom.
2. Turn the Fantom over, remove the four screws indicated in the following diagram, and remove the cover.



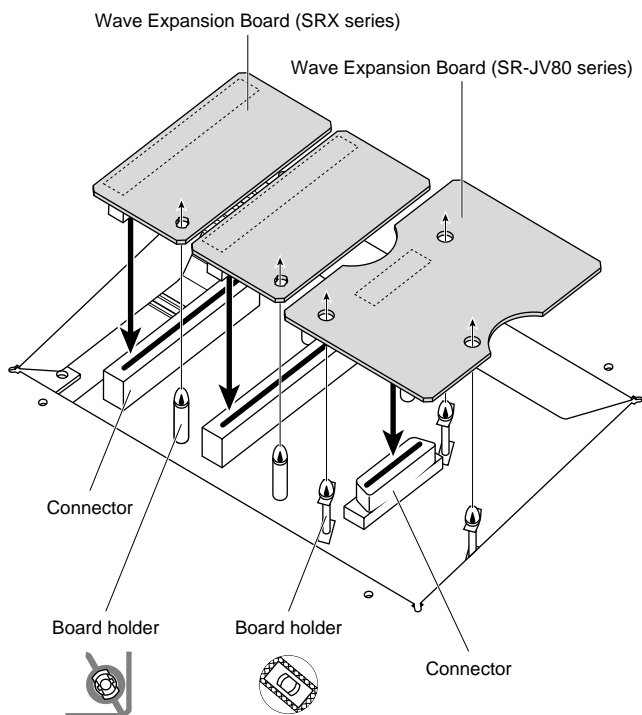
NOTE

- When turning the unit upside-down, get a bunch of newspapers or magazines, and place them under the four corners or at both ends to prevent damage to the buttons and controls. Also, you should try to orient the unit so no buttons or controls get damaged.



- When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.

3. Inside, you will find a slot for an SR-JV80 series board (EXP A), and slots for two SRX series boards (EXP B, EXP C). As shown in the following illustration, plug the connector of the Wave Expansion Board into the connector of the relevant slot, and at the same time insert the board holder through the hole of the Wave Expansion Board.

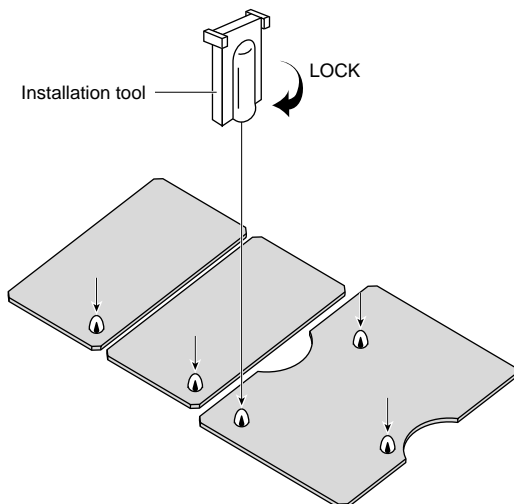


Position them as shown before you install the board.

NOTE

If the same type of Wave Expansion Board is installed in the EXP B slot and the EXP C slot, it will only be possible to select data from the Wave Expansion Board that was installed in the EXP B slot.

4. Use the Installation Tool supplied with the Wave Expansion Board to turn the holders in the LOCK direction, so the board will be fastened in place.

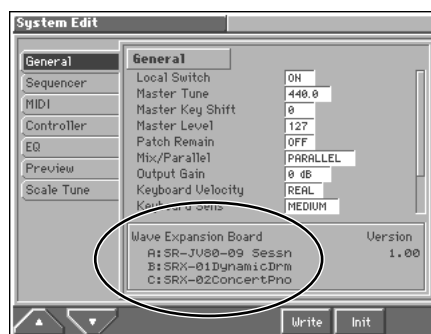


5. Use the screws that you removed in step 2 to fasten the cover back in place.

Checking the Installed Wave Expansion Boards

After installation of the Wave Expansion Boards has been completed, check to confirm that the installed boards are being recognized correctly.

1. Turn on the power, as described in "Turning On the Power" (Quick Start; p. 4).
2. Press [MENU] to open the Menu window. The System Edit screen appears. Verify that the name of the installed Wave Expansion Board is displayed.



NOTE

If "-----" appears next to the installed slot name, it's possible that the installed Wave Expansion Board is not being recognized correctly. Re-install the Wave Expansion Board correctly.

Installation de la carte d'expansion Wave

(French language for Canadian Safety Standard)

French language
for Canadian Safety Standard

Un maximum de trois cartes d'expansion Wave (une carte SR-JV80, deux cartes SRX) peuvent être installées dans le Fantom.

Les cartes d'expansion Wave emmagasinent des données Wave, correctifs et rythmes, et en ajoutant ces cartes au Fantom, il est possible d'élargir considérablement la palette de sons.

Précautions à prendre lors de l'installation d'une carte d'expansion Wave

- Veuillez suivre attentivement les instructions suivantes quand vous manipulez la carte afin d'éviter tout risque d'endommagement des pièces internes par l'électricité statique.
 - Toujours toucher un objet métallique relié à la terre (comme un tuyau par exemple) avant de manipuler la carte pour vous décharger de l'électricité statique que vous auriez pu accumuler.
 - Lorsque vous manipulez la carte, la tenir par les côtés. Évitez de toucher aux composants ou aux connecteurs.
 - Conservez le sachet d'origine dans lequel était la carte lors de l'envoi et remettez la carte dedans si vous devez la ranger ou la transporter.
- Utilisez un tournevis de type Philips de la taille adaptée à celle des vis (tournevis numéro 2). Un tournevis inadéquat peut endommager la tête de la vis.
- Pour retirer une vis, tourner le tournevis dans le sens contraire des aiguilles d'une montre. Pour serrer les vis, tourner le tournevis dans le sens des aiguilles d'une montre.

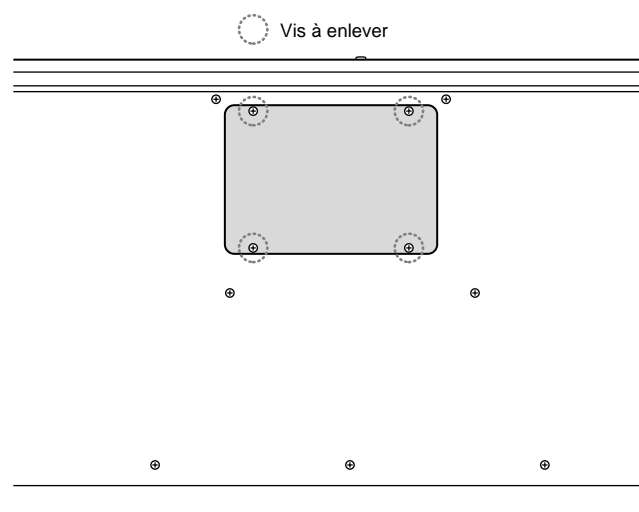


- Pour installer les cartes d'expansion Wave, retirer uniquement les vis mentionnées.
- Assurez-vous que les vis retirées ne tombent pas dans le Fantom.
- Ne pas laisser le panneau de protection avant détacher. S'assurer de l'avoir rattaché après avoir installé le disque dur.
- Ne pas toucher aux circuits imprimés ou aux connecteurs.
- Faites attention de ne pas vous couper sur l'ouverture d'installation de la carte.
- 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, vérifiez si tout est bien installé.
- Toujours éteindre et débrancher l'appareil avant de commencer l'installation de la carte. (SR-JV80/SRX series; Quick Start p. 3-4).
- N'installez que les cartes de circuits imprimés spécifiées (SR-JV80/SRX series). Enlevez seulement les vis indiquées (p. 198).

Installation d'une carte d'expansion Wave

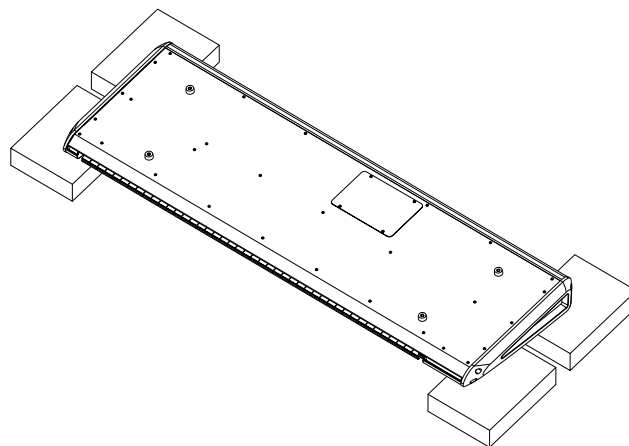
Avant d'installer la carte d'expansion Wave, retirez le panneau inférieur. Installez les cartes SR-JV80 dans la fente d'expansion A (EXP A); installez les cartes SRX dans les fentes d'expansion B et C (EXP B et EXP C). Ces fentes correspondent aux groupes de cartes d'expansion Wave (XP-A-XP-C) lorsque l'expansion Wave, les correctifs et rythmes sont utilisés.

1. Avant d'installer la carte d'expansion Wave, coupez l'alimentation du Fantom et de tous les appareils branchés, et débranchez tous les câbles du Fantom, y compris le câble d'alimentation.
2. Placez le Fantom à l'envers, retirez les quatre vis indiquées dans le schéma ci-dessous et retirez le couvercle.



