

XV-5050

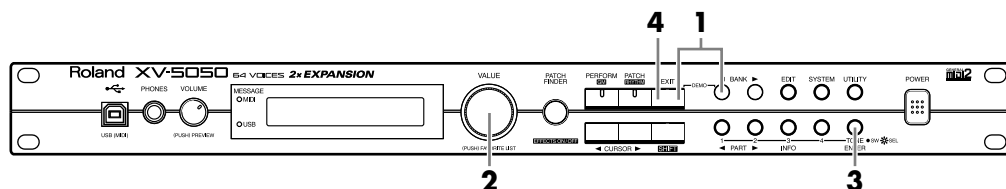
64 VOICES 2× EXPANSION

OWNER'S MANUAL

Thank you, and congratulations on your choice of the Roland XV-5050.

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

Listening to the Demo Songs



- 1. Hold down the [EXIT] button and press the [◀ BANK] button.**
The DEMO PLAY screen appears in the display.
- 2. Turn the [VALUE] dial to choose the song you want to hear.**
Choose “CHAIN PLAY” to hear all songs performed in order, starting with the first song.
- 3. Press the [ENTER] button to start demo song playback.**
- 4. Press the [EXIT] button to stop the performance and return to the song-selection screen.**
Press the [EXIT] button again to leave the DEMO PLAY screen.

* No data for the music that is played will be output from MIDI OUT.

Convention Used in This Manual

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

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

 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:

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Read these instructions. 2. Keep these instructions. 3. Heed all warnings. 4. Follow all instructions. 5. Do not use this apparatus near water. 6. Clean only with a dry cloth. 7. Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions. 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. 9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet. | <ol style="list-style-type: none"> 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. 120, p. 122.) 
- 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. 

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 (SRX Series; p. 14).



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



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



CAUTION

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



- 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.



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



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



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



- Before cleaning the unit, turn off the power and unplug the power cord from the outlet (p. 14).



- 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) (SRX Series). Remove only the specified screws (p. 120, p. 122).



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



IMPORTANT NOTES

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

Power Supply

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

Placement

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

Maintenance

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

Repairs and Data

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

Additional Precautions

- Do not expose the display to strong light (such as camera flashes), as malfunction may result.
- 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 in another MIDI device (e.g., a sequencer).
- Unfortunately, it may be impossible to restore the contents of data that was stored in the unit's memory 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.

Handling CD-ROMs

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

Contents

USING THE UNIT SAFELY	3
IMPORTANT NOTES	5
Features	10
Panel Descriptions.....	11
Front Panel.....	11
Rear Panel.....	12
Getting Ready.....	13
Connecting to MIDI Devices and Audio Equipment.....	13
Turning the Power On/Off.....	14
Turning On the Power.....	14
Turning Off the Power	14
Restoring the Factory Settings (Factory Reset).....	15

Quick Start..... 17

Playing Sounds	18
Playing Patches (Phrase Preview).....	18
Setting the Way In Which Sounds Are Previewed.....	18
Playing a Patch on the XV-5050 from an External MIDI Device (MIDI Keyboard).....	19
Connecting the MIDI Keyboard.....	19
Matching MIDI Channels.....	19
Choosing a Patch	21
Basic Procedure for Choosing a Patch	21
Choosing a Bank.....	21
Choosing a Patch by Category (Patch Finder).....	21
Setting a Patch's Pitch in Octave Steps (Octave Shift)	23
Switching Modes (Patch, Performance, or Rhythm Set).....	23
Playing Multiple Layered Patches (Layer)	25
Selecting Performance "PB:001 Dulcimar&Gtr"	25
Turning a Part On or Off.....	26
Assigning a New Patch to a Part	27
Changing the MIDI Reception Channel of Each Part	27
Playing Different Patches In Different Areas of the Keyboard (Split).....	28
Selecting Performance "PB:029 Organ/Lead"	28
Setting the Note Range of Each Part.....	29
Using an External MIDI Device to Select Patches and Change Other Settings.....	30
Selecting Patches and Rhythm Sets	30
Selecting Performances	31
Turning Effects On and Off	32
Making a List of Your Favorite Patches.....	33
Registering a Patch in the FAVORITE LIST	33
Selecting a Patch from the FAVORITE LIST	34
Connecting to a Computer.....	35
Connecting with USB Connector	35
Connecting with MIDI Connectors.....	35
About Patches and Performances	36
What Is a Patch?.....	36
What Is a Performance?	36

Advanced Use 37

Chapter 1 Creating a Patch 38

How a Patch Is Organized	38
How a Tone Is Organized	38
Tips for Creating a Patch	38
Choosing the Tones That Sound (Tone On/Off)	39
Settings Common to the Entire Patch (COMMON)	39
More Advanced Editing of Tones	43
Tips for Choosing a Waveform	43
Changing a Waveform (WAVE)	44
Changing Pitch (PITCH)	45
Changing the Brightness with a Filter (TVF)	46
Changing the Volume (TVA)	48
Applying Vibrato or Tremolo (LFO)	50
Using Controllers to Change How Sounds Are Played (CONTROL)	51
Adjusting Effect Settings	53
Saving Patches You Create	53
Copying Settings Between Patches (Patch Tone Copy)	53

Chapter 2. Creating a Rhythm Set..... 54

How Percussion Instruments Are Organized	54
Using MIDI Keyboard to Select a Percussion Instrument for Editing	54
Settings Common to an Entire Rhythm Set	55
Setting up Individual Rhythm Tones	56
Tips for Choosing Rhythm Tone Waveforms	56
Modifying a Rhythm Tone's Waveform and Panning (WAVE)	57
Modifying a Rhythm Tone's Pitch (PITCH)	59
Modifying the Brightness of a Sound with a Filter (TVF)	59
Making the Volume Change (TVA)	61
Other Settings (CONTROL)	61
Effects Settings	62
Saving Rhythm Sets You Create	62
Copying the Settings of Another Rhythm Tone (Rhythm Key Copy)	62

Chapter 3 Creating a Performance..... 63

How a Performance Is Organized	63
Basic Ways to Use Performances	63
Turning a Part On or Off	63
How to Adjust a Performance Setting	63
Establishing Settings for an Entire Performance (COMMON)	64
Setting the Keyboard Range	64
Other Settings	64
Settings for Each Part	65
Choosing a Part's Patch or Rhythm Set	65
Setting a Part's Volume, Pan, Pitch, and Polyphony	65
Editing the Attack and Release of a Part's Sound	65
Changing the Pitch	66
Changing the Way a Part's Sound is Played	66
Scale Tune	66
Establishing a Part's MIDI Settings	67
Confirming MIDI Information for Each Part (INFO)	67
Adjusting Effect Settings	68
Saving Performances You Create	68
Copying Settings from One Part to Another (Performance Part Copy)	68

Chapter 4 Using the XV-5050 Effects	69
Turning Effects On/Off	69
Patch/Rhythm Set Mode Settings.....	70
Audio Signal Flow	70
Setting Procedure	71
Performance Mode Settings	72
Audio Signal Flow	72
Setting Procedure	73
Multi-Effects Settings	74
Chorus Settings	74
Reverb Settings	74
Multi-Effects Parameters	75
Chorus Parameters	102
Reverb Parameters	103
Copying Effect Settings	103
Chapter 5 Saving a Sound You Create	104
Saving Edits to the XV-5050's Internal Memory (WRITE)	104
Saving a Patch (PATCH WRITE)	104
Saving a Rhythm Set.....	104
Saving a Performance	104
Initializing a Sound (INIT)	105
Protecting the Internal Memory (PROTECT)	105
Transmitting Sound Settings (XFER).....	106
Chapter 6 Other Settings/Status Checks	107
Making Overall Settings.....	107
Selecting Common Controllers.....	107
Establishing the MIDI and USB Settings.....	108
Setting the MIDI Channel	108
Making Global Settings	108
Specifying the Reception Status for Each Tone	108
Connecting Two or More XV-5050s to Increase Polyphony	108
Making USB-Related Settings	109
Setting the Way In Which Sounds Are Previewed	109
Making the Equalizer Settings.....	109
Adjusting the Overall Tuning of the XV-5050.....	110
Master Tune and Master Key Shift.....	110
Scale Tune.....	110
Confirming the Current Status	110
Saving the System Settings.....	110
Chapter 7 Using the XV-5050 as a General MIDI Sound Module....	111
Entering GM Mode.....	111
Initializing the Sound Generator for General MIDI System Basic Settings	111
Playing Back a GM Score	111
Modifying GM Mode Settings.....	111
Making Effects Settings in GM Mode (EFFECTS)	112
Making Settings for Receiving MIDI (MIDI).....	113
Making Settings for Each Part (PART).....	113
Chapter 8 Examples of Applications Using the XV-5050	114
Controlling the XV-5050 in Realtime Using an External MIDI Device.....	114
Changing Multi-Effects Settings From an External MIDI Device	114
Changing Tone Settings	114
Applications for Patches.....	115
Syncing the LFO Cycle to the System Tempo	115

Synchronizing Multi-Effects to the System Tempo.....	115
Making a Tone's Delay Time Match the System Tempo.....	116
Using a Pedal Switch to Change the Rotary Speed of the Rotary Effect.....	116
Playing Phrase Loops at a System's Tempo.....	116
Changing Part Settings from an External MIDI Device.....	117
Applications for Matrix Control.....	118
Controlling the TMT with the LFO and Changing the Tone's Timing.....	118

Appendices 119

Installing the Wave Expansion Board.....120

Cautions When Installing an Wave Expansion Board	120
How to Install a Wave Expansion Board	120

Installation de la carte d'extension Wave (French language for Canadian Safety Standard)122

Précautions à prendre lors de l'installation d'une carte d'expansion Wave	122
Installation d'une carte d'expansion Wave	122

Installing & Setup the Driver.....124

What is the USB MIDI Driver?	124
Windows 98 / Me Users.....	125
Specifying the Output Destination for MIDI Data.....	127
Windows 2000 Users.....	128
Specifying the Output Destination for MIDI Data.....	131
Deleting the USB MIDI Driver	131
Using OMS on the Macintosh.....	132
Installing the XV-5050 Driver	132
OMS settings	132
Using FreeMIDI on the Macintosh.....	134
Installing the XV-5050 Driver	134
FreeMIDI settings.....	135

Troubleshooting.....136

Error Messages137

Waveform List138

Patch List.....141

Rhythm Set List.....147

Performance List.....153

Demo Song List.....153

MIDI Implementation.....154

Specifications.....177

Index.....178

Features

64-Voice Polyphony and 16-Part Multitimbrality

The XV-5050 is a 16-part multitimbral sound generator that produces up to 64 simultaneous polyphonic voices. It provides ample polyphony, even with Patches containing multiple Tones.

Create Amazingly Expressive Tones

With Patches containing four stereo Tones, as well as four-Tone instruments in Rhythm Sets—you can use up to a total of eight wave types—the XV-5050 takes you the next step beyond Roland's previous generation of JV-Series modules, providing even more precise control and allowing you to create lush, more expressive sounds.

Powerful Internal Effects, Including COSM Effects

The internal effects have been completely rethought and improved. The reverb, the XV-5050's most central effect, incorporates the high-quality SRV-3030 DSP, allowing the instrument itself to give great spatial definition with superior, clear sound.

In addition, the XV-5050 features Multi-effects (MFX) with 90 kinds of effects, including RSS and 3D Delay, Slicer, and Formant Filter. What's more, the XV-5050 also features a variety of combinations of different effects, such as the Guitar Amp Simulator, made possible with COSM technology; Guitar Multi, which lets you get just the right guitar, bass, and keyboard sounds; Bass Multi, and Keyboard Multi, all of which let you create even more powerful sounds. Furthermore, you can use three different MFX systems when in Performance mode, and use each MFX on any Part you select. On top of all this, each output is supplied with two-band EQ.

Digital Out for Complete Compatibility with Digital Systems

The XV-5050's output systems not only include four parallel analog outs that can also be used as two stereo pairs, but also S/P DIF digital outputs (optical and coaxial) as well.

Equipped with a USB Connector

The XV-5050 has a USB connector on its front panel, so that you can easily connect your computer.

Supports General MIDI system Level 2

The XV-5050 provides a mode compatible with General MIDI System Level 2, the standard format for desktop music (DTM) systems. The upwardly compatible General MIDI 2 standards pick up where the original General MIDI standard left off, offering enhanced expressive capabilities and even greater compatibility. You can play back commercially available General MIDI-compatible song data.

Greater Expansion Possibilities with the New-Format Wave Expansion Boards

The XV-5050 accepts up to two of Roland's new-format Wave Expansion Boards (SRX Series).

All of this provides you unprecedented power in creating sounds from a massive amount of waveform data.

Featuring the Patch Finder and Phrase Preview Functions

The XV-5050 provides a Patch Finder function that allows you to quickly find Patches of a specified type or category.

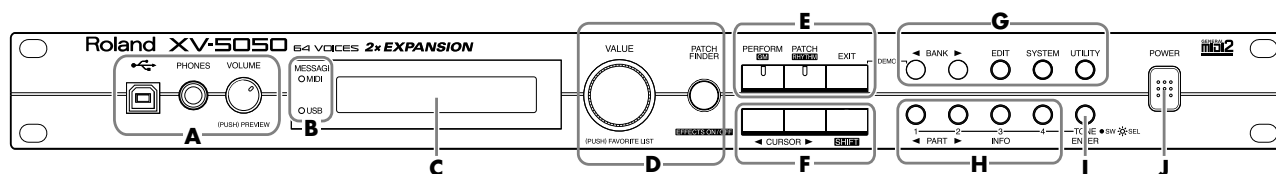
Press the XV-5050's [PHRASE PREVIEW] button to preview the selected Patch with a musically appropriate Phrase.

Registering a Patch in the FAVORITE LIST

You can keep the Patches that you like to use all in one place by registering them on the Favorite List. The FAVORITE LIST gives you immediate access to your favorite Patches, whether they are in the XV-5050 itself, on Wave Expansion Boards, or on memory cards. You can register up to 64 Patches in this list.

Panel Descriptions

Front Panel



A

USB Connector

Use this for connecting a computer to the XV-5050 using a USB cable (p. 35).

PHONES Jack

Headphones are plugged in here (p. 13).

[VOLUME] Knob (PHRASE PREVIEW)

Adjusts the volume from the A (MIX) OUTPUT jacks and PHONES jack. The volume from the OUTPUT B jacks cannot be adjusted.

You can press the knob to listen to the XV-5050 without using any external devices. (Phrase Preview; p. 18)

B

MIDI MESSAGE indicator

This will light when a MIDI message is received via MIDI connector.

USB MESSAGE indicator

This will light when a MIDI message is received via USB connector.

C

Display

Presents a variety of information about the operation being performed.

D

[VALUE] Dial (FAVORITE LIST)

Turn this dial to change a parameter's setting, or "value." If you hold down [SHIFT] as you turn [VALUE], the parameter's value will change by larger increments.

Press this dial in Patch/Rhythm Set mode to display a list showing the collection of your favorite sounds. (Favorite List; p. 33)

[PATCH FINDER] Button

You can choose a Patch using the Patch Finder feature (p. 21).

E

[PERFORM] Button

Press this button to enter Performance mode (p. 23).

Press this button while holding down [SHIFT] to enter General MIDI 2 mode (p. 23).

[PATCH] Button

Press this to enter Patch mode (p. 23).

Press this button while holding down [SHIFT] to enter Rhythm Set mode (p. 23).

[EXIT] Button

Press this button when you wish to return to a mode's PLAY screen, or to cancel an operation before executing it.

Hold [EXIT] and press [◀ BANK] to hear the XV-5050 demo songs.

F

[◀ CURSOR], [CURSOR ▶] Buttons

Move the cursor (underline) with these.

[SHIFT] Button

Use [SHIFT] in combination with other buttons. Holding down this button changes the functions of other buttons.

G

[◀ BANK], [BANK ▶] Buttons

Choose the Bank with these (p. 21).

[EDIT] Button

Provides access to relevant settings, or "parameters."

[SYSTEM] Button

Press this to enter System mode.

This allows you to make settings that affect the entire XV-5050.

[UTILITY] Button

Press this to enter Utility mode.

This button allows you to perform operations such as saving, copying, initializing, transferring data, write-protecting data, and factory reset operations.

H

TONE SWITCH/SELECT [1]–[4] Buttons

(In Patch/Rhythm Set mode)

Switches each Tone on or off when [TONE] is dark (p. 39).

Chooses a Tone whose settings you wish to change when [TONE] is lit (p. 39).

[◀ PART], [PART ▶] Buttons

(In Performance mode)

Chooses a Part whose settings you wish to change (p. 64).

[INFO] Button

(In Performance mode)

Press this to check the receive status of various types of MIDI message for each Part (p. 67).

I

[TONE] Button (ENTER)

Switches the function of the TONE SWITCH/SELECT [1]–[4] buttons.

- When this button is dark, [1]–[4] switches each Tone on or off.
- When this button is lit, [1]–[4] chooses a Tone whose settings you wish to change.

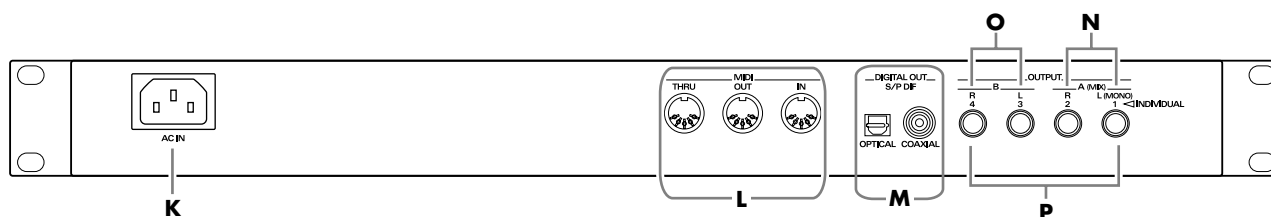
Finalizes a setting value or executes an operation (ENTER).

J

[POWER] Switch

Turns the XV-5050's power on and off (p. 14).

Rear Panel



K

AC Inlet

Connect the included power cable here. (p. 13)

L

MIDI Connectors (IN, OUT, THRU)

These connectors connect the XV-5050 with other MIDI devices, enabling the sending and receiving of MIDI messages. (p. 19)

IN: This connector receives messages from another MIDI device.

Out: This connector transmits messages to another MIDI device.

Thru: MIDI messages received at the MIDI IN connector will be retransmitted from this connector without being changed by the XV-5050.

M

Digital Out Connectors

The XV-5050 features both optical and coaxial digital out connectors (conforming to S/P DIF).

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

N

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

These jacks send audio signals in stereo (L/R) from the XV-5050 to an amp or mixer. For a mono output, use only the L jack. (p. 13)

These jacks are used when the SYSTEM SETUP Mix/Parallel parameter is set to MIX. (p. 107)

* The XV-5050, as shipped from the factory, routes the output of all PRESET Patches to these jacks.

O

B OUTPUT Jacks (L, R)

These jacks send audio signals in stereo (L/R) from the XV-5050 to an amp or mixer. (p. 13)

P

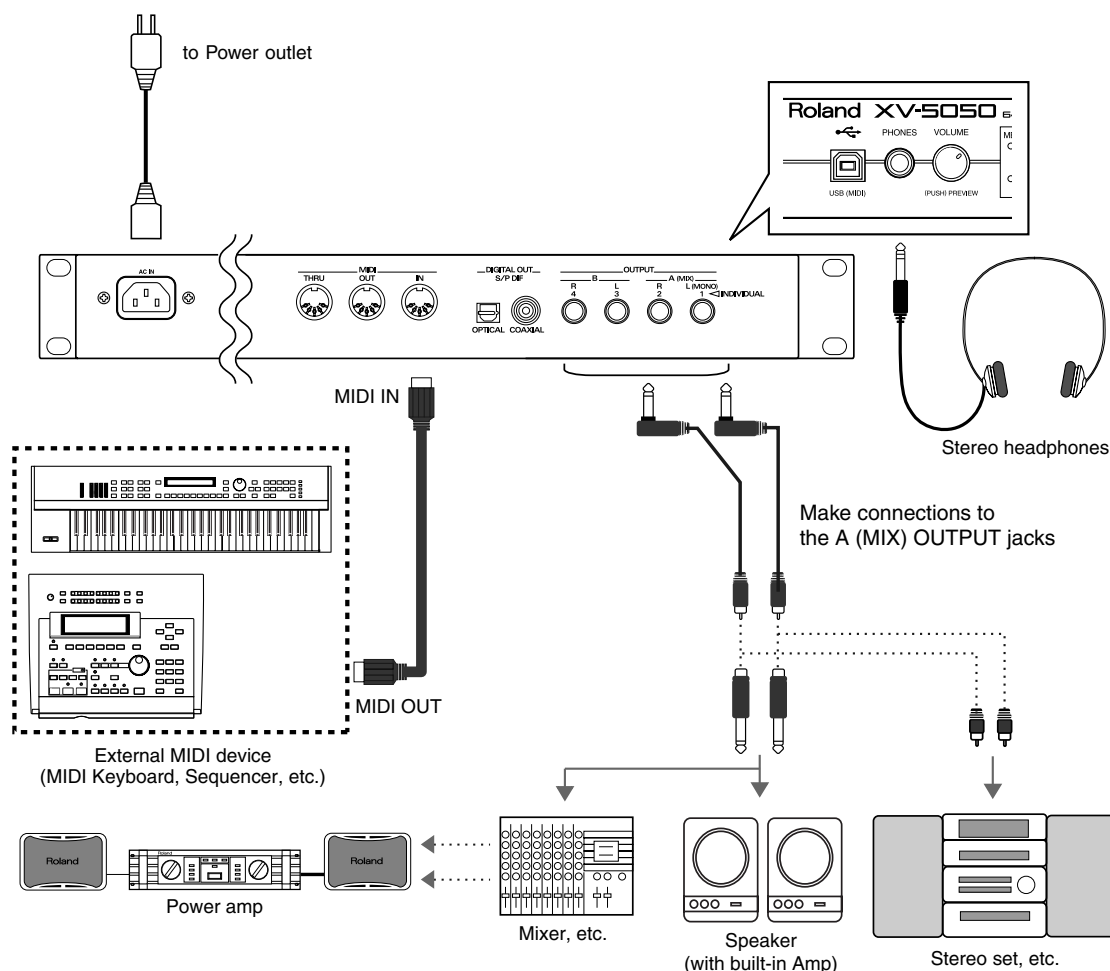
INDIVIDUAL 1–6 OUTPUT Jacks

These jacks output audio signals in mono from the XV-5050 to an amp or mixer. (p. 13)

Getting Ready

Connecting to MIDI Devices and Audio Equipment

The XV-5050 is not equipped with an internal amp or speakers. To hear sound, you will need to connect it to a keyboard amp or audio system, or connect headphones. Refer to the following figure when connecting the XV-5050 with external devices.



1. Before making any connections, confirm that power to all devices has been turned off.
2. Connect the AC power cord included with the XV-5050 to the unit, then plug the other end into a power outlet.
3. Connect audio and MIDI cables as shown in the diagram. If connecting headphones, plug the headphones into the PHONES jack.

NOTE

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

Turning the Power On/Off

Turning On the Power

** Once the connections have been completed (p. 13), turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.*

1. Before turning on the power, confirm the following.

- Are all devices connected properly?
- Are the volume levels on the XV-5050 and any amp or mixer that is connected turned down to the lowest settings?

2. Press XV-5050's [POWER] to turn on the power.

3. Turn on the power to connected external devices.



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

Turning Off the Power

1. Before turning off the power, confirm the following.

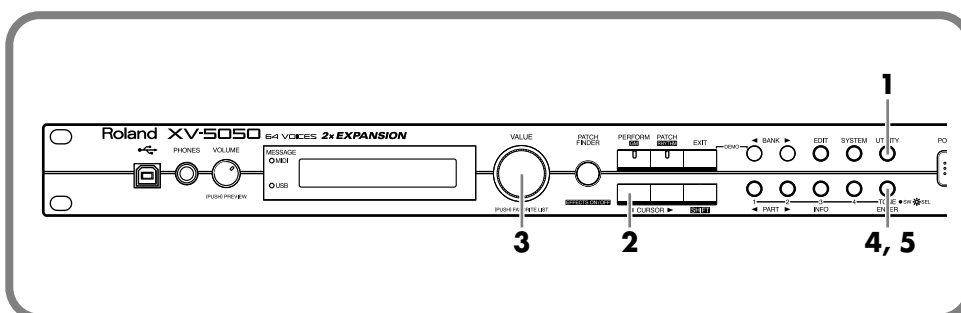
- Are the volume levels on the XV-5050 and any amp or mixer that is connected turned down to the lowest settings?
- Have you saved your data, including data for any sounds you have created? (p. 104)

2. Turn off the power to connected external devices.

3. Press XV-5050's [POWER] to turn off the power.

Restoring the Factory Settings (Factory Reset)

To ensure the XV-5050 operates correctly as described in the procedures found in the Owner's Manual when using the XV-5050 for the first time, be sure to restore the settings to their initial status as shipped.



1. Press [UTILITY] to make its indicator light.

The UTILITY screen appears in the display.

```
WRITE PATCH [ENT]
US:001(Xtremities)
```

2. Press [◀ CURSOR] a few times to move the cursor to the upper left of the display.

3. Turn [VALUE] to choose "FACTORY RESET."

```
FACTORY RESET [ENT]
```

4. Press [ENTER].

The confirmation message "Are You Sure?" appears in the display.

```
FACTORY RESET [ENT]
Are You Sure?
```

* To cancel, press [EXIT]

5. Press [ENTER] to execute the factory reset.

The PLAY screen returns to the display.

* If the following display appears, turn [VALUE] to change the displayed ON to OFF. After pressing [ENTER] to turn off the protect, press [ENTER] again to save the settings.

```
WRITE PROTECT
Internal: ON
```

NOTE

If any important data you may have created is stored in memory, then running this operation will cause such data to be lost. If there is any data you wish to retain, then save the data to a commercially available memory card or external MIDI device.

MEMO

For more information on Write Protect, refer to page 105.

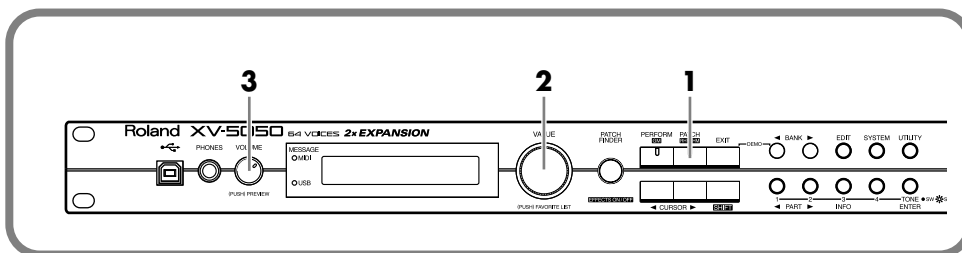
Quick Start

Playing Sounds

The XV-5050 comes with a rich palette of onboard sounds, called “Patches.” Let’s listen to some Patches in **Patch mode**.

Playing Patches (Phrase Preview)

Even when there’s no MIDI keyboard or sequencer connected, the XV-5050 allows you to audition sounds using a number of prepared phrases that are perfectly matched to each Patch (**category**).



1. Press [PATCH] to make its indicator light.

The PATCH PLAY screen appears in the display.

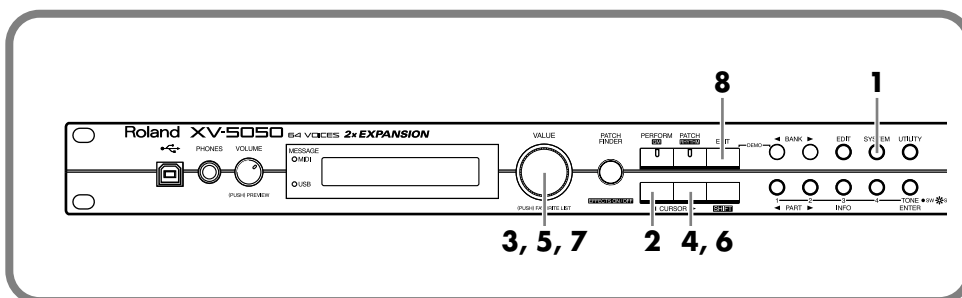
```
PATCH:PLAY 4oct= 1▶  
05:001 TriTheAlarm
```

2. Turn [VALUE] to choose a Patch.
3. Press and hold down [VOLUME].

The Patch plays while [VOLUME] is depressed.

Setting the Way In Which Sounds Are Previewed

You can preview a Patch in any of three ways: “PHRASE” (the Patch plays a phrase), “CHORD” (the Patch plays a chord), or “SINGLE” (the Patch plays a series of notes).



1. Press [SYSTEM] to make its indicator light.
2. Press [◀ CURSOR] a few times to move the cursor to the parameter group in the upper line of the display.

```
SYSTEM:GENERAL  
LCD Contrast: 5
```

3. Turn [VALUE] to choose “PREVIEW.”

4. Press [CURSOR ►] to move the cursor to the parameter at the lower left of the display.
5. Turn [VALUE] to choose the parameter you want to set.
6. Press [CURSOR ►] to move the cursor to the value at the lower right of the display.
7. Turn [VALUE] to select the desired setting.
8. Press [EXIT] to return to the PATCH PLAY screen.