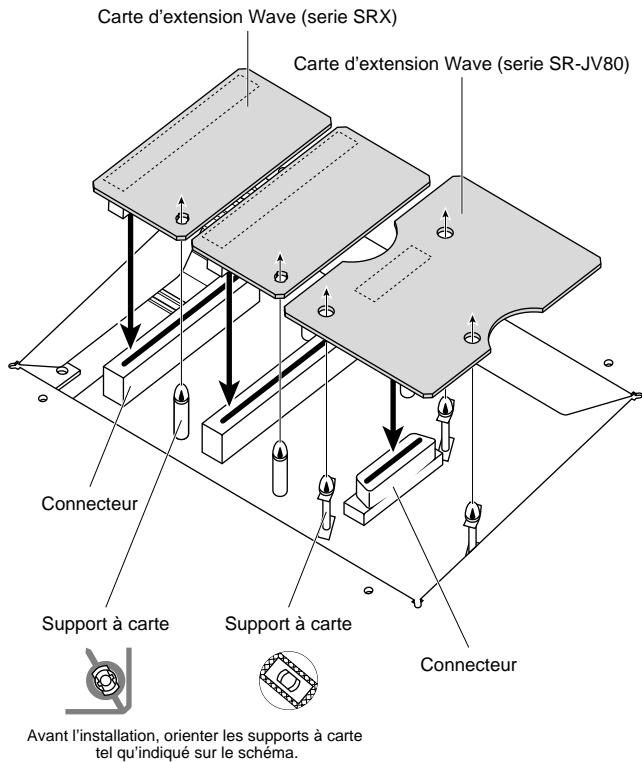
NOTE

- Lorsque vous déposez le Fantom face vers le bas, placez des piles de journaux ou de magazines sous les quatre coins (ou des deux côtés) pour le soutenir. Ainsi, les boutons, manettes et autres pièces ne seront pas endommagés.



- En plaçant l'appareil sens dessus dessous, manipulez-le avec soin pour éviter de l'échapper, de le laisser tomber ou de se renverser.

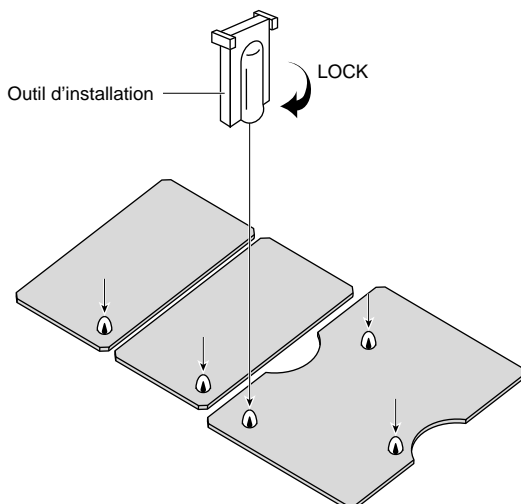
3. À l'intérieur, vous apercevrez une fente pour la carte SR-JV80 (EXP A) et des fentes pour deux cartes SRX (EXP B, EXP C). Comme le montre l'illustration ci-dessous, branchez le connecteur de la carte d'expansion Wave dans la fente appropriée et, en même temps, insérez le support de carte de circuits imprimés dans l'ouverture de la carte d'expansion Wave.



NOTE

Si le même type de carte d'expansion Wave est installé dans les fentes EXP B et C, il sera uniquement possible de sélectionner les données de la carte d'expansion Wave installée dans la fente EXP B.

4. Utilisez l'outil d'installation fourni avec la carte d'expansion Wave pour tourner les supports en position LOCK (verrouillé) afin de retenir la carte en place.

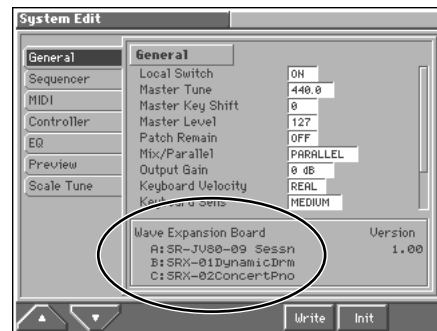


5. Remettez le couvercle en place à l'aide des vis retirées à l'étape 2.

Vérification des cartes d'extension audio après installation

Lorsque l'installation des cartes d'extension audio est terminée, procéder à une vérification pour s'assurer que l'ordinateur les identifie correctement.

1. Mettre sous tension de la façon décrite sous "Turning On the Power" (Quick Start; p. 4).
2. Appuyez sur la touche [MENU] pour ouvrir la fenêtre Menu. L'écran System Edit s'affiche. Vérifiez que le nom de la carte d'expansion Wave installée s'est affiché.



NOTE

Si "-----" est affiché à côté du nom de la fente dans laquelle la carte est installée, il est possible que la carte d'extension audio installée ne soit pas reconnue correctement. Réinstaller correctement la carte d'extension audio.

Specifications

Fantom (FA-76): Synthesizer Keyboard (Conforms to General MIDI 2 System)

● Keyboard

76 keys (with velocity and channel aftertouch)

■ Synthesizer Section

● Multitimbre Parts

16 parts

● Maximum Polyphony

64 voices

● Wave Memory

64 M bytes (16-bit linear equivalent)

Waveforms: 1,083 (XV-5080 equivalent)

● Expansion Slot

Wave Expansion Board SR-JV80 Series: 1 slot

Wave Expansion Board SRX Series: 2 slots

● Preset Memory

Patches: 640 (128 x 5 banks) + 256 (General MIDI 2 Patches)

Rhythm Sets: 16 + 9 (General MIDI 2 Rhythm Sets)

Multitimbres: 16

Performances: 64

● User Memory

Patches: 128

Rhythm Sets: 16

Multitimbres: 16

Performances: 64

● Effects

Multi-Effects (M-FX): 90 types (Patch mode)

** Three different multi-effects (only 50 types) can be used simultaneously in Performance/Multitimbre mode.*

Chorus: 2 types

Reverb: 4 types

System Equalizer: 2 band per each 4 outputs

■ Sequencer Section

● Tracks

Phrase Tracks (16 MIDI channels per track): 16

Pattern Track (16 MIDI channels per track): 1

Tempo Track: 1

Beat Track: 1

** The Pattern Track can hold up to 100 patterns.*

● Resolution

480 TPQN

● Song Data (Internal Memory)

Song: 1

Note Capacity: approx. 120,000 notes

Song Length: 9,998 measures

● Recording Methods

Realtime, Step

● External Storage Device

3.5 inch Floppy Disk: 1.44 M bytes (2HD), 720 K bytes (2DD)

Note Storage: approx. 120,000 notes (2HD), approx. 60,000 notes (2DD)

Song Files: max. 99

● File Formats

MRC Pro Songs

Standard MIDI Files (format 0, 1)

■ Others

● Arpeggiator

88 styles

● Preset Rhythm

50 styles per each 12 patterns

● Display

320 x 240 dots Graphic LCD w/backlit

● Controllers

Pitch Bend/Modulation Lever

D Beam Controller

Realtime Control Knobs (1, 2, 3, 4)

Realtime Control Buttons (1, 2, 3, 4)

● Connectors

Headphones Jack

A (MIX) Output Jacks (L (MONO), R) (1/4 inch TRS phone type)

B Output Jacks (L, R) (1/4 inch phone type)

(or Individual Jacks 1-4)

Hold Pedal Jack (Half Pedal possible)

Control Pedal Jacks (1, 2) (assignable)

MIDI Connectors (IN, OUT, THRU)

Digital Audio Outputs:

S/P DIF Connectors (COAXIAL, OPTICAL) (24-bit, 44.1 kHz)

AC Inlet

● Power Supply

AC 117 V, AC 230 V, AC 240 V

● Power Consumption

16 W

● Dimensions

1,268 (W) x 400 (D) x 115 (H) mm

49-15/16 (W) x 15-3/4 (D) x 4-9/16 (H) inches

● Weight

14.8 kg / 32 lbs 11 oz

● Accessories

Quick Start

Owner's Manual

Sound/Parameter List

Q&A

Demo Floppy Disk

Power Cable

● Options

Wave Expansion Board: SRX Series, SR-JV80 Series

Keyboard Stand: KS-12

Pedal Switch: DP-2/6

Foot Switch: BOSS FS-5U

Expression Pedal: EV-5

NOTE

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

Index

Symbols

[1]-[4]	16, 163
[1]-[4]	16, 163

Numerics

[1]-[8]	17, 28
1:Delay Time	67
1:Delay Time KF	67
1:Fade Mode	67
1:Fade Time	67
1:Key Trigger	68
1:Offset	67
1:Pan Depth	68
1:Pitch Depth	68
1:Rate	67
1:Rate Detune	67
1:TVA Depth	68
1:TVF Depth	68
1:Waveform	66
2:Delay Time	67
2:Delay Time KF	67
2:Fade Mode	67
2:Fade Time	67
2:Key Trigger	68
2:Offset	67
2:Pan Depth	68
2:Pitch Depth	68
2:Rate	67
2:Rate Detune	67
2:TVA Depth	68
2:TVF Depth	68
2:Waveform	66

A

AC inlet	18
Accent Rate (patch)	51
Accent Rate (performance)	95-96
Accent Rate (rhythm set)	75
Aftertouch Sens	180
Aftertouch sensitivity	180
Alter Pan Depth	65
Alter Pan Sw	78
Alternate Pan Depth (rhythm tone)	82
Alternate pan depth (tone)	65
Alternate pan switch	78
Analog Feel	47
Analog feel depth	47
Arabian scale	105, 120, 186
Arpeggiator	38
[ARPEGGIO]	16, 38
Arpeggio	39
Patch	51
Performance	95
Arpeggio accent rate (patch)	51
Arpeggio accent rate (performance)	95
Arpeggio hold switch (patch)	51
Arpeggio hold switch (performance)	95
Arpeggio key trigger (patch)	52
Arpeggio key trigger (performance)	96
Arpeggio keyboard velocity (patch)	52
Arpeggio keyboard velocity (performance)	95
Arpeggio motif (patch)	51
Arpeggio motif (performance)	95
Arpeggio octave range (patch)	52
Arpeggio octave range (performance)	95
Arpeggio shuffle rate (patch)	52
Arpeggio shuffle rate (performance)	95