Parameter	Value	Description
PREVIEW		
Mode	SINGLE, CHORD, PHRASE	SINGLE: The notes specified by Key Note 1–4 sound one after another. CHORD: The notes specified by Key Note 1–4 play together as a chord. PHRASE: The Phrase associated with the Patch's type/category plays.
Key Note 1–4	C-1–G9	Specifies the four notes that sound during a preview when "SINGLE" or "CHORD" is selected for Mode.
Velocity Note 1–4	0–127	Specifies the volume of the four notes that sound when "SINGLE" or "CHORD" is chosen for Mode.

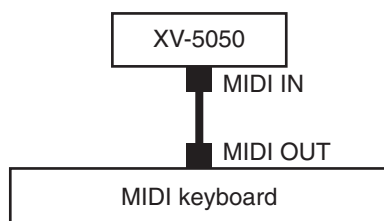
Playing a Patch on the XV-5050 from an External MIDI Device (MIDI Keyboard)

The XV-5050 produces sound in response to MIDI messages it receives from an external MIDI device such as a MIDI keyboard or sequencer.

Try connecting your MIDI keyboard and playing sounds on the XV-5050.

Connecting the MIDI Keyboard

Connect the MIDI keyboard as shown in the following.



Matching MIDI Channels

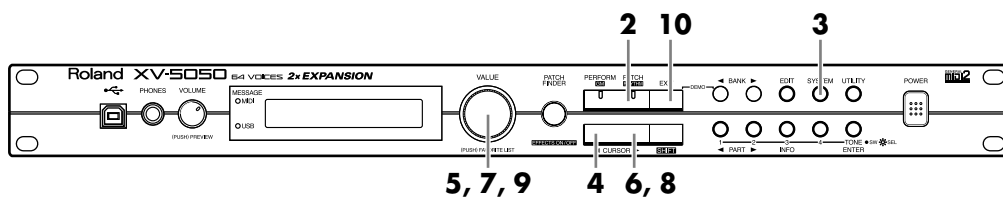
In order for the XV-5050 to respond to MIDI data sent by an external MIDI device, both devices must be set to use the same MIDI channel or channels.

Here, in Patch mode, let's set both devices so that they use MIDI Channel 1.

MEMO

Executing a Factory Reset sets the XV-5050's reception channel in Patch mode to "1."

Playing Sounds



1. Set the send channel of the MIDI keyboard to “1.”

Refer to the keyboard’s owner’s manual for instructions.

2. Press [PATCH] to make its indicator light.

* If you’re using the XV-5050 for the first time – or if you’ve just performed a Factory Reset – you can skip the following steps and play the XV-5050 from your keyboard right now.

3. Press [SYSTEM] to make its indicator light.

4. Press [◀ CURSOR] a few times to move the cursor to the upper line of the display.

```
SYSTEM:GENERAL
LCD Contrast: 5
```

5. Turn [VALUE] to choose “MIDI.”

```
SYSTEM:MIDI&USB
Control Channel: 16
```

6. Press [CURSOR ▶] to move the cursor to the lower left of the display.

7. Turn [VALUE] to choose “Patch Rx Channel.”

```
SYSTEM:MIDI&USB
Patch Rx Channel: 3
```

8. Press [CURSOR ▶] to move the cursor to the lower right of the display.

9. Turn [VALUE] to choose “1.”

```
SYSTEM:MIDI&USB
Patch Rx Channel: 1
```

10. Press [EXIT] to return to the PATCH PLAY screen.

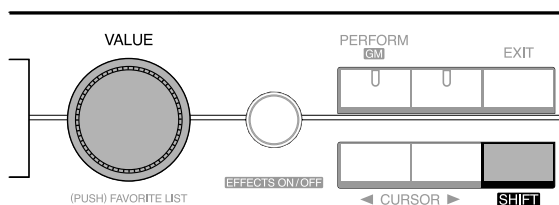
Play the MIDI keyboard to hear the currently selected XV-5050 Patch.

MEMO

You can hold down [SHIFT] and press [PATCH] to enter Rhythm Set mode and play percussion sounds from your MIDI keyboard. To return to the PATCH PLAY screen, press [PATCH].

Choosing a Patch

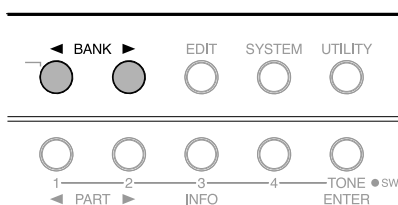
Basic Procedure for Choosing a Patch



On the PATCH PLAY screen, turn [VALUE] to choose the desired Patch.

As you turn [VALUE], press the [VALUE] knob to change values in large steps. You can also hold down [SHIFT] as you turn to change values in large steps.

Choosing a Bank



Press [◀ BANK]/[BANK ▶] in Patch mode to select a new **Bank**.

- Pressing [BANK ▶] changes the Bank as shown below.

US (User) -> PA (Preset A) -> PB (Preset B) -> ... -> GM (General MIDI)-> XA (Expansion A) -> XB (Expansion B)

- Pressing [◀ BANK] changes the Bank as below.

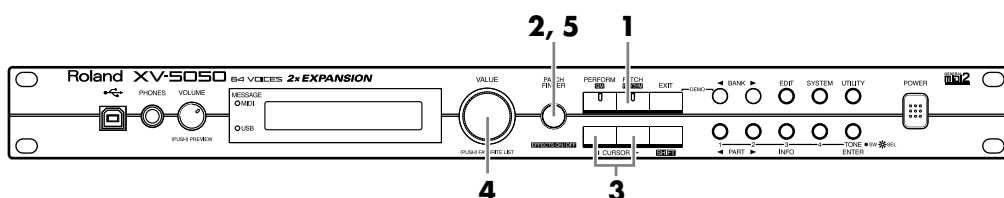
XB (Expansion B)-> XA (Expansion A)-> GM (General MIDI) -> PH (Preset H) -> PG (Preset G) -> ... -> US (User)



You cannot select XA or XP unless a Wave Expansion Board is installed into the corresponding slot.

Choosing a Patch by Category (Patch Finder)

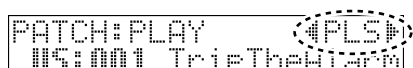
The XV-5050's "Patch Finder" allows you to quickly find any Patch.



1. Press [PATCH] to make its indicator light.

2. Press [PATCH FINDER] to make its indicator light.

The current category appears in the upper right of the display.



3. Press [◀ CURSOR]/[CURSOR ▶] to select the desired category.

Playing Sounds

4. Turn [VALUE] to choose a Patch in the currently selected category.

5. Press [PATCH FINDER] to turn off its indicator.

* If you press [VALUE] in Step 3, the CATEGORY SELECT screen appears.

```
CATEGORY SELECT
TECHNO SYNTH  (TEK)
```

- On the CATEGORY SELECT screen, turn [VALUE] to choose a category, and then press [VALUE] or [ENTER] to confirm your choice. To find the desired Patch, perform Steps 4 and 5 above.

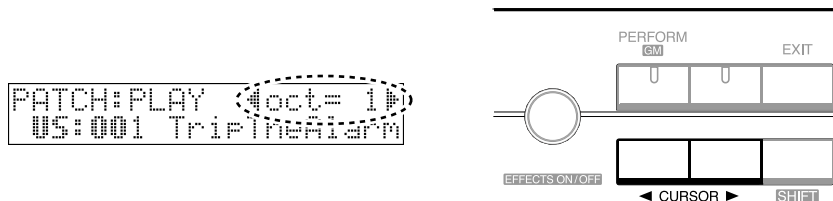
You can select the following categories.

Category Group	Display	Category	Contents
	—	NO ASSIGN	No assign
Piano	PNO	AC.PIANO	Acoustic Piano
	EP	EL.PIANO	Electric Piano
Keys&Organ	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
Guitar	AGT	AC.GUITAR	Acoustic Guitar
	EGT	EL.GUITAR	Electric Guitar
	DGT	DIST.GUITAR	Distortion Guitar
Bass	BS	BASS	Acoustic and Electric Bass
	SBS	SYNTH BASS	Synth Bass
Orchestral	STR	STRINGS	Strings
	ORC	ORCHESTRA	Orchestra Ensemble
	HIT	HIT&STAB	Orchestra Hit, Hit
	WND	WIND	Winds (Oboe, Clarinet, etc.)
	FLT	FLUTE	Flute, Piccolo
Brass	BRS	AC.BRASS	Acoustic Brass
	SBR	SYNTH BRASS	Synth Brass
	SAX	SAX	Sax
Synth	HLD	HARD LEAD	Hard Synth Lead
	SLD	SOFT LEAD	Soft Synth Lead
	TEK	TECHNO SYNTH	Techno Synth
	PLS	PULSATING	Pulsating Synth
	FX	SYNTH FX	Synth FX (Noise, etc.)
	SYN	OTHER SYNTH	Poly Synth
Pad	BPD	BRIGHT PAD	Bright Pad Synth
	SPD	SOFT PAD	Soft Pad Synth
	VOX	VOX	Vox, Choir
Ethnic	PLK	PLUCKED	Plucked (Harp, etc.)
	ETH	ETHNIC	Other Ethnic
	FRT	FRETTED	Fretted Inst (Mandolin, etc.)
Rhythm&SFX	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

Setting a Patch's Pitch in Octave Steps (Octave Shift)

In Patch mode, you can easily change the pitch of an entire Patch.

Each time you press [◀ CURSOR]/[CURSOR ▶], the pitch changes in one-octave steps. You can adjust a Patch's pitch by as much as +/- 3 octaves.



Switching Modes (Patch, Performance, or Rhythm Set)

In addition to Patch mode, the XV-5050 also features three other modes: Performance mode, Rhythm Set mode, and GM2 mode.

PERFORM (Performance Mode)

Choose this mode when using the XV-5050 as a multitimbral sound module or when changing Performance settings.

When you press [PERFORM], its indicator lights, and you enter Performance mode.

PATCH (Patch Mode)

Choose this mode when playing a single Patch from a keyboard or when changing Patch settings.

When you press [PATCH], its indicator lights, and you enter Patch mode.

RHYTHM (Rhythm Set Mode)

Choose this mode when playing Rhythm Sets from a keyboard or when changing Rhythm Set settings. XV-5050 Rhythm Sets can be used in any Part in a Performance. You can also select the desired multi-effects for a Rhythm Set.

When you hold down [SHIFT] and press [PATCH], the [PATCH] indicator blinks, and you enter Rhythm Set mode.

GM (General MIDI 2 Mode)

Choose this mode when using the XV-5050 as a General MIDI 2 compatible sound module.

When you hold down [SHIFT] and press [PERFORM], the [PERFORM] indicator blinks, and you enter General MIDI 2 mode.

General MIDI is a set of recommendations that standardizes the MIDI capabilities of sound modules. Sound modules and music files that adhere to 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 module with essentially the same musical results.

The upwardly compatible General MIDI 2 () recommendations pick up where General MIDI leaves off, offering enhanced expressive capabilities and even greater compatibility.

Playing Sounds

Issues not covered by the original General MIDI standard – such as how sounds are to be edited, and how effects should be handled – are precisely defined in General MIDI 2. Moreover, the available sounds have been expanded. General MIDI 2 compliant sound modules 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.

What is a Performance?

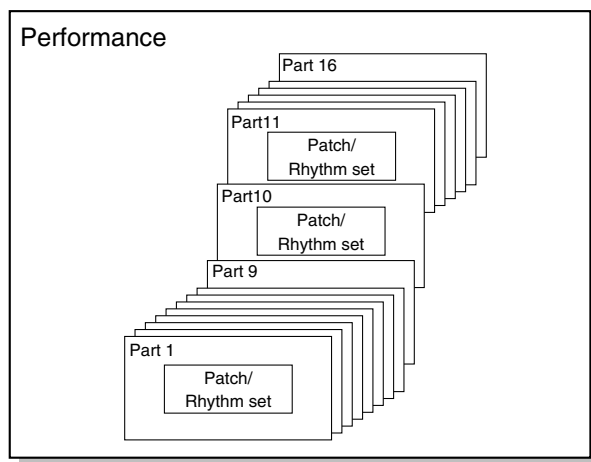
With Performances, you can combine a total of up to sixteen separate Patches and Rhythm Sets to produce complex, rich ensemble textures. In other words, a Performance allows you to produce sixteen separate sounds with a single XV-5050. A sound module that can simultaneously produce multiple sounds – such as the XV-5050 – is called a “multitimbral” sound module.

What is a Rhythm Set?

A Rhythm Set is a group of percussion instrument sounds. Since these sounds are not typically used for performing melodies, it’s not necessary to play them at different pitches across a keyboard. However, it is important to be able to play a number of percussion instruments at the same time. A Rhythm Set lets you play different percussion sounds by pressing different keys on your keyboard.

Playing Multiple Layered Patches (Layer)

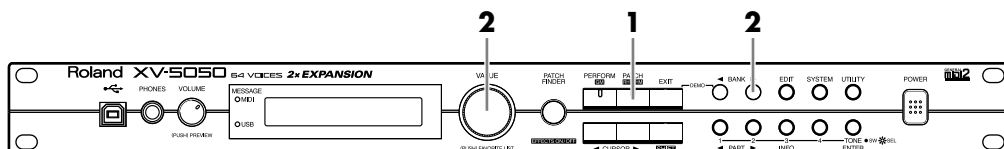
The collected assignment of Patches or Rhythm Sets to the XV-5050's sixteen Parts is referred to as a "Performance."



You can set a number of Parts to the same MIDI reception channel so that their Patches sound at the same time. This type of Performance is referred to as a **Layer**.

Let's try this technique using Performance "PB:001 Dulcimar&Gtr," playing two layered Patches.

Selecting Performance "PB:001 Dulcimar&Gtr"



1. Press [PERFORM] to make its indicator light.
2. Use [BANK ►] and [VALUE] to choose "PB:001 Dulcimar&Gtr."

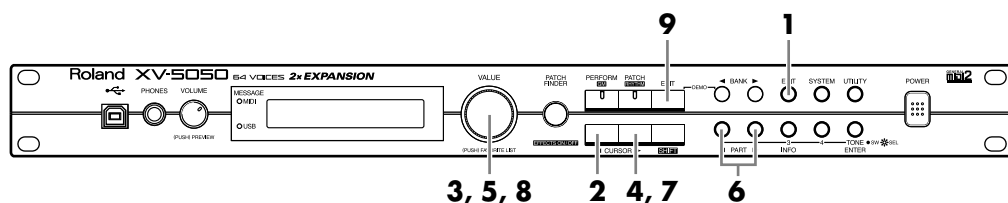
Set the MIDI keyboard send channel to "1," and play the keyboard. Since the Patches for Part 1 and Part 2 are layered, they play together.

Turning a Part On or Off

Let's try turning the Parts used in a Performance on and off.

In Performance PB:001 Dulcimar&Gtr, Parts 1, 2 and 10 are turned on.

Let's try turning Part 2 on and off.



First, make sure Performance "PB:001 Dulcimar&Gtr" is selected.

1. Press [EDIT] to make its indicator light.
2. Press [◀ CURSOR] a few times to move the cursor to the upper line of the display.
3. Turn [VALUE] to choose "MIDI."

```
PERFORM:MIDI      P 1
Rx Channel:       1
```

4. Press [CURSOR ▶] to move the cursor to the lower left of the display.
5. Turn [VALUE] to choose "Rx Switch."
6. Press [◀ PART]/[PART ▶] to choose Part 2.

```
PERFORM:MIDI      P 2
Rx Switch:        ON
```

7. Press [CURSOR ▶] to move the cursor to the lower right of the display.
8. Turn [VALUE] to choose "OFF" or "ON."
9. Press [EXIT] to return to the PERFORM PLAY screen.

Assigning a New Patch to a Part

Here's how to change the Patch assigned to a Part in a Performance.

We'll change the patch assigned to Part 2 of Performance "PA:001 Seq:Template" to "PB:018 Slap Bass 1."

On the PERFORM PLAY screen, choose Performance "PA:001 Seq:Template."

1. Press [PERFORM] and [PATCH] to make their indicators light.

The patch assigned to the current part appears.

```
PART 1:PLAY 4oct= 0#
PB:001 64voicePiano
```

2. Press [◀ PART]/[PART ▶] to choose Part 2.

```
PART 2:PLAY 4oct= 2#
PB:013 Finger Bass
```

3. Turn [VALUE] to choose "018 Slap Bass 1."
4. Press [PERFORM] to return to the PERFORM PLAY screen.

MEMO

Phrase Preview feature is also available in Performance mode. The patch on the current part will sound.

Changing the MIDI Reception Channel of Each Part

On the PERFORM PLAY screen, choose the Performance you wish to use.

1. Press [EDIT] to make its indicator light.
2. Press [◀ CURSOR] a few times to move the cursor to the upper line of the display.
3. Turn [VALUE] to choose "MIDI."
4. Press [CURSOR ▶] to move the cursor to the lower left of the display.
5. Turn [VALUE] to choose "Rx Channel."
6. Press [◀ PART]/[PART ▶] to choose the Part you wish to set.

```
PERFORM:MIDI P 7
Rx Channel: 7
```

7. Press [CURSOR ▶] to move the cursor to the lower right of the display.
8. Turn [VALUE] to choose the desired MIDI channel.
9. Press [EXIT] to return to the PERFORM PLAY screen.

MEMO

You can play multiple Parts — and their Patches — simultaneously by setting them to the same MIDI reception channel.

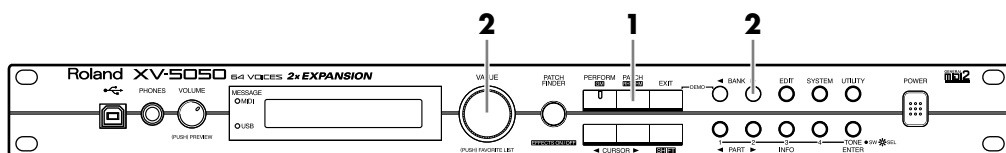
Playing Different Patches In Different Areas of the Keyboard (Split)

In a Performance, you can divide the keyboard into separate ranges and assign a different Patch to each range. This can be done by selecting the same MIDI reception channel for multiple Parts and then changing the pitch range over which each Part plays. This type of keyboard setup is referred to as a **Split**.

A split is like a layer in which the Parts' pitch ranges don't overlap (Playing Multiple Layered Patches).

Let's create a split using Performance "PB:029 Organ/Lead."

Selecting Performance "PB:029 Organ/Lead"



1. Press [PERFORM] to make its indicator light.
2. Use [BANK ►] and [VALUE] to choose "PB:029 Organ/Lead."

Play your MIDI keyboard (MIDI transmit channel = 1).

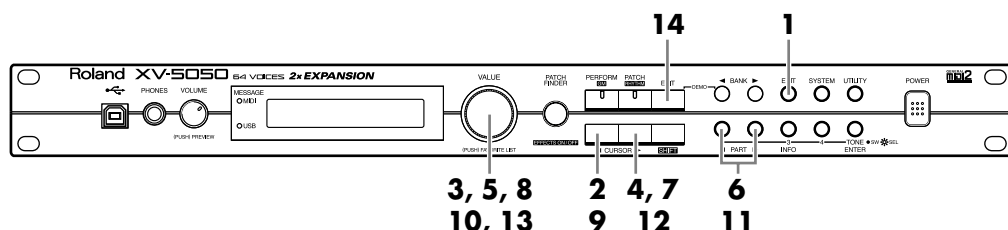
In this Performance, the note range settings for Part 2 and Part 3 are shown below.

Part 2: C4–G9

Part 3: C-1–B3

Setting the Note Range of Each Part

Now let's change the settings so that Part 2 sounds in the C5–G9 range and Part 3 sounds in the C-1–B4 range.



First, make sure Performance “PB:029 Organ/Lead” is chosen.

- 1.** Press [EDIT] to make its indicator light.
- 2.** Press [◀ CURSOR] a few times to move the cursor to the upper line of the display.
- 3.** Turn [VALUE] to choose “COMMON.”
- 4.** Press [CURSOR ▶] to move the cursor to the lower left of the display.
- 5.** Turn [VALUE] to choose “Key Range Lower.”
- 6.** Press [◀ PART]/[PART ▶] to choose Part 2.
- 7.** Press [CURSOR ▶] to move the cursor to the lower right of the display.
- 8.** Turn [VALUE] to choose “C5.”
- 9.** Press [◀ CURSOR] to move the cursor to the lower left of the display.
- 10.** Turn [VALUE] to choose “Key Range Upper.”
- 11.** Press [PART ▶] to choose Part 3.
- 12.** Press [CURSOR ▶] to move the cursor to the lower right of the display.
- 13.** Turn [VALUE] to choose “B4.”
- 14.** Press [EXIT] to return to the PERFORM PLAY screen.

Play your MIDI keyboard and notice how the Part's ranges have changed.

Using an External MIDI Device to Select Patches and Change Other Settings

Selecting Patches and Rhythm Sets

You can change Patches – including the Patches in each Part of a Performance – and Rhythm Sets on the XV-5050 via MIDI Part.

In this example, after setting the send channel for the external MIDI device and the XV-5050's reception channel (Patch Rx Channel) to "1," we'll send a MIDI message from the external MIDI device to select the XV-5050 Patch "PB:018 Slap Bass 1."

MEMO

A Factory Reset sets the reception channel in Patch mode to MIDI Channel 1.

1. Use a MIDI cable to connect the MIDI OUT connector on the external MIDI device to the XV-5050's MIDI IN connector.
2. Press [PATCH] to make its indicator light.
3. Set the channel used for transmission by the external MIDI device and the XV-5050's reception channel to the same MIDI channel (see p. 19).

* A Factory Reset sets the reception channel in Patch mode to MIDI Channel 1.

4. Send a Bank Select MSB (Control Number 0) value of "87" to the XV-5050.

* If you want to select a Rhythm Set, send a value of "86."

5. Next, send a Bank Select LSB (Control Number 32) value of "65."

6. Send a Program Change with a value of "18."

The Patch name appearing in the display changes to "PB:018 Slap Bass 1."

* Each Patch or Rhythm Set has a corresponding Bank Select number and Program number, as shown below.

Patches		Bank Select number		Program number
Bank	Number	MSB	LSB	
US (User)	001–128	87	00	001–128
PA (Preset A)	001–128	87	64	001–128
PB (Preset B)	001–128	87	65	001–128
PC (Preset C)	001–128	87	66	001–128
PD (Preset D)	001–128	87	67	001–128
PE (Preset E)	001–128	87	68	001–128
PF (Preset F)	001–128	87	69	001–128
PG (Preset G)	001–128	87	70	001–128
PH (Preset H)	001–128	87	71	001–128
GM (GM2)	001–256	121	0–	001–128
XA (Expansion A)	001–	93	0–	001–
XB (Expansion B)	001–	93	0–	001–

NOTE

Numbers for XA and XB will be different depending on the Wave Expansion Board you've installed. For more information, refer to the manual for the SRX.

Rhythm Sets		Bank Select number		Program number
Bank	Number	MSB	LSB	
US (User)	001-004	86	00	001-004
PA (Preset A)	001-002	86	64	001-002
PB (Preset B)	001-002	86	65	001-002
PC (Preset C)	001-002	86	66	001-002
PD (Preset D)	001-002	86	67	001-002
PE (Preset E)	001-002	86	68	001-002
PF (Preset F)	001-002	86	69	001-002
PG (Preset G)	001-002	86	70	001-002
PH (Preset H)	001-002	86	71	001-002
GM (GM2)	001-009	120	00	001-057
XA (Expansion A)	001-	92	0-	001-
XB (Expansion B)	001-	92	0-	001-



Numbers for XA and XB will be different depending on the Wave Expansion Board you've installed. For more information, refer to the manual for the SRX.

Selecting Performances

To switch Performances, after matching the send channel for the external MIDI device with the XV-5050's Performance Control channel (Control Channel p. 108), send the Bank Select number and Program Change messages.

Upon execution of Factory Reset, **Performance Ctrl-Ch** is set to "16." Here, set the external MIDI device's send channel to "16," then try switching the Performance to PB:029 Organ/Lead.

1. Use a MIDI cable to connect the MIDI OUT connector on the external MIDI device to the XV-5050's MIDI IN connector.

2. Press the [PERFORM] button, lighting the indicator.

The XV-5050 reverts to Performance mode.

3. Set the external MIDI device's send channel to "16."

For instructions on making this setting, refer to the owner's manual for the external MIDI device.

4. Send a Bank Select MSB (Control Number 0) with a value of "85" to the XV-5050.

5. Next, send a Bank Select LSB (Control Number 32) with a value of "65."

6. Send a Program Change with a value of "29."

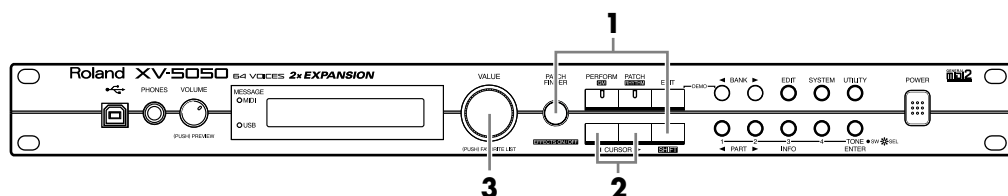
The Performance name appearing in the page changes to PB:029 Organ/Lead.

* Each Performance has a corresponding Bank Select number and Program number, as shown below.

Performances		Bank Select number		Program number
Bank	Number	MSB	LSB	
US (User)	001-064	85	00	001-064
PA (Preset A)	001-032	85	64	001-032
PB (Preset B)	001-032	85	65	001-032

Turning Effects On and Off

You can turn each of the XV-5050's built-in effects processors (multi-effects, chorus, reverb, and equalizer) on or off for the entire XV-5050, regardless of its current mode (Performance, Patch, and Rhythm Set).



1. Hold down [SHIFT] and press [PATCH FINDER] to make its indicator blink.

```
MFx  | Cho | Rev | EQ
ON | ON | ON | ON
```

2. Press [◀ CURSOR]/[CURSOR ▶] to choose the effects processor to be turned on or off.
3. Turn [VALUE] to turn the effect on or off.

MFx (Multi-Effects)

The MFx (Multi-Effects) group offers 90 different effect types. In addition to single effects such as distortion and delay, the XV-5050 also provides a number of multiple effects that combine several single effects. The multi-effects group also includes chorus and reverb effects in addition to the separate chorus and reverb described below.

Chorus

Chorus adds fatness and breadth to the sound.

Reverb

Reverb adds an ambience to sounds so they seem to be playing in an actual physical space.

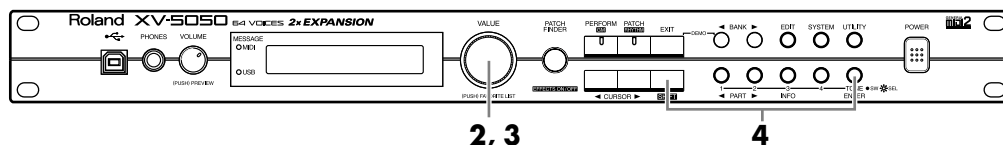
EQ (Equalizer)

Equalizer boosts or cuts specific frequencies within a sound.

Making a List of Your Favorite Patches

Registering a Patch in the FAVORITE LIST

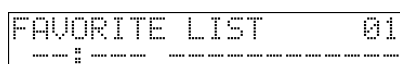
You can bring together your favorite and most frequently used Patches in one place by registering them in the **FAVORITE LIST**. The **FAVORITE LIST** gives you immediate access to your favorite Patches, whether they're in the XV-5050 itself or on Wave Expansion Boards. You can register up to 64 Patches in this list.



1. On the PATCH PLAY screen, choose the Patch you want to register.

2. Press [VALUE].

The FAVORITE LIST screen appears.

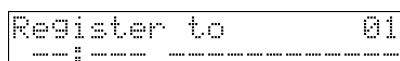


3. Turn [VALUE] to choose the desired registration destination number.

* There is no factory list of favorites.

4. Hold down [SHIFT] and press [ENTER] to execute the registration.

Press [SHIFT] to display the Registration screen shown in the figure below.



* To cancel the registration, press [EXIT].

5. Press [EXIT] to return to the PATCH PLAY screen.

NOTE

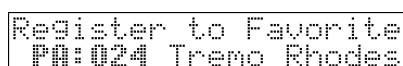
When you choose a favorite Patch on a Wave Expansion Board, no sound is produced for the Patch unless the corresponding Wave Expansion Board is installed.

MEMO

To delete the registration, select the patch you want to delete, and then hold down [SHIFT] and press [EXIT].

Directly registering to the list on the PATCH/RHYTHM PLAY page

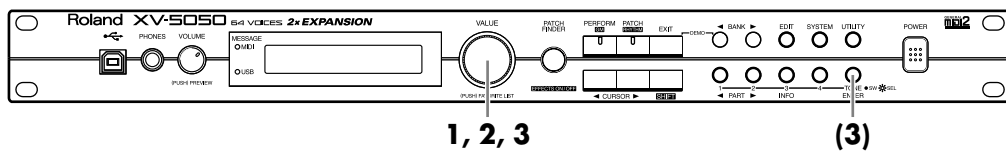
The following display appears when [SHIFT] is pressed while on the PATCH/RHYTHM PLAY page.



If [ENTER] is pressed at this stage, the data is registered to the lowest-numbered opening on the list.

Although the message "COMPLETE" instantly appears in the display when the registration is executed, if the registration cannot be carried out because the list is full, the message "Favorite List Full" is displayed instead.

Selecting a Patch from the FAVORITE LIST



1. On the PATCH PLAY screen, press [VALUE].

The FAVORITE LIST screen appears.

```
FAVORITE LIST    01
PA:125 Power Trip
```

2. Turn [VALUE] to select the desired Patch.
3. Press [VALUE] or [ENTER] to confirm your choice and return to the previous screen.