Arpeggio shuffle resolution (patch)	52
Arpeggio shuffle resolution (performance)	95
Arpeggio style (patch)	51
Arpeggio style (performance)	95
Arpeggio switch (patch)	51
Arpeggio switch (performance)	95
Arpeggio variation (patch)	51
Arpeggio variation (performance)	95
Arpeggio zone number	96
Assign (performance)	98
Assign (rhythm set)	76
Assign 1-4 (patch)	52
Assign 1-4 (performance)	97
Assign 1-4 (rhythm set)	76
Assign Type	74
Assigning a name	30
Pattern	138
Song	137
Attack Time Offset (multitimbre part)	116
Attack Time Offset (patch)	48
Attack Time Offset (performance part)	101

B

Backlight Saver	180
Backup	193
Backup Floppy Disk	193
[BANK]	17
Bank Select (multitimbre)	119
Bank Select (performance)	103
Beam Sens	185
[BEAT]	17
Beat indicator	17
Beat track	25
Bend Range (rhythm tone)	74
Bend Range Down	49
Bend Range Up	49
Bias	64
Bias Direction	65
Bias Level	64
Bias Position	65
Booster	58
Booster 1&2	57
Booster 3&4	57
Booster Gain 1&2	57
Booster Gain 3&4	57
[BWD]	16, 124

C

C-B (multitimbre part)	120
C-B (patch)	186
C-B (performance part)	104
Chain file	26, 123-124
Chain play	122
Change Channel	147
Change Gate Time	147
Change Velocity	146
Change Volume Label	192
Channel Pressure (multitimbre)	119
Channel Pressure (performance)	103
Check Floppy Disk	192
CHO	165
Chorus Level (multitimbre)	173
Chorus Level (patch)	169
Chorus Level (performance)	173
Chorus Level (rhythm set)	169
Chorus Output Assign (multitimbre)	173
Chorus Output Assign (patch)	169
Chorus Output Assign (performance)	173

Chorus Output Assign (rhythm set)	169
Chorus Output Select (multitimbre)	173
Chorus Output Select (patch)	169
Chorus Output Select (performance)	173
Chorus Output Select (rhythm set)	169
Chorus Source	174
Chorus type	176
Chorus Type (multitimbre)	173
Chorus Type (patch)	169
Chorus Type (performance)	173
Chorus Type (rhythm set)	169
Clock Source (patch)	48
Clock Source (rhythm set)	74
Coarse Tune (multitimbre part)	115
Coarse tune (patch)	60
Coarse Tune (performance part)	100
Coarse tune (rhythm tone)	79
Coarse Tune (rhythm wave)	78
Coarse tune (tone)	60
Compare function	44, 46, 71, 73
Cont Hold Pedal	184
Continuous hold pedal switch	184
CONTRAST knob	18
Control Aftertouch	99
Control aftertouch switch	99
Control Bender	99
Control Hold Pedal	99
Control hold pedal switch	99
Control Modulation	99
Control modulation switch	99
Control pedal	164
Control Pedal 1, 2	99
Control pedal 1, 2 switch	99
Control pitch bend switch	99
Controller	
Patch	52
Performance	97
Rhythm set	76
System	184
Copy	143, 157, 190
Copy file	190
Micro edit	157
Multitimbre effects copy	113
Multitimbre name copy	113
Multitimbre part copy	113
Patch effects copy	44
Patch name copy	44
Patch tone copy	44
Performance effects copy	92
Performance name copy	92
Performance part copy	92
Rhythm set effects copy	71
Rhythm set name copy	70
Rhythm tone copy	71
Track edit	143
Copy File	190
Count in	129
Create	156
Create Event	156
Ctg	34
CTL 1, CTL 2 PEDAL jack	18, 164
[CURSOR]	17, 29
Cursor	29
Cursor button	29
Cutoff Freq	62
Cutoff Frequency (rhythm tone)	81
Cutoff frequency (tone)	62
Cutoff frequency key follow	62
Cutoff frequency velocity curve (rhythm tone)	81
Cutoff frequency velocity curve (tone)	63
Cutoff KF	62
Cutoff Offset (multitimbre part)	116
Cutoff Offset (Patch)	47
Cutoff Offset (performance part)	101
Cutoff V-Curve (rhythm tone)	81
Cutoff V-Curve (tone)	63
Cutoff velocity sensitivity (rhythm tone)	81
Cutoff velocity sensitivity (tone)	63
Cutoff V-Sens (rhythm tone)	81
Cutoff V-Sens (tone)	63
D	
D Beam	162
D Beam assign (performance)	98
D Beam assign (rhythm set)	76
D Beam controller	162
D Beam polarity (patch)	53
D Beam polarity (performance)	98
D Beam polarity (rhythm set)	77
D Beam range lower (patch)	53
D Beam range lower (performance)	98
D Beam range lower (rhythm set)	77
D Beam range upper (patch)	53
D Beam range upper (performance)	98
D Beam range upper (rhythm set)	77
D Beam sensitivity	185
D Beam switch (performance)	98
D Beam switch (rhythm set)	76
D Beam zone number	98
Data file	26
Data Thin	151
Data Transfer	194
Data transfer	
Transmitting data to an external MIDI device	194
Transmitting data to user memory	195
[DEC]	17, 29
Decay Time Offset	101, 116
Delay Mode	49
Delay Time	50
Delete	143, 191
Delete file	191
Track edit	143
Delete File	191
Destination 1-4	55, 176
Device ID	183
Device ID number	183
DIGITAL OUT connector	18
Disk Utility	187
Drop format	181
E	
Effects	170
Applying effects in Multitimbre mode	170
Applying effects in Patch mode	165
Applying effects in Performance mode	170
Chorus	23
Multi-effects	23
Multitimbre	170
Patch	165
Performance	170
Reverb	23
Rhythm	165
Turning effects on and off	165
Env Depth (rhythm tone)	79, 81
Env Depth (tone)	61, 63
Env Level 0-4 (rhythm tone)	80-81
Env Level 0-4 (tone)	61, 64

- Env Level 1-3 (rhythm tone) 83
 Env Level 1-3 (tone) 66
 Env Mode (rhythm tone) 74
 Env Mode (tone) 49
 Env T1 V-Sens (rhythm tone) 80-82
 Env T1 V-Sens (tone) 61, 63, 65
 Env T4 V-Sens (rhythm tone) 80-81, 83
 Env T4 V-Sens (tone) 61, 63, 66
 Env Time 1-4 (rhythm tone) 80, 82-83
 Env Time 1-4 (tone) 61, 64, 66
 Env Time KF 61, 64, 66
 Env V-Curve (rhythm tone) 81
 Env V-Curve (tone) 63
 Env V-Sens (rhythm tone) 80-81
 Env V-Sens (tone) 61, 63
 Envelope depth (rhythm tone) 79
 Envelope Mode (rhythm tone) 74
 Envelope mode (tone) 49
 EQ 185
 EQ Switch 185
 Equal temperament 105, 120, 186
 Equalizer switch 185
 Erase 142, 156
 Micro edit 156
 Realtime erase 132
 Track edit 142
 Exchange 152
 Exclusive Protect 183
 Exclusive protect switch 183
 [EXIT] 17
 Expression (multitimbre) 119
 Expression (performance) 104
 Ext Bank Select LSB 99
 Ext Bank Select MSB 98
 Ext Level 99
 Ext Pan 99
 Ext Program Number 99
 Ext Switch 98
 External bank select LSB 99
 External bank select MSB 98
 External level 99
 External pan 99
 External program change number 99
 External switch 98
 Extract 149
- F**
- Factory Reset 195
 Favorite List 33, 86, 94
 Favorite sound
 Patch 33, 46
 Performance 86, 93
 Rhythm set 73
- File
 Chain file 26, 123-124
 Copy file 190
 Data file 26
 Delete file 191
 File name 135
 Loading a file 188
 Rename file 191
 Song file 26
 Standard MIDI file 26
- Filter Type (rhythm tone) 80
 Filter Type (tone) 62
 Fine Tune (multitimbre part) 115
 Fine tune (patch) 60
 Fine Tune (performance part) 100
 Fine tune (rhythm tone) 79
- Fine Tune (rhythm wave) 78
 Fine tune (tone) 60
 Floppy disk drive 16
 Format 191
 Frequency cross modulation 59, 78
 [FWD] 16, 124
 FXM 59, 78
 FXM Color (rhythm wave) 78
 FXM Color (tone) 59
 FXM Depth (rhythm wave) 78
 FXM Depth (tone) 60
 FXM Switch (rhythm wave) 78
 FXM Switch (tone) 59
- G**
- Gain 59
 Gate time 133
 General
 Multitimbre 115
 Patch 47
 Performance 94
 Rhythm set 74
 System 179
 General MIDI 15
 General MIDI 2 15
- H**
- High Freq 185
 High frequency 185
 High Gain 185
 Hold (patch) 51
 Hold (performance) 95-96
 Hold (rhythm set) 75
 HOLD PEDAL jack 18
 Hold Pedal Polarity 184
 Hold-1 (multitimbre) 119
 Hold-1 (performance) 104
- I**
- [INC] 17, 29
 INDIVIDUAL 1-4 jacks 18
 Initialize
 Multitimbre 112
 Patch 43
 Performance 91
 Rhythm set 69
 Song 127
 System 178
 Insert Measure 145
 Int Switch 98
 Internal memory 26
 Internal song 26
 Internal switch 98
- J**
- [JUMP] 17
 [JUMP (BANK)] 46, 73
 Just temperament 105, 120, 186
- K**
- Key Fade Lower (multitimbre part) 117
 Key Fade Lower (performance part) 102
 Key Fade Lower (tone) 58
 Key Fade Upper (multitimbre part) 117
 Key Fade Upper (performance part) 102
 Key Fade Upper (tone) 58
 Key Range Lower 99