* To cancel the selection, press [EXIT].

Connecting to a Computer

If you're running music software on your computer, you can use the computer to control the operation of the XV-5050. This allows you to create and play back song data, select sounds on the XV-5050 from the computer, and create new XV-5050 sounds on the computer.

Two Ways to Connect

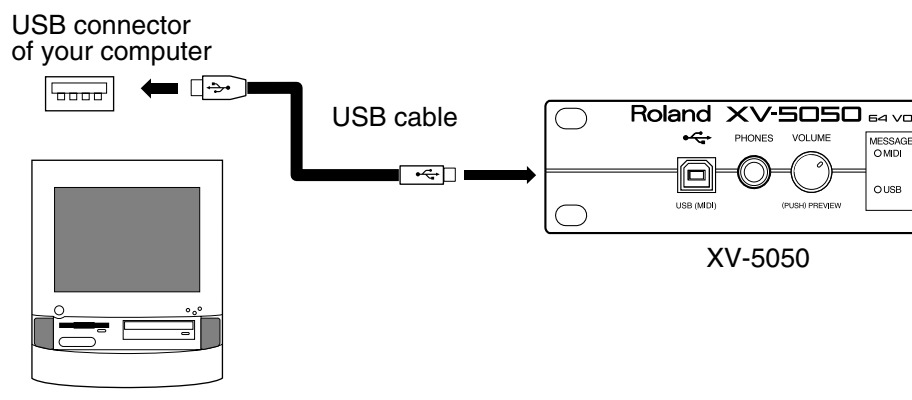
You can connect the XV-5050 to a computer using either of two methods:

connecting it with a USB connector and **connecting it with MIDI connectors**.

A USB cable can connect the XV-5050 to your computer's USB connector.

A MIDI interface is required for making MIDI connections with a computer. The MIDI interface is connected to the computer, and two MIDI cables connect the MIDI connectors of the MIDI interface to the XV-5050's MIDI connectors.

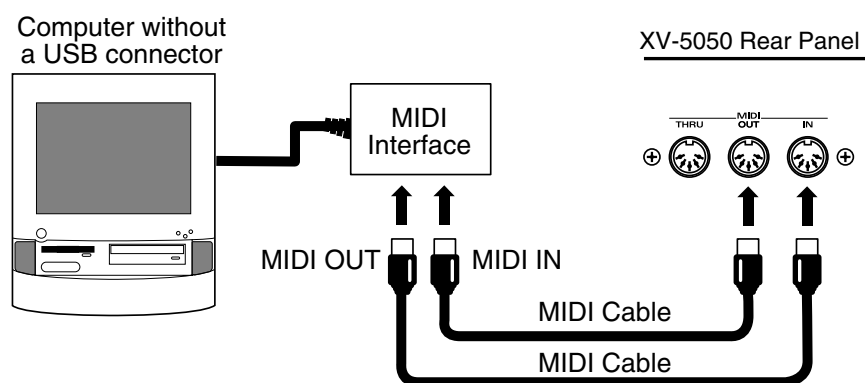
Connecting with USB Connector



MEMO

Once the USB MIDI driver is installed, it's not necessary to turn off the power for your computer or the XV-5050 when using a USB cable to connect your computer to the XV-5050.

Connecting with MIDI Connectors



NOTE

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

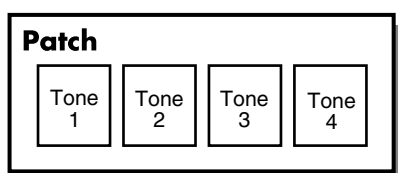
About Patches and Performances

On the XV-5050, sounds are organized according to units called **Tones**, **Patches**, **Rhythm Sets**, and **Performances**. This section describes the relationship between a Patch and a Performance.

What Is a Patch?

The type of sound most commonly played on the XV-5050 is called a **Patch**. A Patch is a combination of **Tones**, which are the smallest units of sound. Each Patch can contain up to four Tones. If we use the analogy of an orchestra, then Patches are the musical instruments of the performers.

* For information on Tones, see p. 38.

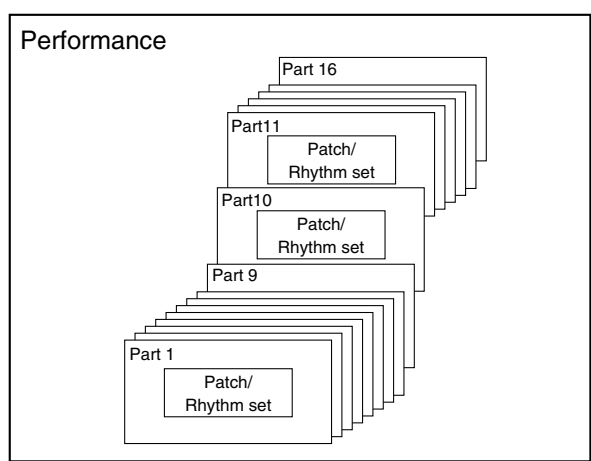


* You can turn the Tones in a Patch on or off. Only Tones that are turned on are heard when you play the Patch (p. 39).

What Is a Performance?

It may be easiest to think of a **Performance** as being the orchestra itself.

To continue the orchestra analogy, a Performance is made up of the parts assigned to the respective instruments (called, naturally enough, "Parts"). You can enjoy ensemble play by combining a total of 16 Patches or Rhythm Sets into one such Part.



In other words, a Performance allows you to produce sixteen separate sounds with a single XV-5050.

If You're Playing Back Song Data Using an External MIDI Instrument or Sequencing Program

On the XV-5050, press [PERFORM] so its indicator lights, change to the Performance mode, then start playback of the song data.

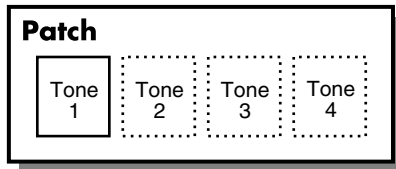
* The Patch mode is selected by default. Please be aware that if you try to play song data while in the Patch mode, only the sound of one Part is played.

Advanced Use

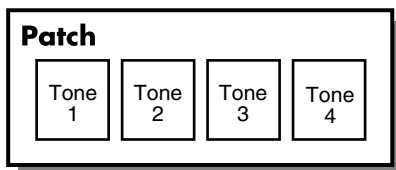
Chapter 1 Creating a Patch

How a Patch Is Organized

The type of sound most commonly played on the XV-5050 is called a **Patch**. Each Patch can contain up to four Tones.



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



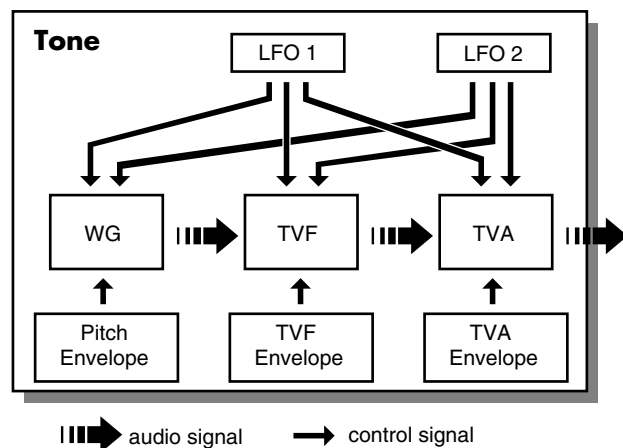
Example 2: A Patch consisting of four Tones.

You can turn the Tones in a Patch on or off. Only Tones that are turned on are heard when you play the Patch. (p. 39)

You can also set the structure of a Patch to specify how Tones 1 and 2 and Tones 3 and 4 are combined. (p. 41)

How a Tone Is Organized

Tones are the smallest programmable unit of sound on the XV-5050, and are the basic building blocks that make up a Patch. You can't play a Tone by itself—it can only be played as part of a Patch or Rhythm Set. A Tone consists of the following five components.



WG (Wave Generator)

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

The XV-5050 has 1083 different waveforms. (See Waveform List p. 138.)

All Patches built into the XV-5050 consist of combinations of Tones based on these waveforms.

TVF (Time Variant Filter)

This specifies how the frequency components of the Tone change.

TVA (Time Variant Amplifier)

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

Envelope

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

LFO (Low Frequency Oscillator)

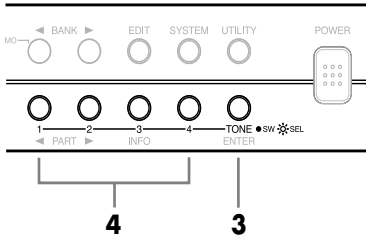
Use the LFO to create cyclical changes—or cyclical “modulation”—in a Tone. Each Tone has two LFOs. An LFO can be applied to the Tone's pitch settings, TVF (filter), and TVA (volume). When an LFO is applied to pitch, a vibrato effect is produced. When an LFO is applied to the TVF cutoff frequency, a wah-wah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

Tips for Creating a Patch

- Choose a Patch that's similar to the sound you wish to create.
When you want to create a new sound, it's a good idea to begin with a Patch that's close to the sound that you have in mind. Starting with a Patch that bears no resemblance to the one you want to create is likely to result in much more programming work for you. (**Choosing a Patch** (p. 21))
- Decide which Tones will sound
When creating a Patch, it's important to decide which Tones you want to use. It's also important to turn off unused Tones to avoid wasting voices, unnecessarily reducing the number of simultaneous notes you can play. (See “Choosing the Tones That Sound” (p. 39).)
- Check the way in which the Tones are combined
Structure Type 1&2 and 3&4 are important parameters that determine how the four Tones are combined. Before you select new Tones, make sure you understand how the currently selected Tones are affecting each other. (p. 41)
- Turn off effects
Since the XV-5050 effects have such a profound impact on its sounds, turn off a Patch's effects during programming so you can more clearly hear the changes you're making. Actually, sometimes just changing effects settings can give you the sound you want. (p. 70)

Choosing the Tones That Sound (Tone On/Off)

Here's how to turn on the Tones that you want to hear in a Patch. You can also use the on/off technique described in this section to audition an individual Tone by turning off all the other Tones in a Patch.

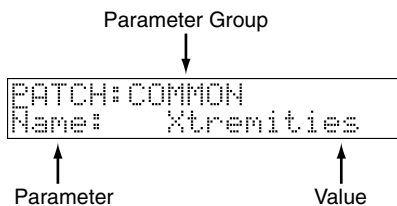


1. Make sure that the PATCH PLAY screen is displayed.
2. Choose the Patch you wish to use.
3. If [TONE]'s indicator lights, press [TONE] to make its indicator dark.
4. Press TONE SW [1]–[4] to turn the corresponding Tone on so that its indicator lights, or off so that its indicator goes dark.

Settings Common to the Entire Patch (COMMON)

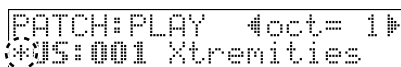
How to adjust a Patch setting, or "parameter":

1. Choose the Patch you wish to use.
2. Press [EDIT] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the parameter group at the upper line of the display.



4. Turn [VALUE] to choose "COMMON."
5. Press [CURSOR ▶] to move the cursor to the parameter.
6. Turn [VALUE] to choose the parameter you want to set.
7. Press [CURSOR ▶] to move the cursor to the value.
8. Turn [VALUE] to choose the desired value.
9. Press [EXIT] to return to the PATCH PLAY screen.

A "*" symbol appears at the left of the Patch name, indicating that its settings have been changed.

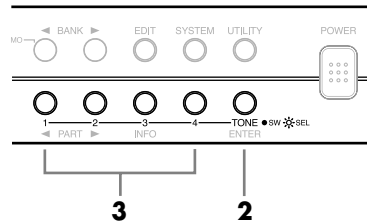


NOTE

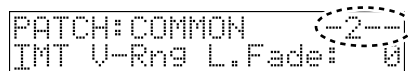
If you turn off the power or choose another Patch while the "*" symbol is displayed, your new Patch settings will be lost. If you wish to preserve them, save the changed Patch using the Write operation. (p. 104)

Selecting a Tone for Editing (Tone Select)

Some parameters can be set independently for each Tone in a Patch.



1. Make sure that the PATCH EDIT screen is displayed.
 2. Press [TONE] to make its indicator light.
 3. Press TONE SW [1]–[4] to choose the Tone you wish to set up.
- Its indicator lights, and the chosen Tone's number appears in the upper right of the display.



Chapter 1 Creating a Patch

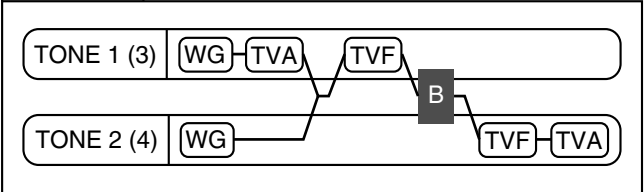
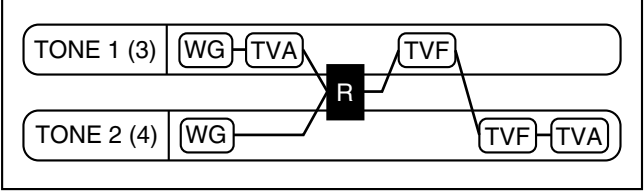
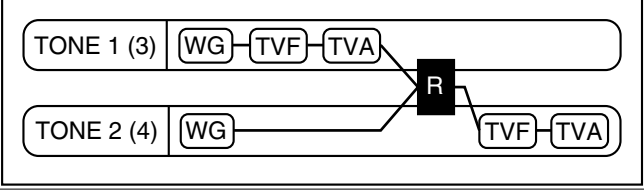
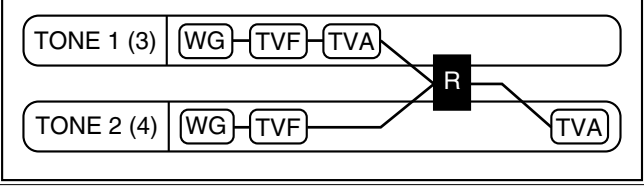
Settings Common to the Entire Patch

* Parameters that can be set independently for each Tone are indicated by T."