Key Range Lower (multitimbre part)	117
Key Range Lower (performance part)	102
Key Range Lower (tone)	58
Key Range Upper (multitimbre part)	117
Key Range Upper (performance part)	102
Key Range Upper (tone)	58
Key Range Upper (zone)	99
Key Trigger (patch)	52
Key Trigger (performance)	96
Key Trigger (rhythm set)	75
Keyboard controller section	19
Keyboard fade width lower (multitimbre part)	117
Keyboard fade width lower (performance part)	102
Keyboard fade width lower (tone)	58
Keyboard fade width upper (multitimbre part)	117
Keyboard fade width upper (performance part)	102
Keyboard fade width upper (tone)	58
Keyboard range lower (multitimbre part)	117
Keyboard range lower (performance part)	102
Keyboard range lower (tone)	58
Keyboard range lower (zone)	99
Keyboard range upper (multitimbre part)	117
Keyboard range upper (performance part)	102
Keyboard range upper (tone)	58
Keyboard range upper (zone)	99
Keyboard Sens	180
Keyboard sensitivity	180
Keyboard Velocity	179
Keyboard Velocity (patch)	52
Keyboard Velocity (performance)	95-96
Keyboard Velocity (rhythm set)	75
Knob	163

L

Legato Retrigger	48
Legato retrigger switch	48
Legato Switch (multitimbre part)	116
Legato Switch (patch)	48
Legato Switch (performance part)	100
Level (multitimbre part)	115
Level (performance part)	100
Level V-Curve (rhythm tone)	82
Level V-Curve (tone)	65
Level V-Sens (rhythm tone)	82
Level V-Sens (tone)	65
LFO	66
LFO1 delay time	67
LFO1 delay time key follow	67
LFO1 fade mode	67
LFO1 fade time	67
LFO1 key trigger	68
LFO1 offset	67
LFO1 pan depth	68
LFO1 pitch depth	68
LFO1 rate	67
LFO1 rate detune	67
LFO1 TVA depth	68
LFO1 TVF depth	68
LFO1 waveform	66
LFO2 delay time	67
LFO2 delay time key follow	67
LFO2 fade mode	67
LFO2 fade time	67
LFO2 key trigger	68
LFO2 offset	67
LFO2 pan depth	68
LFO2 pitch depth	68
LFO2 rate	67
LFO2 rate detune	67

LFO2 TVA depth	68
LFO2 TVF depth	68
LFO2 waveform	66
[LIST]	17, 28
Load Song File	136
Load Song File (Track)	188
Load Sound File (Xfer)	189
Local Switch	179
Locate position	138
LOOP	125
Loop play	125
Loop point	139
Loop recording	130
Loop waveform	44, 71
Low Freq	185
Low frequency	185
Low Gain	185

M

Master Key Shift	179
Master Level	179
Master Tune	179
Matrix control	54
Matrix control destination 1-4	55
Matrix control sens 1-4	56
Matrix control source 1-4	54
Matrix Ctrl	54
Memory	22
Disk	22
Preset memory	22
System memory	22
Temporary area	22
User memory	22
Wave expansion board	22
[MENU]	17, 28
Menu	28
Menu window	28
Merge	148
Metronome Mode	182
Metronome Sound	182
MFX	165
MFX Chorus Send Level (multitimbre)	172
MFX Chorus Send Level (patch)	168
MFX Chorus Send Level (performance)	172
MFX Chorus Send Level (rhythm set)	168
MFX Control Channel	176
MFX Dry Send Level (multitimbre)	172
MFX Dry Send Level (patch)	168
MFX Dry Send Level (performance)	172
MFX Dry Send Level (rhythm set)	168
MFX Output Assign (multitimbre)	172
MFX Output Assign (patch)	169
MFX Output Assign (performance)	172
MFX Output Assign (rhythm set)	169
MFX Reverb Send Level (multitimbre)	172
MFX Reverb Send Level (patch)	169
MFX Reverb Send Level (performance)	172
MFX Reverb Send Level (rhythm set)	169
MFX template	174
MFX Type (multitimbre)	172
MFX Type (patch)	168
MFX Type (performance)	172
MFX-A Source	173
Micro edit	153
Copy	157
Create	156
Erase	156
Move	157
Microscope	153

- MIDI
- Multitimbre 118
 - Performance 103
 - System 182
- MIDI clock 180
- MIDI connector 18
- MIDI time code 180
- MIDI update 124
- Mix/Parallel 179
- MMC Mode 181
- MMC Output 181
- MMC output switch 181
- [MODE] 17, 27
- Mode 27
- Mode 1-4 (patch) 53
- Mode 1-4 (performance) 97
- Mode window 27
- Modulation (multitimbre) 119
- Modulation (performance) 103
- Mono/Poly (multitimbre part) 116
- Mono/Poly (patch) 47
- Mono/Poly (performance part) 100
- Motif (patch) 51
- Motif (performance) 95
- Move 157
- Move Event 157
- MRC Pro song 26
- MTC 180
- Types of MTC 181
- MTC Error Level 182
- MTC Frame Rate 181
- MTC Offset Frame 182
- MTC Offset Hour 181
- MTC Offset Minute 181
- MTC Offset Second 181
- MTC offset time frame 182
- MTC offset time hour 181
- MTC offset time minute 181
- MTC offset time second 181
- MTC Sync Output 181
- MTC sync output switch 181
- Multi-effects A source 173
- Multi-effects chorus send level (multitimbre) 172
- Multi-effects chorus send level (patch) 168
- Multi-effects chorus send level (performance) 172
- Multi-effects chorus send level (rhythm set) 168
- Multi-effects control channel 176
- Multi-effects control destination 1-4 176
- Multi-effects control source 1-4 175
- Multi-effects dry send level (multitimbre) 172
- Multi-effects dry send level (patch) 168
- Multi-effects dry send level (performance) 172
- Multi-effects dry send level (rhythm set) 168
- Multi-effects output assign (multitimbre) 172
- Multi-effects output assign (patch) 169
- Multi-effects output assign (performance) 172
- Multi-effects output assign (rhythm set) 169
- Multi-effects reverb send level (multitimbre) 172
- Multi-effects reverb send level (patch) 169
- Multi-effects reverb send level (performance) 172
- Multi-effects reverb send level (rhythm set) 169
- Multi-effects select 175
- Multi-effects type 175
- Multi-effects type (multitimbre) 172
- Multi-effects type (performance) 172
- Multi-effects type (rhythm set) 168
- Multi-timbral sound generator 20
- Multitimbre
- How a multitimbre is organized 20
 - Multitimbre group 107
 - Multitimbre parameters 115
 - Multitimbre settings 112
 - Selecting a multitimbre 107
- Multitimbre control channel 182
- Multitimbre Copy 113
- Multitimbre Ctrl Ch 182
- Multitimbre Edit 112, 170
- Chorus 176
 - General 115
 - MFX 174
 - MFX Control 174
 - MIDI 118
 - Part 115
 - Reverb 177
 - Scale Tune 120
- Multitimbre List 107
- Multitimbre mode 27
- Playing in Multitimbre mode 106
- Multitimbre Name 115
- Multitimbre Part Write 114
- MULTITIMBRE PLAY 106
- Multitimbre Write 114
- Mute
- Part 109
 - Track 137
- Mute Group 74
- Mute Switch (multitimbre part) 119
- Mute Switch (performance part) 103
- N**
- Name window 30
- Non-drop format 181
- Note Assign (performance) 96
- Note Assign (rhythm set) 75
- Note Number 1-4 185
- O**
- Oct 35
- Octave Range (patch) 52
- Octave Range (performance) 95
- Octave shift 35
- Octave Shift (multitimbre part) 117
- Octave Shift (patch) 60
- Octave Shift (performance part) 102
- [ON/OFF] 16, 126, 162
- One-shot waveform 44, 71
- OUTPUT A (MIX) jacks 18
- OUTPUT B jacks 18
- Output Gain 179
- Overriding Tempo 94
- P**
- Pan (multitimbre part) 115
- Pan (multitimbre) 119
- Pan (performance part) 100
- Pan (performance) 104
- Pan key follow 65
- Pan KF 65
- Part 20
- Current part 108
 - Multitimbre 115
 - Performance 100
- Part Chorus Send Level 172
- Part decay time offset 101, 116
- Part Dry Send Level 172