Parameter		Value	Description
Name	Patch Name	space, A–Z, a–z, 0–9, ! " # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ` { }	You can give a Patch a name of up to 12 characters. Use [◀ CURSOR]/[CURSOR ▶] to move the cursor to a character position, and then turn [VALUE] to choose the desired character.
Category	Patch Category	(Refer to p. 22)	Specifies the type, or "category" of the Patch. The Patch Finder uses this setting.
Level	Patch Level	0–127	Specifies the volume of the Patch. * You can specify the level of each Tone in a Patch using the Tone Level parameter (TVA p. 48).
Pan	Patch Pan	L64–63R	Sets the stereo position of the Patch. L64 pans the Patch all the way to the left, 0 is center and 63R pans it hard right. * You can specify the pan setting for each Tone in a Patch using the Tone Pan parameter (TVA p. 48). * While each Tone in a Patch has its own Pan position, the Patch pan setting shifts the entire Patch—including all of its Tones—leftward or rightward.
Analog Feel	Analog Feel Depth	0–127	Specifies the depth of Analog Feel that is applied to the Patch. Traditional analog synthesizers often exhibited a degree of instability in their tuning. The XV-5050's Analog Feel feature can simulate this characteristic.
Octave Shift		-3+3	Sets the pitch of the Patch in units of an octave. * This setting can also be adjusted from the PATCH PLAY screen. (p. 23)
Coarse Tune		-48+48	Adjusts the pitch of all of the Patch's Tones simultaneously in semitone steps over a range of +/-4 octaves.
Fine Tune		-50+50	Adjusts the pitch of all of the Patch's Tones simultaneously in 1-cent steps (1/100th of a semitone) over a range of 1/2 semitones up or down.
Stretch Tune	Stretch Tune Depth	OFF, 1, 2, 3	This setting allows you to apply "stretch tuning" to the Patch. Acoustic pianos typically use stretch tuning, with their lower range slightly flatter and their higher range slightly sharper than the actual mathematical tuning ratios dictate. Stretch is therefore useful when programming a Patch intended to sound like a real piano. With a setting of OFF, the Patch's tuning is equal temperament. A setting of 3 produces the greatest difference in the pitch of the low and high ranges. This diagram shows the pitch change relative to equal temperament that occurs in the low and high ranges. Stretch has a subtle effect on the way in which chords resonate. Pitch difference from equal temperament Parameter value 3 2 1 OFF OFF 1 2 3 Low note range High note range
Priority	Voice Priority	LAST, LOUDEST	Determines how notes are managed when the XV-5050's maximum polyphony limit is exceeded (64 voices). LAST: Gives priority to the last-played voices. Currently-sounding notes are turned off in order, beginning with the first-played note. LOUDEST: Gives priority to the voices with the loudest volume. Currently-sounding notes are turned off beginning with the lowest-volume voice.
Output Asgn	Output Assign	MFx, OUTPUT A/B, INDIV 1–4, TONE	Specifies the output destination for the Patch. MFx: Sends the Patch into the Multi-Effects. The output destination is determined by the Multi-Effects output setting. OUTPUT A/B: Sends the Patch to the selected pair of OUTPUTs, A or B. INDIV 1–4: Sends the Patch to the selected INDIVIDUAL output jack, 1–4. TONE: Sends each Tone in the Patch to its programmed output destination.
Clock Source	Patch Clock Source	PATCH, SYSTEM	Selects the timing reference to be used by the Patch. The LFO cycle, M-Fx changes, phrase loop (break beats), and Tone delay time can be synchronized to a clock, or tempo. PATCH: Uses the Patch Tempo. SYSTEM: Uses the global System Tempo or clock messages received from an external sequencer.
Tempo	Patch Tempo	20–250	Establishes the Patch's tempo when Clock Source is set to "PATCH." * Clock messages for the Patch Tempo are not transmitted from the MIDI OUT connector.
Cutoff Freq	Cutoff Offset	-63+63	Simultaneously lowers or raises the individual TVF cutoff frequency values of the Tones in the Patch.
Resonance	Resonance Offset	-63+63	Simultaneously lowers or raises the individual TVF Resonance values of the Tones in the Patch.

Parameter		Value	Description	
Attack	Attack Time Offset	-63+63	Simultaneously lowers or raises the individual TVA ENVELOPE T1 values of the Tones in the Patch.	
Release	Release Time Offset	-63+63	Simultaneously lowers or raises the individual TVA ENVELOPE T4 values of the Tones in the Patch.	
Velocity Sens		-63+63	Simultaneously lowers or raises the individual TVF VELOCITY V-Cutoff and TVA V-Sens values of the Tones in the Patch.	
TMT With the XV-5050, you can set each Tone's expression range, or "key range." You can also change the way the Tone responds to the force, or "velocity," with which a key is pressed. These settings are collectively referred to as the TMT (Tone Mix Table) .				
TMT Vel Control	TMT Velocity Control	OFF, ON, RND	Determines whether Velocity messages from a MIDI keyboard or sequencer are recognized (ON), or ignored (OFF). When set to RND, the Patch's constituent Tones sound randomly, regardless of any Velocity messages.	
TMT V-Rng L.Fade	TMT Velocity Fade Width Lower	0-127	Determines what happens to the Tone's level when the Tone is played at a velocity lower than its specified velocity range. Higher settings result in a more gradual change in volume. If you don't want notes played below the specified velocity range to be heard at all, set this to 0.	T
TMT V-Rng Lower	TMT Velocity Range Lower	1-UPPER	Sets the lowest velocity at which the Tone sounds.	T
TMT V-Rng Upper	TMT Velocity Range Upper	LOWER-127	Sets the highest velocity at which the Tone sounds. * It is not possible to set the Lower value higher than the Upper value, or the Upper value below the Lower value.	T
TMT V-Rng U.Fade	TMT Velocity Fade Width Upper	0-127	Determines what happens to the Tone's level when the Tone is played at a velocity greater than its specified velocity range. Higher settings result in a more gradual change in volume. If you don't want notes played above the specified velocity range to be heard at all, set this to 0.	T
TMT K-Rng L.Fade	TMT Key Fade Width Lower	0-127	Determines what happens to the Tone's level when a note that's lower than the Tone's specified keyboard range is played. Higher settings result in 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.	T
TMT K-Rng Lower	TMT Key Range Lower	C-1-UPPER	Specifies the lowest note that causes the Tone to sound.	T
TMT K-Rng Upper	TMT Key Range Upper	LOWER-G9	Specifies the highest note that causes the Tone to sound. * The Lower value cannot be set to a value greater than Upper value, or vice versa.	T
TMT K-Rng U.Fade	TMT Key Fade Width Upper	0-127	Determines what happens to the Tone's level when a note that's higher than the Tone's specified keyboard range is played. Higher settings result in a more gradual change in volume. If you don't want the Tone to sound at all when a note above the keyboard range is played, set this parameter to 0.	T
Struct Type1&2, 3&4	Structure Type 1&2, 3&4	1-10	Determines how Tone 1 and 2, and Tone 3 and 4 are connected. If you press [CURSOR ►] while selecting the Structure, the display will graphically show the selected Structure. (To return to the previous screen, press [◀ CURSOR].) The displayed symbols have the following meanings. W: WG, F: TVF, A: TVA, B: Booster, R: Ring Modulator	
TYPE 1 		TYPE 2 		

Chapter 1 Creating a Patch

Parameter	Value	Description
TYPE 3		TYPE 4
TYPE 5		TYPE 6
TYPE 7		TYPE 8
TYPE 9		TYPE 10
Booster1&2, 3&4	Booster Gain 1&2, 3&4	0, +6, +12, +18 dB
		* If Type 2–10 is selected, turning off one Tone will cause the other Tone to be connected in the simple order of WG/TVF/TVA.
		Sets the Booster strength when Struct Type has been set to 3 or 4.

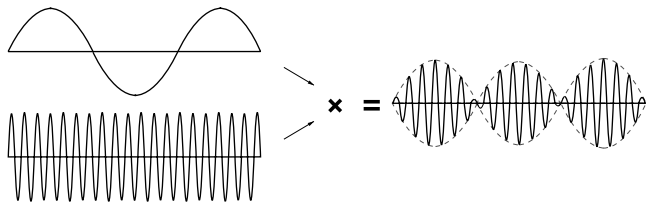
What is a Booster?

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

What is a Ring Modulator?

A Ring Modulator mathematically multiplies two Tones, creating a new sound that includes inharmonic overtones that were not present in either of the two original Tones.

Since the difference in pitch between the two Tones changes the overtone structure, an un-pitched “metallic” sound often results. Ring modulation is therefore especially suitable for creating bells and other metallic sounds.



More Advanced Editing of Tones

You can edit the Tones in a Patch with a tremendous degree of detail. Editable parameters are separated into parameter groups as follows.

EFFECTS

Adjusting Effect Settings (p. 70)

CONTROL

Using Controllers to Change How Sounds Are Played (p. 51)

WAVE

Selecting a Waveform (p. 44)

LFO

Applying Vibrato or Tremolo (p. 50)

PITCH

Changing Pitch (p. 45)

TVF

Changing the Brightness with a Filter (p. 46)

TVA

Changing the Volume (p. 48)

The following shows the basic procedure for setting parameter values. For a description of each parameter, refer to the reference page given in the above.

1. Choose the Patch you wish to set up.
2. Press [EDIT] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the parameter group in the upper line of the display.
4. Turn [VALUE] to choose the parameter group containing the parameter you wish to set up.
5. Press [TONE] to make its indicator light.
6. Press TONE SW [1]–[4] to choose the Tone you wish to set up.
Its indicator lights, and the chosen Tone's number appears in the upper right of the display.
7. Press [CURSOR ▶] to move the cursor to the parameter name in the lower-left corner of the screen.
8. Turn [VALUE] to choose the parameter you wish to set.
9. Press [CURSOR ▶] to move the cursor to the selected parameter's value.
10. Turn [VALUE] to choose the desired value.
11. Repeat Steps 3-10 to finish setting up the Patch.
12. Press [EXIT] to return to the PATCH PLAY screen.

A "*" symbol appears at the left of the Patch name, indicating that its settings have been changed.

```
PATCH:PLAY 4oct= 1▶
*05:001 Xtremities
```

NOTE

If you turn off the power or choose another Patch while the "*" symbol is displayed, your new Patch settings will be lost. If you wish to preserve them, save the changed Patch using the Write operation. (p. 104)

Tips for Choosing a Waveform

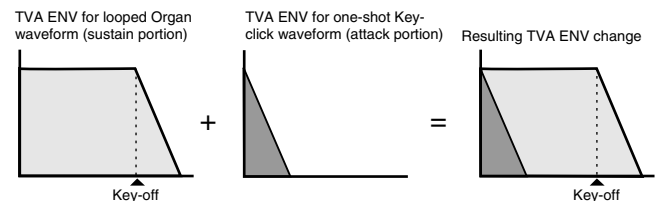
Because the XV-5050 is designed to create highly realistic sounds, the success of the editing process depends to a large degree on the PCM waveforms upon which Tones are based. Therefore, if you try to create a sound that's totally different from the waveform(s) you're working with, the desired result may be difficult or impossible to achieve.

The XV-5050's internal waveforms 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 its sound. Some of the XV-5050's one-shot waveforms are sounds that are complete in themselves, such as percussive instrument sounds. The XV-5050 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. With looped waveforms, the latter part of the sound plays over and over for as long as the note is held, allowing wave memory to be used more efficiently. The XV-5050's looped waveforms also include components of other sounds, such as piano-string resonant vibrations and the hollow overtones of brass instruments.

The following diagram shows an example of a sound—an electric organ—that combines one-shot and looped waveforms.

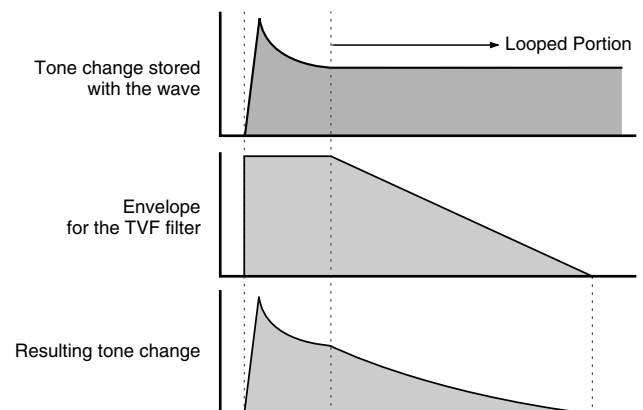


Notes for editing one-shot waveforms

You cannot give a one-shot waveform a longer decay—or make it into a sustaining sound—by using an envelope. 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.

Notes for editing looped waveforms

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. The XV-5050 provides a variety of waveforms containing realistic acoustic instrument attacks. To obtain the maximum realism when using these waveforms, it's best to leave the filter wide-open during the attack so that all of these important timbral changes are heard. If you use an envelope to modify the attack portion, you may not achieve the result you want. Use enveloping to produce the desired changes in the decay portion of the sound.

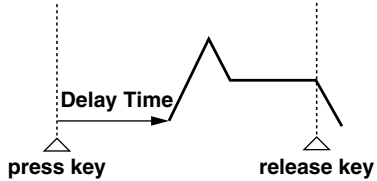
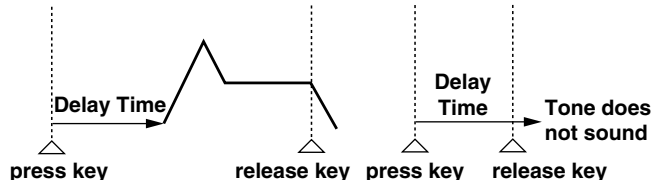
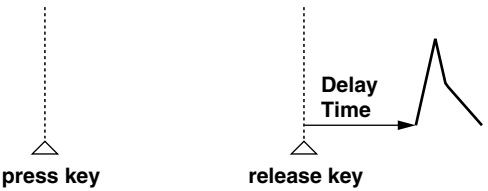
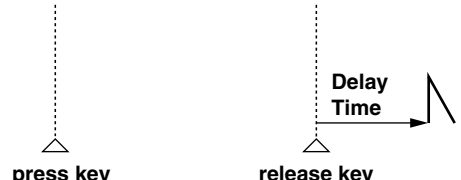


If you try to make a waveform's attack seem brighter by lowering the high-frequency content of its decay using the TVF filter, consider the original timbral character of the waveform. If you're making a part of the sound brighter than the original waveform, you should first generate new upper harmonics not present in the original waveform by using the FXM Color and FXM Depth parameters before filtering. This will help you achieve the desired result. To make an entire waveform brighter, try applying an effect such as an enhancer and equalizer before modifying the TVF parameter.

Chapter 1 Creating a Patch

Changing a Waveform (WAVE)

This set of parameters allows you to select the PCM waveform that serves as the basis for the currently selected Tone, apply effects to the waveform, and control its pitch.