Part Information	90, 111
Part level (multitimbre part)	115
Part level (performance part)	100
Part Output Assign	172
Part Output MFX Select	172
Part output multi-effects select	172
Part pan (multitimbre part)	115
Part pan (performance part)	100
Part Reverb Send Level	172
Part Select	105, 121, 172
Part vibrate delay	101, 117
Part vibrate depth	101, 117
Part vibrate rate	101, 117
Patch	
Category	35
How a patch is organized	20
Patch group	32
Patch parameters	47
Patch settings	42
Selecting a patch	32
Patch Bank (multitimbre part)	115
Patch Bank (performance part)	100
Patch C Tune	60
Patch Category	47
Patch Compare	46
Patch Copy	43
Patch Edit	42
Arpeggio	51
Chorus	176
Controller	52
Effects	165
General	47
LFO	66
Matrix Ctrl	54
MFX	174
MFX Control	174
Pitch	60
Reverb	177
TMT	56
TVA	64
TVF	62
Wave	59
Patch F Tune	60
Patch finder	34
Patch Initialize	43
Patch Level	64
Patch List	33
Patch Mode	
Playing in Patch mode	31
Patch mode	27
Patch Name	47
Patch Number (multitimbre part)	115
Patch Number (performance part)	100
Patch Output Assign	168
Patch Pan	65
PATCH PLAY	31
Patch Remain	179
Patch remain switch	179
Patch Write	45
Patch/Rhythm (multitimbre part)	115
Patch/Rhythm (performance part)	100
Patch/Rhythm Rx Ch	182
Patch/rhythm set (multitimbre part)	115
Patch/rhythm set (performance part)	100
Patch/rhythm set receive channel	182
Patch/rhythm set transmit channel	183
Patch/Rhythm Tx Ch	183
Pattern	
Assigning a pattern to a phrase track	134
Pattern name	138
Pattern call message	134
Pattern track	25
Pedal 1, 2 Assign	184
Pedal 1, 2 Polarity	185
Performance	
How a performance is organized	20
Layer performance	87
Performance group	85
Performance parameters	94
Performance settings	91
Selecting a performance	85
Split performance	87
Performance control channel	182
Performance Copy	92
Performance Ctrl Ch	182
Performance Edit	91, 170
Arpeggio	95
Chorus	176
Controller	97
General	94
MFX	174
MFX Control	174
MIDI	103
Part	100
Reverb	177
Rhythm Ptn	96
Scale Tune	104
Performance Initialize	91
Performance List	86
Performance mode	27
Playing in Performance mode	84
Performance Name	94
Performance Part Write	93
PERFORMANCE PLAY	84
Performance Write	93
Phase Lock (multitimbre)	119
Phase Lock (performance)	104
Phase lock switch (multitimbre)	119
Phase lock switch (performance)	104
PHONES jack	18
Phrase loop	60, 78
Phrase preview	34
Phrase track	24
Pitch	
Patch	60
Rhythm set	79
Pitch Bend (multitimbre)	119
Pitch Bend (performance)	103
Pitch Bend Range (multitimbre part)	116
Pitch Bend Range (performance part)	101
Pitch bend range (rhythm tone)	74
Pitch bend range down	49
Pitch bend range up	49
Pitch bend/Modulation lever	17
Pitch envelope depth (tone)	61
Pitch envelope level 0-4 (rhythm tone)	80
Pitch envelope level 0-4 (tone)	61
Pitch envelope time 1 velocity sensitivity (rhythm tone)	80
Pitch envelope time 1 velocity sensitivity (tone)	61
Pitch envelope time 1-4 (rhythm tone)	80
Pitch envelope time 1-4 (tone)	61
Pitch envelope time 4 velocity sensitivity (rhythm tone)	80
Pitch envelope time 4 velocity sensitivity (tone)	61
Pitch envelope time key follow	61
Pitch envelope velocity sensitivity (rhythm tone)	80
Pitch envelope velocity sensitivity (tone)	61

- Pitch Key follow 61
Pitch KF 61
Polarity (patch) 53
Polarity (performance) 98
Polarity (rhythm set) 77
Poly Key Pressure (multitimbre) 119
Poly Key Pressure (performance) 103
Portamento 37, 48
Portamento Mode 49
Portamento Start 49
Portamento Switch (multitimbre part) 116
Portamento Switch (patch) 48
Portamento Switch (performance part) 101
Portamento Time (multitimbre part) 116
Portamento Time (patch) 49
Portamento Time (performance part) 101
Portamento Type 49
POWER ON Switch 18
Power Up Mode 180
Preview 185
Preview Mode 185
Preview note number 1-4 185
Preview velocity 1-4 185
Prevu 34
Program Change (multitimbre) 119
Program Change (performance) 103
Punch-in
 Manual punch-in 130
Punch-in recording 130
 Auto punch-in 130
- Q**
Quantize 131, 140
 Grid quantize 131
 Recording quantize 131
 Shuffle quantize 131
 Track edit 140
Quick Format Floppy Disk 191
Quick play 122
- R**
Random Pan Depth (rhythm tone) 82
Random pan depth (tone) 65
Random pan switch 78
Random Pitch Depth (rhythm tone) 79
Random pitch depth (tone) 61
Range Lower (patch) 53
Range Lower (performance) 98
Range Lower (rhythm set) 77
Range Upper (patch) 53
Range Upper (performance) 98
Range Upper (rhythm set) 77
Realtime control button assign 1-4 (patch) 52
Realtime control button assign 1-4 (performance) 97
Realtime control button assign 1-4 (rhythm set) 76
Realtime control button mode 1-4 (patch) 53
Realtime control button mode 1-4 (performance) 97
Realtime control button zone number 1-4 97
Realtime control knob assign 1-4 (patch) 52
Realtime control knob assign 1-4 (performance) 97
Realtime control knob assign 1-4 (rhythm set) 76
Realtime control knob zone number 1-4 97
Realtime controller 163
Realtime erase 132
Realtime phrase sequence 159
Realtime recording 129
[REC] 16, 129
Receive bank select switch 183
Receive bank select switch (multitimbre) 119
Receive bank select switch (performance) 103
Receive Channel (multitimbre part) 118
Receive Channel (performance part) 103
Receive channel pressure switch (multitimbre) 119
Receive channel pressure switch (performance) 103
Receive expression switch (multitimbre) 119
Receive expression switch (performance) 104
Receive expression switch (rhythm tone) 74
Receive expression switch (tone) 51
Receive GM system on switch 183
Receive GM2 system on switch 183
Receive GS reset switch 183
Receive hold 1 switch (multitimbre) 119
Receive hold 1 switch (performance) 104
Receive hold-1 switch (rhythm tone) 75
Receive hold-1 switch (tone) 51
Receive modulation switch (multitimbre) 119
Receive modulation switch (performance) 103
Receive pan mode (rhythm tone) 75
Receive pan switch (multitimbre) 119
Receive pan switch (performance) 104
Receive pitch bend switch (multitimbre) 119
Receive pitch bend switch (performance) 103
Receive polyphonic key pressure switch (multitimbre) 119
Receive polyphonic key pressure switch (performance) 103
Receive program change switch 183
Receive program change switch (multitimbre) 119
Receive program change switch (performance) 103
Receive Switch (multitimbre part) 118
Receive Switch (performance part) 103
Receive system exclusive switch 183
Receive volume switch (multitimbre) 119
Receive volume switch (performance) 104
Recording mode
 Realtime recording 129
 Step recording 132
Recording quantize 131
Recording select 131
Recording Standby 129
Redamper Sw 51
[REGISTRY] 17
Rehearsal function 132
Release Time Offset (multitimbre part) 116
Release Time Offset (patch) 48
Release Time Offset (performance part) 101
Remote Keyboard Sw 183
Remote keyboard switch 183
Rename 191
 Rename file 191
Rename File 191
[RESET] 124
Reso V-Sens 63
Resonance (rhythm tone) 81
Resonance (tone) 63
Resonance Offset (multitimbre part) 116
Resonance Offset (patch) 47
Resonance Offset (performance part) 101
Resonance velocity sensitivity (rhythm tone) 81
Resonance velocity sensitivity (tone) 63
Resonance V-Sens 81
REV 165
Reverb Level (multitimbre) 173
Reverb Level (patch) 169
Reverb Level (performance) 173
Reverb Level (rhythm set) 169
Reverb Output Assign (multitimbre) 173
Reverb Output Assign (patch) 169
Reverb Output Assign (performance) 173