Parameter	Value	Description
WAVE		
Group	Wave Group	INT, XP-A, XP-B Chooses the desired waveform's group. INT: Internal XP-A, B: Wave Expansion Boards A, B * It's not possible to select XP-A, B unless a wave expansion board is inserted into the corresponding slot.
L	Wave Number Left	0001–1083 Chooses the desired waveform. You can choose a separate waveform for the XV-5050's left and right channels.
R	Wave Number Right	
Gain	Wave Gain	-6, 0, +6, +12 dB Specifies the gain (or amplitude) of the waveform. 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 highest value.
Switch	TMT Tone Switch	OFF, ON Determines whether or not the Tone will be heard in the Patch. In order to make best use of the available number of simultaneous voices, unused Tones should be turned off. * When TONE SW [1]–[4] are turned on or off, this setting is automatically changed.
Tempo Sync	Wave Tempo Sync	OFF, ON Determines whether the waveform is synchronized (ON) or not synchronized (OFF) to the Patch's tempo.
FXM FXM (Frequency Cross Modulation) uses a specified waveform to apply frequency modulation to the currently selected waveform, creating complex overtones. This can be useful when creating wilder sounds or sound effects.		
FXM Switch	Wave FXM Switch	OFF, ON Sets whether FXM will be used (ON) or not (OFF).
FXM Color	Wave FXM Color	1–4 Specifies how FXM will perform its frequency modulation. Higher settings result in a grainier sound, while lower settings result in a more metallic sound.
FXM Depth	Wave FXM Depth	0–16 Specifies the depth of the modulation produced by FXM.
Tone Delay This produces a time delay between the moment a key is pressed (or released) and the moment the Tone actually begins to sound. Since you can adjust the timing of each Tone in a Patch, you can create effects in which pressing a single key produces two or more sounds occurring at different times. If you don't wish to use Tone Delay, set Tone Dly to NORMAL and Tone Delay Time to 0.		
Tone Dly	Tone Delay Mode	NORMAL, HOLD, KEY-OFF-NOR, KEY-OFF-DCY Sets the manner in which the Tone sounds. * If you've selected a Wave that is a decay-type sound (i.e., a sound that fades away naturally even if the key is not released), selecting KEY-OFF-NOR or KEY-OFF-DCY may result in no sound being heard.
	NORMAL: The Tone sounds after the specified Delay Time. 	
	HOLD: The Tone will only sound if the key is held for longer than the specified Delay Time. If the key is released before the Delay Time has elapsed, the Tone will not sound. 	
	KEY-OFF-NOR: The Tone doesn't sound while the key is being pressed, but sounds after the specified Delay Time when the key is released. 	
	KEY-OFF-DCY: The Tone doesn't sound while the key is being pressed, but sounds after the specified Delay Time when the key is released. However, for this setting—unlike KEY-OFF-NOR—the TVA envelope of the Tone begins when the key is first pressed. As a result, in most cases, only the decay portion of the sound is heard. 	
Tone Delay Time		0–127, note *1 Specifies the time after which the Tone sounds when using Tone Delay. When the Struct Type parameter has a setting of 2–10, the outputs of Tones 1 (3) and 2 (4) are combined with Tone 2 (4). Tone 1 (or 3) settings are ignored.

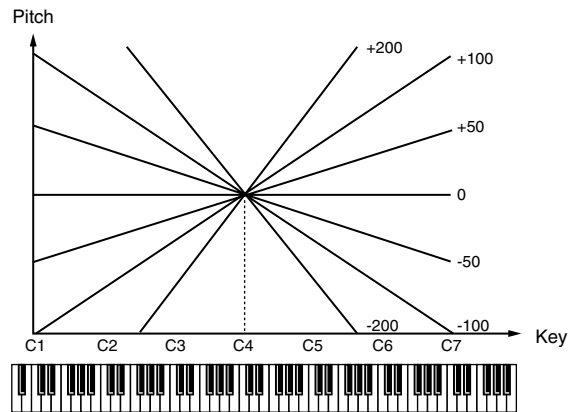
*1:

♩_3 (Sixty-four-note triplet), ♩ (Sixty-four note), ♩_3 (Thirty-second-note triplet), ♩ (Thirty-second note), ♩_3 (Sixteenth-note triplet), ♩ (Dotted thirty-second note), ♩ (Sixteenth note), ♩_3 (Eighth-note triplet), ♩ (Dotted sixteenth note), ♩ (Eighth note), ♩_3 (Quarter-note triplet), ♩ (Dotted eighth note), ♩ (Quarter note), ♩_3 (Half-note triplet), ♩ (Dotted quarter note), ♩ (Half note), ♩_3 (Whole-note triplet), ♩ (Dotted half note), ♩ (Whole note), ♩_3 (Double-note triplet), ♩ (Dotted whole note), ♩ (Double note)

Changing Pitch (PITCH)

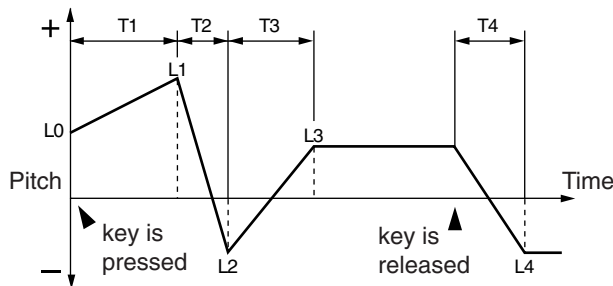
These settings allow you to set the currently selected Tone's pitch.

Parameter	Value	Description
PITCH These parameters set the basic pitch of each Tone.		
Coarse Tune	Tone Coarse Tune	-48—+48 Adjusts the pitch of the Tone in semitone steps over a range of +/-4 octaves.
Fine Tune	Tone Fine Tune	-50—+50 Adjusts the pitch of the Tone in 1-cent steps (1/100th of a semitone) over a range of half a semitone up or down.
Random Pitch	Tone Random Pitch Depth	0—1200 Specifies the width of random pitch deviation that occurs each time a key is pressed. If you don't want a random pitch change, set this parameter to 0. The setting is adjustable in units of 1 cent (1/100th of a semitone).
Keyfollow	Wave Pitch Keyfollow	-200—+200 Sets the amount of pitch change that occurs per octave on the keyboard. If you want the pitch to change by one octave for each 12 keys on the keyboard—as on traditional keyboard instruments—set this parameter to +100. For a two-octave pitch change over the span of 12 keys, set this parameter to +200. Negative (-) values cause the Tone's pitch to go down as you go up the keyboard. If you want the same pitch to sound regardless of what key is pressed, set this parameter to 0.

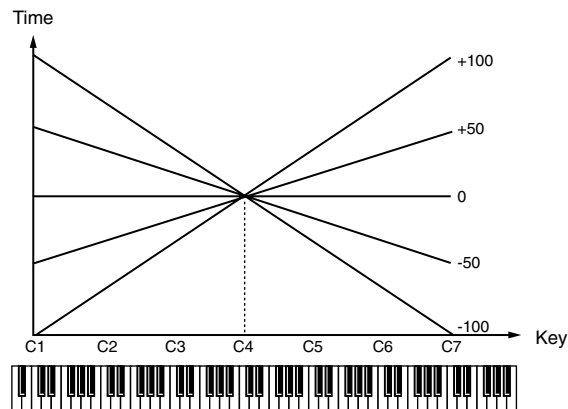


PITCH ENVELOPE

These parameters determine the amount of pitch enveloping—changes to your basic pitch settings that occur over time—the effect of velocity on the pitch envelope, and the basic characteristics of the pitch envelope itself.



Envelope Depth	Pitch Envelope Depth	-12—+12	Determines the amount of pitch enveloping to be used—higher settings result in more extreme enveloping. Negative (-) settings invert the direction of the changes made by the Pitch Envelope.
Envelope V-Sens	Pitch Envelope Velocity Sensitivity	-63—+63	Adjust this parameter when you want your keyboard playing dynamics (velocity) to affect the amount of pitch enveloping. With higher settings, there is a greater difference in the amount of enveloping when notes are played softly or when they're played hard. Negative (-) settings reverse the direction of change.
Env Time Keyfl	Pitch Envelope Time Keyfollow	-100—+100	Use this parameter when you want the keyboard location of notes to affect times T2–T4 of the pitch envelope. Higher values for this parameter cause more extreme changes to the T2–T4 settings as you play further away from Middle C (C4)—at Middle C itself, your original T2–T4 settings are in effect. Positive (+) settings cause the times to be shortened for notes above Middle C. Negative (-) settings cause the times to be lengthened for notes above Middle C.



Chapter 1 Creating a Patch

Parameter		Value	Description
Envelope V-T1	Pitch Envelope Time 1 Velocity Sensitivity	-63+63	Use this parameter when you want keyboard playing dynamics to affect T1 (Time 1) of the pitch envelope. If you want T1 to be sped 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.
Envelope V-T4	Pitch Envelope Time 4 Velocity Sensitivity	-63+63	Use this parameter when you want key release speed to affect T4 (Time 4) of the pitch envelope. If you want T4 to be sped 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.
Envelope L0-L4	Pitch Envelope Level 0-4	-63+63	Specify the pitch envelope levels. They determine how much the pitch changes from the reference pitch (the value set with Coarse Tune and Fine Tune) at each point. Positive (+) settings cause the pitch to be higher than the standard pitch, and negative (-) settings cause it to be lower.
Envelope T1-T4	Pitch Envelope Time 1-4	0-127	Specify the pitch envelope times. Higher settings lengthen the time until the next pitch is reached. (For example, T2 is the time over which the pitch changes from L1 to L2.)

Changing the Brightness with a Filter (TVF)

The settings for the TVF (Time Variant Filter) allow you to change a Tone's timbral content by altering its brightness or thickness.

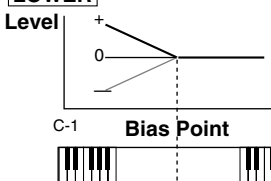
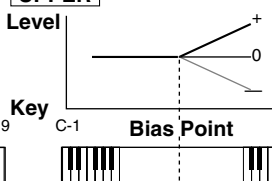
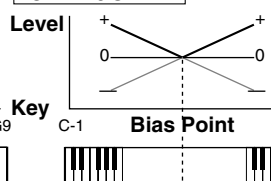
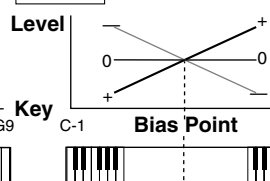
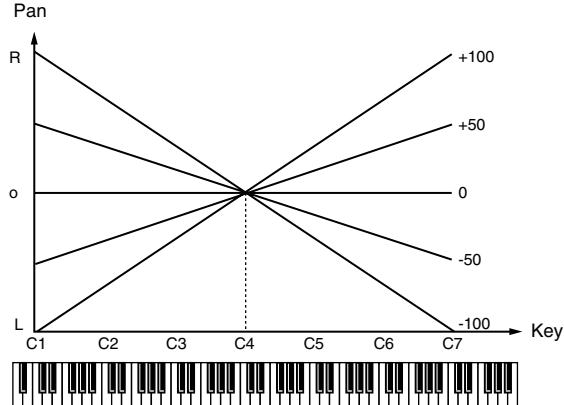
Parameter	Value	Description
TVF		
Filter Type	OFF, LPF, BPF, HPF, PKG, LPF2, LPF3	Selects a filter type. A filter typically reduces, or attenuates, a specific frequency range within a Tone in order to accentuate its other frequencies. OFF: No filter is used. LPF: A Low Pass Filter reduces the volume of frequencies above the cutoff frequency in order to un-brighten the sound. This is the most common filter used in synthesizers. BPF: A Band Pass Filter reduces the volume of frequencies below and above the cutoff frequency range. This is most effective when creating sounds with a strong character since it can accentuate a desired range of frequencies anywhere in the sound. HPF: A High Pass Filter reduces the volume of the frequencies below the cutoff frequency. This is suitable for creating percussive sounds by rolling off their lower frequencies, thus emphasizing their higher ones. PKG: A Peaking Filter emphasizes frequencies around the cutoff frequency by raising their level. You can use this to create wah-wah effects by employing an LFO to change the cutoff frequency cyclically. LPF2: Low Pass Filter 2. This reduces the volume of all frequencies above the cutoff frequency. This differs from LPF in that you can control the amount of the reduction using the TVF ENVELOPE settings while still maintaining a fixed cutoff frequency. This can be very effective with acoustic-instrument-based Tones, since nothing is done to weaken the power and energy of the sound. * This disables the Resonance setting. LPF3: Low Pass Filter 3 reduces the volume of frequencies above the cutoff frequency. While similar to LPF2, it reduces the frequencies more gently than LPF2. This can also be effective with acoustic-instrument-based Tones. * This disables the Resonance setting.
Cutoff Frequency	0-127	Adjusts the frequency at which the filter begins to have an effect on the waveform's frequency components. 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. When Filter Type is BPF, the cutoff frequency setting determines the range of frequencies within the Tone that will be heard. This can be useful when creating sounds that need to stand out. When Filter Type is HPF, higher settings of the cutoff frequency decrease the level of the Tone's low frequencies, preserving its brighter qualities. When Filter Type is PKG, the cutoff frequency setting determines the range of frequencies to be emphasized.
Resonance	0-127	Increases the level of the cutoff frequency itself to add a popular classic synth character to the sound. Excessively high settings can produce oscillation, causing the sound to distort.

Parameter		Value	Description
Cutoff Keyfollow	Cutoff Keyfollow	-200—+200	Use this parameter if you want the cutoff frequency to change according to the key that's pressed. At Middle C (C4), the original Cutoff value is used. Positive (+) settings cause the cutoff frequency to rise for notes higher than Middle C, and negative (-) settings cause the cutoff frequency to fall for notes higher than Middle C. Higher settings produce greater amounts of change to the original Cutoff setting. Cutoff frequency (Octave)
TVF VELOCITY This sets the amount of change to the original cutoff frequency produced in response to differences in velocity, as well as the velocity response curve and velocity's effect on Resonance.			
Cutoff V-Sens	Cutoff Frequency Velocity Sensitivity	-63—+63	Sets the amount of change to the Cutoff setting to be applied as a result of changes in playing velocity. With higher settings, there is a greater amount of change between softly and strongly played notes. Negative (-) settings reverse the direction of change.
Cutoff V-Curve	Cutoff Frequency Velocity Curve	FIXED, 1-7	Chooses one of seven curves that determine how keyboard playing dynamics (velocity) influence the Tone's cutoff frequency. When V-Curve is set to "FIXED," the cutoff frequency remains unchanged regardless of how hard or soft the keys are played.
Resonance V-Sens	TVF resonance velocity sensitivity	-63— +63	Use this parameter when you want velocity to affect the amount of Resonance. With higher settings, there is a greater difference in the amount of Resonance between softly and strongly played notes. Negative (-) values reverse the direction of the change.
TVF ENVELOPE 			
Envelope Depth	TVF envelope depth	-63— +63	This adjusts the amount of filter enveloping. Higher settings produce more change. Negative (-) values invert the effect of the TVF envelope.
Envelope V-Sens	TVF envelope velocity sensitivity	-63— +63	Use this parameter when you want keyboard playing dynamics (velocity) to affect the depth of the TVF Envelope. With higher settings, there is a greater difference in the TVF envelope depth when you play softly or hard. Negative (-) settings reverse the direction of change.
Envelope V-Crv	TVF envelope velocity curve	FIXED, 1-7	This selects one of seven velocity curves that determine how velocity will affect the depth of the TVF Envelope. When set to "FIXED," the TVF envelope depth remains unchanged, regardless of how hard or soft you play.
Env Time Keyfl	TVF Envelope Time Keyfollow	-100—+100	Use this parameter when you want a note's keyboard position to affect times T2-T4 of the TVF envelope. Higher settings change the times by a greater amount as you move away from Middle C (C4) - at Middle C, the original T1-T4 settings are in effect. Positive (+) settings cause the times to shorten as you play above Middle C. Negative (-) settings cause the times to lengthen as you play above Middle C.
Envelope V-T1	TVF Envelope Time 1 Velocity Sensitivity	-63—+63	Use this parameter when you want keyboard playing dynamics to affect T1 (Time 1) of the TVF envelope. If you want T1 to be sped 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.
Envelope V-T4	TVF Envelope Time 4 Velocity Sensitivity	-63—+63	Use this parameter when you want key release speed to affect T4 (Time 4) of the TVF envelope. If you want T4 to be sped 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.
Envelope L0-L4	TVF Envelope Level 0-4	0-127	Specify the TVF envelope levels. These settings specify how the cutoff frequency changes at each point, relative to the standard cutoff frequency.
Envelope T1-T4	TVF Envelope Time 1-4	0-127	Specify the TVF envelope times. Higher settings lengthen the time until the next cutoff frequency level is reached. (For example, T2 is the time over which L1 changes to L2.)