Reverb Output Assign (rhythm set)	169
Reverb Source	174
Reverb type	177
Reverb Type (multitimbre)	173
Reverb Type (patch)	169
Reverb Type (performance)	173
Reverb Type (rhythm set)	169
[RESET]	16
[RHYTHM]	16, 41
Rhythm	
Rhythm set group	40
Rhythm Compare	73
Rhythm Copy	70
Rhythm Edit	69
Chorus	176
Controller	76
Effects	165
General	74
MFX	174
MFX Control	174
Pitch	79
Reverb	177
Rhythm Ptn	75
TVA	82
TVF	80
WMT	77
Rhythm Initialize	70
Rhythm Level	82
Rhythm Name	74
Rhythm Pattern	41
Rhythm pattern accent rate (performance)	96
Rhythm pattern accent rate (rhythm set)	75
Rhythm pattern hold switch (performance)	96
Rhythm pattern hold switch (rhythm set)	75
Rhythm pattern key trigger (performance)	96
Rhythm pattern key trigger (rhythm set)	75
Rhythm pattern keyboard velocity (performance)	96
Rhythm pattern keyboard velocity (rhythm set)	75
Rhythm pattern note assign (performance)	96
Rhythm pattern note assign (rhythm set)	75
Rhythm pattern shuffle rate (performance)	96
Rhythm pattern shuffle rate (rhythm set)	75
Rhythm pattern shuffle resolution (performance)	96
Rhythm pattern shuffle resolution (rhythm set)	75
Rhythm pattern style (performance)	96
Rhythm pattern style (rhythm set)	75
Rhythm pattern switch (performance)	96
Rhythm pattern switch (rhythm set)	75
Rhythm pattern zone number	96
Rhythm Ptn	
Performance	96
Rhythm set	75
Rhythm Set	
How a rhythm set is organized	20
Rhythm set	
Rhythm set parameters	74
Rhythm set settings	69
Selecting a rhythm set	40
Rhythm set level	82
Rhythm set name	74
Rhythm tone name	74
Rhythm Write	72
Ring modulator	58
Rnd Pan Depth	65
Rnd Pan Sw	78
Rnd Pitch Depth	61
RPS function	159
RPS Setup	159
Rx Bank Select	183
Rx Bender	50
Rx Exclusive	183
Rx Expression (rhythm tone)	74
Rx Expression (tone)	51
Rx GM System On	183
Rx GM2 System On	183
Rx GS Reset	183
Rx Hold-1 (rhythm tone)	75
Rx Hold-1 (tone)	51
Rx Pan Mode (rhythm tone)	75
Rx Pan Mode (tone)	51
Rx Program Change	183
S	
S/P DIF COAXIAL	18
S/P DIF OPTICAL	18
Save	
Multitimbre	114
Patch	45
Performance	93
Rhythm set	72
Song	135, 189
System	178
Scale Tune	
Multitimbre	120
Performance	104
System	186
Scale tune C-B (multitimbre part)	120
Scale tune C-B (patch)	186
Scale tune C-B (performance part)	104
Scale Tune Switch	186
Select	175
Select Command	189, 191
Seq Tempo Override	94
Sequencer	24, 180
Sequencer section	19
Sequencer tempo override	94
[SHIFT]	17
[SHIFT (REGISTRY)]	46, 73
Shift Clock	150
Shuffle Rate (patch)	52
Shuffle Rate (performance)	95-96
Shuffle Rate (rhythm set)	75
Shuffle Resolution (patch)	52
Shuffle Resolution (performance)	95-96
Shuffle Resolution (rhythm set)	75
Simultaneous polyphony	21
S-MRC format	125
Sns 1-4	56
Soft Through	181
Soft through switch	181
Solo	108
Solo legato switch	48
Solo Part Select (multitimbre)	118
Solo Part Select (performance)	103
Song	24
Editing Song	136
File name	190
Loading Song	136
Playing back a song	108, 122
Recording song	127
Saving a song on disk	135, 189
Song initialize	127
Song name	135, 137, 190
Song Edit	136
Song file	26
Song Initialize	127
Song Setup	137
Sound generator section	19

- Source 1-4 54, 175
 - Standard MIDI file 26
 - Step recording 132
 - Step Recording Standby 132
 - Step time 133
 - [STOP/PLAY] 16, 108, 122
 - Stretch Tune 60
 - Stretch tune depth 60
 - Structure 1 & 2 56
 - Structure 3 & 4 56
 - Structure Type 1 & 2 56
 - Structure Type 3 & 4 56
 - Style (patch) 51
 - Style (performance) 95-96
 - Style (rhythm set) 75
 - Switch 163
 - Switch (patch) 51
 - Switch (performance) 95-96, 98
 - Switch (rhythm set) 75-76
 - Sync Mode 180
 - Sync Output 181
 - Sync output switch 181
 - Sys Ctrl 1-4 Source 184
 - System Control 184
 - System control 1-4 source 184
 - System Edit
 - Controller 184
 - EQ 185
 - General 179
 - MIDI 182
 - Preview 185
 - Scale Tune 186
 - Sequencer 180
 - System Exclusive Edit 155
 - System exclusive message 155
 - System function 178
 - System function settings 178
 - System parameters 179
 - System Initialize 178
- T**
- Tempo (patch) 48
 - Tempo (rhythm set) 74
 - Tempo recording 130
 - Tempo Sync (rhythm wave) 78
 - Tempo Sync (tone) 60
 - Tempo track 25
 - Time Fit 152
 - Time signature 128
 - TMT 56
 - TMT Control Sw 56
 - TMT control switch 56
 - TMT Vel Control 58
 - TMT velocity control switch 58
 - Tone
 - How a tone is organized 19
 - Tone on/off 36
 - Tone C Tune 60
 - Tone Chorus Send Level 168
 - Tone Coarse Tune 79
 - Tone Delay 50
 - Tone delay mode 49
 - Tone delay time 50
 - Tone Dry Send Level 168
 - Tone F Tune 60
 - Tone Fine Tune 79
 - Tone Level (rhythm tone) 82
 - Tone Level (tone) 64
 - Tone Name 74
 - Tone Output Assign 168
 - Tone Pan (tone) 65
 - Tone receive pitch bend switch 50
 - Tone redamper switch 51
 - Tone Reverb Send Level 168
 - Tone Select 168
 - Tone Switch 36
 - Track 24
 - Beat track 25
 - Pattern track 25
 - Phrase track 24
 - Tempo track 25
 - Track Edit 139
 - Track edit
 - Change channel 147
 - Change gate time 147
 - Change velocity 146
 - Copy 143
 - Data thin 151
 - Delete 143
 - Erase 142
 - Exchange 152
 - Extract 149
 - Insert measure 145
 - Merge 148
 - Quantize 140
 - Shift clock 150
 - Time fit 152
 - Transpose 145
 - Truncate 153
 - Track Edit (Change Channel) 147
 - Track Edit (Change Gate Time) 148
 - Track Edit (Change Velocity) 146
 - Track Edit (Copy) 143
 - Track Edit (Data Thin) 151
 - Track Edit (Delete) 143
 - Track Edit (Erase) 142
 - Track Edit (Exchange) 152
 - Track Edit (Extract) 149
 - Track Edit (Insert Measure) 145
 - Track Edit (Merge) 148
 - Track Edit (Quantize) 140
 - Track Edit (Shift Clock) 150
 - Track Edit (Time Fit) 152
 - Track Edit (Transpose) 145
 - Track Edit (Truncate) 153
 - Trans 36
 - Transmit active sensing switch 183
 - Transmit bank select switch 183
 - Transmit Channel 98
 - Transmit edit data switch 183
 - Transmit program change switch 183
 - Transpose 36, 145
 - Track edit 145
 - Truncate 153
 - TVA
 - Patch 64
 - Rhythm set 82
 - TVA envelope level 1-3 (rhythm tone) 83
 - TVA envelope level 1-3 (tone) 66
 - TVA envelope time 1 velocity sensitivity (rhythm tone) 82
 - TVA envelope time 1 velocity sensitivity (tone) 65
 - TVA envelope time 1-4 (rhythm tone) 83
 - TVA envelope time 1-4 (tone) 66
 - TVA envelope time 4 velocity sensitivity (rhythm tone) 83
 - TVA envelope time 4 velocity sensitivity (tone) 66
 - TVA envelope time key follow 66
 - TVA level velocity curve (rhythm tone) 82
 - TVA level velocity curve (tone) 65

TVA level velocity sensitivity (rhythm tone)	82
TVA level velocity sensitivity (tone)	65
TVF	
Patch	62
Rhythm set	80
TVF envelope depth (rhythm tone)	81
TVF envelope depth (tone)	63
TVF envelope level 0–4 (rhythm tone)	81
TVF envelope level 0–4 (tone)	64
TVF envelope time 1 velocity sensitivity (rhythm tone)	81
TVF envelope time 1 velocity sensitivity (tone)	63
TVF envelope time 1–4 (rhythm tone)	82
TVF envelope time 1–4 (tone)	64
TVF envelope time 4 velocity sensitivity (rhythm tone)	81
TVF envelope time 4 velocity sensitivity (tone)	63
TVF envelope time key follow	64
TVF envelope velocity curve (rhythm tone)	81
TVF envelope velocity curve (tone)	63
TVF envelope velocity sensitivity (rhythm tone)	81
TVF envelope velocity sensitivity (tone)	63
Tx Active Sensing	183
Tx Bank Select	183
Tx Edit Data	183
Tx Program Change	183
Type	175–177

V

VALUE dial	17, 29
Variation (patch)	51
Variation (performance)	95
Vel Fade Lower (rhythm wave)	79
Vel Fade Lower (tone)	59
Vel Fade Upper (rhythm wave)	79
Vel Fade Upper (tone)	59
Vel Range Lower (rhythm wave)	79
Vel Range Lower (tone)	59
Vel Range Upper (rhythm wave)	79
Vel Range Upper (tone)	59
Vel Sens Offset (multitimbre part)	117
Vel Sens Offset (performance part)	102
Velocity 1–4	185
Velocity Control	79
Velocity control switch	79
Velocity Curve (multitimbre)	119
Velocity Curve (performance)	104
Velocity fade width lower (rhythm wave)	79
Velocity fade width lower (tone)	59
Velocity fade width upper (rhythm wave)	79
Velocity fade width upper (tone)	59
Velocity range lower (rhythm wave)	79
Velocity range lower (tone)	59
Velocity range upper (rhythm wave)	79
Velocity range upper (tone)	59
Velocity Sens Offset (patch)	48
Velocity sensitivity offset (multitimbre part)	117
Velocity sensitivity offset (patch)	48
Velocity sensitivity offset (performance part)	102
Vibrate Delay	101, 117
Vibrate Depth	101, 117
Vibrate Rate	101, 117
View Select	155
View Switch	188
Voice Priority	47
Voice reserve	21
Voice Reserve (multitimbre part)	118
Voice Reserve (performance part)	102
Volume (multitimbre)	119
Volume (performance)	104
Volume label	192

Volume slider	16
---------------------	----

W

Wave	59
Wave expansion board	
Installing the wave expansion board	196, 198
SR-JV80 series	32, 40, 196, 198
SRX series	32, 40, 196, 198
Wave Gain (rhythm wave)	78
Wave Gain (tone)	59
Wave Group (rhythm wave)	77
Wave Group (tone)	59
Wave Level	79
Wave No. (L) (rhythm wave)	78
Wave No. (L) (tone)	59
Wave No. (R) (rhythm wave)	78
Wave No. (R) (tone)	59
Wave Number (L) (rhythm wave)	78
Wave Number (L) (tone)	59
Wave Number (R) (rhythm wave)	78
Wave Number (R) (tone)	59
Wave Pan	78
Wave tempo sync (rhythm wave)	78
Wave Tempo Sync (tone)	60
Window	28
WMT	77

Z

Zone	90, 98
Performance Edit	98
Zone and part	84
Zone 1–4	97
Zone Number	96



For EU Countries

This product complies with the requirements of European Directives EMC 89/336/EEC and LVD 73/23/EEC.

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Information

When you need repair service, call your nearest Roland Service Center or authorized Roland distributor in your country as shown below.

AFRICA

EGYPT

Al Fanny Trading Office
9, EBN Hagar A1 Askalany Street,
ARD El Golf, Heliopolis,
Cairo 11341, EGYPT
TEL: 20-2-417-1828

REUNION

Maison FO - YAM Marcel
25 Rue Jules Hermann,
Chaudron - BP79 97 491
Ste Clotilde Cedex,
REUNION ISLAND
TEL: (0262) 218-429

SOUTH AFRICA

That Other Music Shop
(PTY) Ltd.
11 Melle St., Braamfontein,
Johannesbourg, SOUTH AFRICA

P.O.Box 32918, Braamfontein 2017
Johannesbourg, SOUTH AFRICA
TEL: (011) 403 4105

Paul Bothner (PTY) Ltd.
17 Werdmuller Centre,
Main Road, Claremont 7708
SOUTH AFRICA

P.O.Box 23032, Claremont 7735,
SOUTH AFRICA
TEL: (021) 674 4030

ASIA

CHINA

Beijing Xinghai Musical
Instruments Co., Ltd.
6 Huangmchang Chao Yang
District, Beijing, CHINA
TEL: (010) 6774 7491

Shanghai Xingtong Acoustics
Equipment Co., Ltd.
5F. No.1500 Pingliang Road
New East Club Plaza, Shanghai,
CHINA
TEL: (021) 5580-0800

HONG KONG

Tom Lee Music Co., Ltd.
Service Division
22-32 Pun Shan Street, Tsuen
Wan, New Territories,
HONG KONG
TEL: 2415 0911

INDIA

Rivera Digitec (India) Pvt. Ltd.
409, Nirman Kendra Mahalaxmi
Flats Compound Off. Dr. Edwin
Moses Road, Mumbai-400011,
INDIA
TEL: (022) 498 3079

INDONESIA

PT Citra Inti Rama
Jl. Cideng Timur No. 15J-150
Jakarta Pusat
INDONESIA
TEL: (021) 6324170

KOREA

Cosmos Corporation
1461-9, Seocho-Dong,
Seocho Ku, Seoul, KOREA
TEL: (02) 3486-8855

MALAYSIA

BENTLEY MUSIC SDN BHD
140 & 142, Jalan Bukit Bintang
55100 Kuala Lumpur, MALAYSIA
TEL: (03) 2144-3333

PHILIPPINES

G.A. Yupangco & Co. Inc.
339 Gil J. Puyat Avenue
Makati, Metro Manila 1200,
PHILIPPINES
TEL: (02) 899 9801

SINGAPORE

Swee Lee Company
150 Sims Drive,
SINGAPORE 387381
TEL: 846-3676

CRISTOFORI MUSIC PTE LTD

Blk 3014, Bedok Industrial Park E,
#02-2148, SINGAPORE 489980
TEL: 243 9555

TAIWAN

ROLAND TAIWAN
ENTERPRISE CO., LTD.
Room 5, 9fl. No. 112 Chung Shan
N.Road Sec.2, Taipei, TAIWAN,
R.O.C.
TEL: (02) 2561 3339

THAILAND

Theera Music Co., Ltd.
330 Veng NakornKasem, Soi 2,
Bangkok 10100, THAILAND
TEL: (02) 2248821

VIETNAM

Saigon Music
138 Tran Quang Khai St.,
District 1
Ho Chi Minh City
VIETNAM
TEL: (08) 844-4068

AUSTRALIA/ NEW ZEALAND

AUSTRALIA

Roland Corporation
Australia Pty., Ltd.
38 Campbell Avenue
Dee Why West, NSW 2099
AUSTRALIA
TEL: (02) 9982 8266

NEW ZEALAND

Roland Corporation Ltd.
32 Shaddock Street, Mount Eden,
Auckland, NEW ZEALAND
TEL: (09) 3098 715

CENTRAL/LATIN AMERICA

ARGENTINA

Instrumentos Musicales S.A.
Av.Santa Fe 2055
(1123) Buenos Aires
ARGENTINA
TEL: (011) 4508-2700

BRAZIL

Roland Brasil Ltda
Rua San Jose, 780 Sala B
Parque Industrial San Jose
Cotia - Sao Paulo - SP, BRAZIL
TEL: (011) 4615 5666

COSTA RICA

JUAN BANSBACH
Instrumentos Musicales
Ave.1. Calle 11, Apartado 10237,
San Jose, COSTA RICA
TEL: 258-0211

CHILE

Comercial Fancy II S.A.
Rut.: 96.919.420-1
Nataniel Cox #739, 4th Floor
Santiago - Centro, CHILE
TEL: (02) 688-9540

EL SALVADOR

OMNI MUSIC
75 Avenida Norte y Final
Alameda Juan Pablo II,
Edificio No.4010 San Salvador,
EL SALVADOR
TEL: 262-0788

MEXICO

Casa Veerkamp, s.a. de c.v.
Av. Toluca No. 323, Col. Olivar
de los Padres 01780 Mexico D.F.
MEXICO
TEL: 668-0480

PANAMA

SUPRO MUNDIAL, S.A.
Boulevard Andrews, Albrook,
Panama City, REP. DE PANAMA
TEL: 315-0101

PARAGUAY

Distribuidora De
Instrumentos Musicales
J.E. Olear y ESQ. Manduvira
Asuncion PARAGUAY
TEL: (021) 492-124

PERU

VIDEO Broadcast S.A.
Portinari 199 (ESQ. HALS),
San Borja, Lima 41,
REP. OF PERU
TEL: (01) 4758226

URUGUAY

Todo Musica S.A.
Francisco Acuna de Figueroa 1771
C.P.: 11.800
Montevideo, URUGUAY
TEL: (02) 924-2335

VENEZUELA

Musicland Digital C.A.
Av. Francisco de Miranda,
Centro Parque de Cristal, Nivel
C2 Local 20 Caracas
VENEZUELA
TEL: (212) 285-8586

EUROPE

AUSTRIA

Roland Austria GES.M.B.H.
Siemensstrasse 4, P.O. Box 74,
A-6063 RUM, AUSTRIA
TEL: (0512) 26 44 260

BELGIUM/HOLLAND/ LUXEMBOURG

Roland Benelux N. V.
Houtstraat 3, B-2260, Oevel
(Westerlo) BELGIUM
TEL: (014) 575811

DENMARK

Roland Scandinavia A/S
Nordhavnsvej 7, Postbox 880,
DK-2100 Copenhagen
DENMARK
TEL: (039)16 6200

FRANCE

Roland France SA
4. Rue Paul Henri SPAACK,
Parc de l'Esplanade, F 77 462 St.
Thibault, Lagny Cedex FRANCE
TEL: 01 600 73 500

FINLAND

Roland Scandinavia As,
Filial Finland
Lautasaarentie 54 B
Fin-00201 Helsinki, FINLAND
TEL: (9) 682 4020

GERMANY

Roland Elektronische
Musikinstrumente HmbH.
Oststrasse 96, 22844 Norderstedt,
GERMANY
TEL: (040) 52 60090

GREECE

STOLLAS S.A.
Music Sound Light
155, New National Road
Patras 26442, GREECE
TEL: (061) 43-5400

HUNGARY

Intermusica Ltd.
Warehouse Area 'DEPO' Pf.83
H-2046 Torokbalint, HUNGARY
TEL: (23) 511011

IRELAND

Roland Ireland
Audio House, Belmont Court,
Donnybrook, Dublin 4.
Republic of IRELAND
TEL: (01) 2603501

ITALY

Roland Italy S. p. A.
Viale delle Industrie 8,
20020 Arese, Milano, ITALY
TEL: (02) 937-78300

NORWAY

Roland Scandinavia Avd.
Kontor Norge
Lilleakerveien 2 Postboks 95
Lilleaker N-0216 Oslo
NORWAY
TEL: 273 0074

POLAND

P. P. H. Brzostowicz
UL. Gibraltarska 4.
PL-03664 Warszawa POLAND
TEL: (022) 679 44 19

PORTUGAL

Tecnologias Musica e Audio,
Roland Portugal, S.A.
Cais Das Pedras, 8/9-1 Dto
4050-465 PORTO
PORTUGAL
TEL: (022) 608 00 60

ROMANIA

FBS LINES
Piata Libertatii 1,
RO-4200 Gheorghhehi
TEL: (095) 169-5043

RUSSIA

MuTek
3-Bogatyrskaya Str. 1.k.1
107 564 Moscow, RUSSIA
TEL: (095) 169 5043

SPAIN

Roland Electronics
de España, S. A.
Calle Bolivia 239, 08020
Barcelona, SPAIN
TEL: (93) 308 1000

SWEDEN

Roland Scandinavia A/S
SWEDISH SALES OFFICE
Danvik Center 28, 2 tr.
S-131 30 Nacka SWEDEN
TEL: (08) 702 0020

SWITZERLAND

Roland (Switzerland) AG
Musitronic AG
Gerberstrasse 5, Postfach,
CH-4410 Liestal, SWITZERLAND
TEL: (061) 927-8383

UKRAINE

TIC-TAC
Mira Str. 19/108
P.O. Box 180
295400 Munkachevo, UKRAINE
TEL: (03131) 414-40

UNITED KINGDOM

Roland (U.K.) Ltd.
Atlantic Close, Swansea
Enterprise Park, SWANSEA
SA7 9FJ,
UNITED KINGDOM
TEL: (01792) 700139

MIDDLE EAST

BAHRAIN

Moon Stores
No.16, Bab Al Bahrain Avenue,
P.O.Box 247, Manama 304,
State of BAHRAIN
TEL: 211 005

CYPRUS

Radex Sound Equipment Ltd.
17, Diagorou Street, Nicosia,
CYPRUS
TEL: (02) 66-9426

IRAN

MOCO, INC.
No.41 Nike St., Dr. Shariyati Ave.,
Roberoye Cerahe Mirdamad
Tehran, IRAN
TEL: (021) 285-4169

ISRAEL

Haliit P. Greenspoon &
Sons Ltd.
8 Retzif Ha'aliya Hashnya St.
Tel-Aviv-Yafo ISRAEL
TEL: (03) 6823666

JORDAN

AMMAN Trading Agency
245 Prince Mohammad St.,
Amman 1118, JORDAN
TEL: (06) 464-1200

KUWAIT

Easa Husain Al-Yousifi
Abdullah Salem Street,
Safat, KUWAIT
TEL: 243-6399

LEBANON

A. Chahine & Fils
Gerge Zeidan St., Chahine Bldg.,
Achrafieh, P.O.Box: 16-5857
Beirut, LEBANON
TEL: (01) 20-1441

QATAR

Al Emadi Co. (Badie Studio
& Stores)
P. O. Box 62,
Doha, QATAR
TEL: 4423-554

SAUDI ARABIA

aDawliah Universal
Electronics APL
Corniche Road, Aldossary Bldg.,
1st Floor, Alkhobar,
SAUDI ARABIA

P.O.Box 2154, Alkhobar 31952
SAUDI ARABIA
TEL: (03) 898 2081

SYRIA

Technical Light & Sound
Center
Bldg. No. 47,
Khaled Ebn Al Walid St.
Damascus, SYRIA
TEL: (011) 221-1230

TURKEY

Barkat muzik aletleri ithalat
ve ihracat Ltd Sti
Siraselviler Caddesi Siraselviler
Pasaji No:74/20
Taksim - Istanbul, TURKEY
TEL: (0212) 2499324

U.A.E.

Zak Electronics & Musical
Instruments Co. L.L.C.
Zabeel Road, Al Sherooq Bldg.,
No. 14, Grand Floor, Dubai, U.A.E.
TEL: (04) 3360715

NORTH AMERICA

CANADA

Roland Canada Music Ltd.
(Head Office)
5480 Parkwood Way Richmond
B. C., V6V 2M4 CANADA
TEL: (0604) 270 6626

Roland Canada Music Ltd.

(Toronto Office)
Unit 2, 109 Woodbine Downs
Blvd, Etobicoke, ON
M9W 6Y1 CANADA
TEL: (0416) 213 9707

U. S. A.

Roland Corporation U.S.
5100 S. Eastern Avenue
Los Angeles, CA 90040-2938,
U. S. A.
TEL: (323) 890 3700

As of January 1, 2002 (Roland)

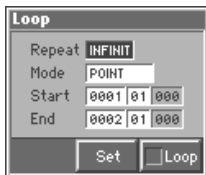
Additional Functions of the Fantom and Changes in Operation

Linked settings for Loop mode

See pp. 139, 125, 130 in the Owner's Manual

In the Loop window, you can now select the loop modes (POINT, 1 MEAS, 2 MEAS, 4 MEAS, 8 MEAS, 16 MEAS, SONG ALL).

The new Loop window



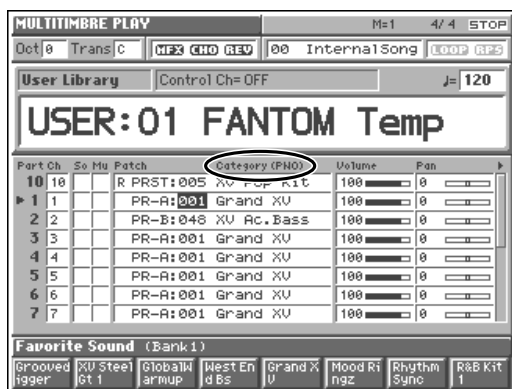
The selection here is linked with both Loop Play and Loop Recording. In other words, the settings you make in the Loop window will be applied to the Loop settings for playback, as well as to the loop settings for recording in the Recording Standby window.

Loop on/off settings are also linked between the various PATCH PLAY, PERFORMANCE PLAY, and MULTITIMBRE PLAY screens, and in the Loop, Song Edit, and Recording Standby windows.

Category name display in the MULTITIMBRE PLAY screen

See pp. 106, 34 in the Owner's Manual

If the Patch List window or the Rhythm List window are set to display sorted by categories (i.e., when [7 (Ctg)] has a check mark (✓) assigned), the category name for the selected patch will be displayed in the MULTITIMBRE PLAY screen.



Undo and Redo in the MULTITIMBRE PLAY screen

See p. 109 in the Owner's Manual

After editing Patch or Volume settings in the MULTITIMBRE PLAY screen, you can revert to the original value (Undo), or set the edited value again (Redo).

To revert to the original value, hold down [JUMP] and press [INC] or [DEC]. To set the edited value again, hold down [JUMP] again and press [INC] or [DEC].

Copy between performances and multitimbres

See pp. 92, 113 in the Owner's Manual

In the Performance Copy window and Multitimbre Copy window, an "All" setting has been added to Mode. When you use this mode, all name, effect, and part settings can be copied between performances and multitimbres.

New type added to performance and multitimbre initialize

See pp. 91, 112 in the Owner's Manual

In the Performance Initialize window and Multitimbre Initialize window, a new "SOUND CONTROL" selection has been added to the Type field. This lets you set the following parameters for the specified part (Part: All, 1-16) to the stored value (Value: STORED) or the factory-set value (Value: DEFAULT).

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



Quantize all tracks at the same time

See p. 140 in the Owner's Manual

In the Track Edit (Quantize) window, you can now select "All" for Track (target track).

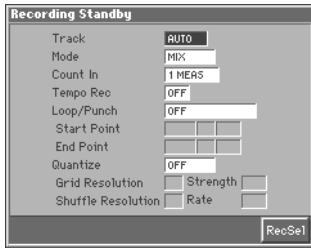
This allows you to simultaneously perform quantization on all tracks: phrase tracks 1-16, beat track, and tempo track.

Changes in the Recording Standby window and how to start recording

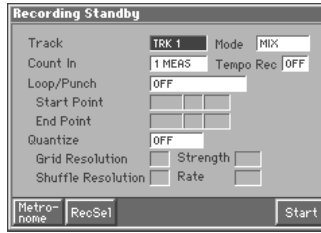
See p. 129 in the Owner's Manual

In the Recording Standby window, the functions assigned to the [1]–[8] buttons have been expanded and modified.

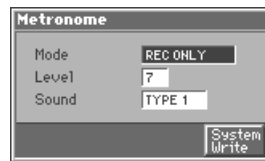
Recording Standby window before the change



Recording Standby window following the change



Settings in the Metronome window are linked with the Sequencer group settings in the System Edit window.



Button name	Function
[3 (Metronome)]	Open the Metronome window
[4 (RecSel)]	Open the Recording Select window
[8 (Start)]	Start recording (the Realtime Recording window will appear)
[STOP/PLAY] *Outside the Recording Standby window	Start recording (the Realtime Recording window will not be displayed)

Switching between Recording and Rehearsal modes, and showing or hiding the Realtime Recording window

See left column on p. 132 in the Owner's Manual. The operating procedure in "Auditioning Sounds or Phrases While Recording (Rehearsal Function)" has changed.

When the Recording Standby window is displayed, pressing [8 (Start)] causes recording to begin **with the Realtime Recording window displayed**, while pressing [STOP/PLAY] causes recording to begin **without the Realtime Recording window appearing**. Subsequently, you can switch between recording and rehearsal modes, and between showing/hiding the Realtime Recording window as shown in the diagram below.

Recording (with the Realtime Recording window displayed)



Recording

Press [8 (Rehers)]
→
Press [8 (Record)]
←

Rehearsing (with the Realtime Recording window displayed)



Rehearsing

↑
Press [REC]
↓

↑
Press [REC]
↓

Recording (with the Realtime Recording window hidden)



Recording

Hold down [SHIFT]
and press [REC]
←

Rehearsing (with the Realtime Recording window hidden)



Rehearsing

Free Manuals Download Website

<http://myh66.com>

<http://usermanuals.us>

<http://www.somanuals.com>

<http://www.4manuals.cc>

<http://www.manual-lib.com>

<http://www.404manual.com>

<http://www.luxmanual.com>

<http://aubethermostatmanual.com>

Golf course search by state

<http://golfingnear.com>

Email search by domain

<http://emailbydomain.com>

Auto manuals search

<http://auto.somanuals.com>

TV manuals search

<http://tv.somanuals.com>