Chapter 1 Creating a Patch

Changing the Volume (TVA)

The TVA (Time Variant Amplifier) controls volume changes to the Tone, as well as its stereo positioning.

Parameter	Value	Description
TVA		
Level	Tone Level	0–127 Sets the Tone's basic volume. This setting is useful primarily for adjusting the volume balance between Tones in a Patch. * The overall volume of the Patch is set by the Patch Level (COMMON group p. 40) setting, raising or lowering the Tone level settings of its individual Tones by the selected amount.
Pan	Tone Pan	L64–63R Specifies the stereo position of the Tone. L64 places the Tone hard left, 0 puts it dead-center and 63R pans it hard right. * The overall panning of the entire Patch is set by the Patch Pan parameter (COMMON group p. 40), shifting the Tone Pan values of its individual Tones leftward or rightward by the selected amount.
Velocity Sens	TVA Level Velocity Sensitivity	-63–+63 Use this setting when you want keyboard touch (velocity) to affect the Tone volume. 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.
Velocity Curve	TVA Level Velocity Curve	FIXED, 1–7 Chooses one of seven curves that determine how keyboard playing dynamics (velocity) influence the Tone's volume. When set to "FIXED," the Tone's volume not affected by the force with which the keyboard is played. 
BIAS Use the Bias parameter when you want the position of notes on a keyboard to affect the TVA level.		
LOWER  UPPER  LOWER&UPPER  ALL 		
Bias Level		-100–+100 Adjusts the slope of the volume change that occurs in the selected Bias Direction. Higher settings produce greater amounts of change to the Tone's volume. Negative (-) settings reverse the direction of the change.
Bias Point		C-1–G9 Chooses the MIDI key at which the Tone's volume begins to change.
Bias Direction		LOWER, UPPER, LO&UP, ALL Determines whether the volume of notes above or below the Bias point—or both—changes according to their distance from the Bias Point. LOWER: Notes below the Bias Point are affected. UPPER: Notes above the Bias Point are affected. LO&UP: Notes below and above the Bias Point are affected. ALL: The volume of notes across the entire keyboard are biased according to the Bias Level slope, based on their distance from the Bias Point.
PAN MODULATE Use these parameters to dynamically alter the Tone's stereo position as set by the TVA Pan.		
Pan Keyfollow	Tone Pan Keyfollow	-100–+100 Use this parameter when you want each note's keyboard position to affect its stereo location. Higher settings cause a greater shifting of the Tone's original pan position as you move further away from Middle C (C4), where the original stereo TVA Pan value remains in effect. Positive (+) settings cause notes above Middle C to be panned rightward. Negative (-) settings cause them to be panned leftward. 
Pan Random Depth	Tone Random Pan Depth	0–63 Use this parameter to activate random panning, note-by-note. Higher values result in more extreme fluctuations in the Tone's stereo placement.

Parameter		Value	Description
Pan Alternate	Tone Alternate Pan Depth	L63–63R	This setting causes panning to be alternated between left and right each time a key is pressed. Higher values result in a greater left/right width. You can select the stereo placement of the first key using this parameter—its opposite is used for the second note, and so on back and forth. If you want to alternate the pan position of two Tones, set them to the exact opposite L and R settings.
TVA ENVELOPE This specifies the manner in which keyboard velocity affects the times of the TVA envelope.			
Envelope V-T1	TVA Envelope Time 1 Velocity Sensitivity	-63–+63	Use this parameter when you want keyboard playing dynamics to affect T1 (Time 1) of the TVA envelope. If you want T1 to be sped 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.
Envelope V-T4	TVA Envelope Time 4 Velocity Sensitivity	-63–+63	Use this parameter when you want key release speed to affect T4 (Time 4) of the TVA envelope. If you want T4 to be sped up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.
Env Time Keyfl	TVA Envelope Time Keyfollow	-100–+100	Use this parameter when you want a note's keyboard position to affect times T2–T4 of the TVA envelope. Higher settings change the times by a greater amount as you move away from Middle C (C4)—at Middle C, the original T1–T4 settings are in effect. Positive (+) settings cause the times to shorten as you play above Middle C. Negative (-) settings cause the times to lengthen as you play above Middle C.
Envelope T1–T4	TVA Envelope Time 1–4	0–127	Specify the TVA envelope times. Higher settings lengthen the time until the next volume level is reached. (For example, T2 is the time over which L1 changes to L2.)
Envelope L1–L3	TVA Envelope Level 1–3	0–127	Specify the TVA envelope levels. These settings specify how the volume changes at each point, relative to the standard volume.

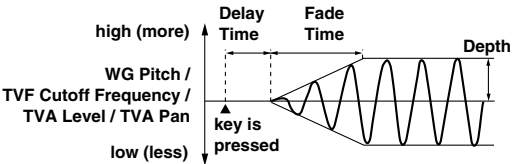
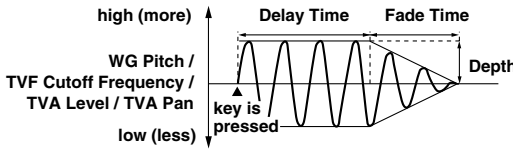
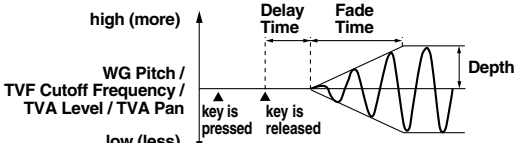
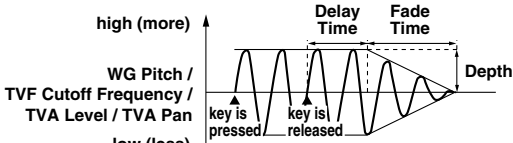
Applying Vibrato or Tremolo (LFO)

The LFO (Low Frequency Oscillator) can alter various Tone settings in a back-and-forth, cyclic manner. Each Tone has two LFOs, and each can apply the desired amount of repetitive change to the Tone's Pitch, TVF cutoff frequency, TVA Level and TVA Pan settings. This can be used as the Matrix Control source (p. 52).

How to Use the LFO

Applying an LFO to the Tone's Pitch settings creates vibrato, applying it to its TVF cutoff frequency creates a wah-wah, and applying it to its TVA Level creates tremolo. When an LFO is applied to the Tone's TVA Pan, the sound moves back and forth, from one side to another, in the stereo field.

Depending on your settings, an LFO can also be used to cyclically exchange two Tones. For example, if you wish to shift back and forth between Tones 1 and 2, select the same LFO settings for both, but set their LFO TVA Depth settings to opposite polarities—set one to a + value, and the other to a - value.

Parameter	Value	Description
LFO Since both LFOs have the same parameters, the following explanations apply to both.		
LFO1(2) Form	LFO1(2) Waveform	SIN, TRI, SAW-UP, SAW-DW, SQR, RND, BEND-UP, BEND-DW, TRP, S&H, CHAOS Chooses the waveform the LFO is to use. SIN: sine wave TRI: triangle wave SAW-UP: sawtooth wave SAW-DW: sawtooth wave (negative polarity) SQR: square wave RND: random wave BEND-UP: Once the attack of the waveform output by the LFO is allowed to develop in standard fashion, the waveform then continues without further change. BEND-DW: 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 (LFO value is changed one time per cycle) CHAOS: chaos wave * When setting BEND-UP or BEND-DW, set the Key Sync parameter to "ON." If this is "OFF," BEND-UP and BEND-DW will have no effect.
LFO1(2) Offset		-100—+100 Adjusts the basic width of the LFO waveform.
LFO1(2) Rate		0–127, note *1 Adjusts the basic modulation rate, or speed, of the LFO.
LFO1(2) Detune	LFO1(2) Rate Detune	0–127 This setting allows you to adjust the tuning of the LFO waveform.
LFO1(2) Key Sync		OFF, ON Sets whether you want the LFO cycle to start in sync with the timing of a key press (ON) or not (OFF).
LFO1(2) Fade	LFO1(2) Fade Mode	ON-IN, ON-OUT, OFF-IN, OFF-OUT Sets how the LFO is applied.
	ON-IN: The LFO fades in after the key is pressed.	
	ON-OUT: The LFO is immediately applied when the key is pressed, and then fades out.	
	OFF-IN: The LFO fades in after the key is released.	
	OFF-OUT: The LFO is immediately applied when the key is pressed, and begins fading out when the key is released.	
LFO1(2) Fade Time		0–127 Adjusts the time over which the LFO rises to its full effect or fades away. (Refer to the diagrams for Fade Mode.)
LFO1(2) Delay Time		0–127 Sets the time interval between the moment when a key is pressed (or released) and the moment the LFO begins to take effect. (Refer to the diagrams for Fade Mode.)
LFO1(2) Delay Keyfl	LFO1(2) Delay Keyfollow	-100—+100 Adjusts the value for the LFO1/LFO2 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 before the LFO effect is applied to change according to the key pressed, set this to "0."
LFO1(2) Pitch Depth		-63—+63 Adjusts how much the LFO affects the Tone's pitch.
LFO1(2) TVF Depth		-63—+63 Adjusts how much the LFO affects the Tone's TVF cutoff frequency.
LFO1(2) TVA Depth		-63—+63 Adjusts how much the LFO affects the Tone's TVA Level.
LFO1(2) Pan Depth		-63—+63 Adjusts how much the LFO affects the Tone's TVA Pan.

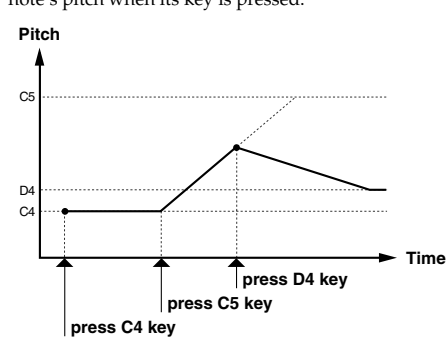
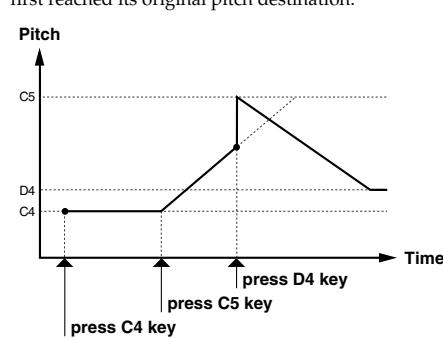
*1:

♩₃ (Sixty-fourth-note triplet), ♪₃ (Sixty-fourth note), ♪₃ (Thirty-second-note triplet), ♪₃ (Thirty-second note), ♪₃ (Sixteenth-note triplet), ♪₃ (Dotted thirty-second note), ♪₃ (Sixteenth note), ♪₃ (Eighth-note triplet), ♪₃ (Dotted sixteenth note), ♪₃ (Eighth note), ♪₃ (Quarter-note triplet), ♪₃ (Dotted eighth note), ♪₃ (Quarter note), ♪₃ (Half-note triplet), ♪₃ (Dotted quarter note), ♪₃ (Half note), ♪₃ (Whole-note triplet), ♪₃ (Dotted half note), ♪₃ (Whole note), ♪₃ (Double-note triplet), ♪₃ (Dotted whole note), ♪₃ (Double note)

Using Controllers to Change How Sounds Are Played (CONTROL)

The parameters in this group determine how various controllers affect the Patch and its Tones.

* Parameters that can be set independently for each Tone are indicated by "T."

Parameter	Value	Description		
CONTROL				
Key Mode Assign	MONO, POLY	Sets how the Patch's notes are played. The MONO setting is effective when playing a solo instrument Patch such as sax or flute. MONO: Only one note sounds at a time. * While only a single note sounds, that note may, as usual, consist of multiple Tones. POLY: Two or more notes can be played simultaneously.		
Key Mode Legato	OFF, ON	Turn this parameter on when you want to use the Legato feature and off when you don't. Legato is a function that works only when the Key Assign Mode is MONO. When Legato is ON, pressing one key when another is already pressed causes the currently playing note's pitch to change to that of the newly pressed key while continuing to sound. This can be effective when you wish to simulate performance techniques such as a guitarist's hammering on and pulling off strings.		
Key Mode Retrigger	OFF, ON	The setting determines whether sounds are replayed or not when performing legato. Normally you will leave this parameter "ON." When Delay Keyfollow is set to OFF, if one key is pressed while another key is held down, only the pitch changes, which with some waveforms may result in an unnatural sound. Set this to "OFF" when performing wind and string phrases or when using modulation with the mono synth keyboard sound. * If the Legato Switch is "OFF," this setting is ignored.		
PORTAMENTO Portamento is a function that causes the Patch's pitch to change smoothly from one note to the next note played. When the Key Mode Assign is MONO, this can be effective in simulating performance techniques such as a violinist's glissando.				
Portamento Sw	OFF, ON	Turn this switch on when you wish to use Portamento.		
Portamento Time	0–127	Sets the time over which one pitch glides to the next.		
Portamento Mode	NORMAL, LEGATO	Chooses the way in which Portamento is applied. NORMAL: Portamento is always applied. LEGATO: Portamento is applied only for notes played legato (i.e., when you press a second key before releasing the first.)		
Portamento Type	RATE, TIME	Determines the way in which the pitch difference between the two notes affects the time it takes to glide from one note to the next. RATE: The time it takes depends on the distance between the two pitches. TIME: The time it takes is constant, regardless of how far apart in pitch the notes are.		
Portamento Start	PITCH, NOTE	Portamento begins anew if you press another key during a pitch movement. This setting specifies how the new portamento starts.		
	PITCH: The pitch begins changing immediately to the new note's pitch when its key is pressed. 	NOTE: The pitch begins changing to the new note's pitch only after it has first reached its original pitch destination. 		
CTRL Rx MIDI (Tone control receive MIDI) These settings determine each Tone's response to received Pitch Bend, Expression, Pan, Hold1, Damper, and Envelope Mode MIDI messages.				
Rx MIDI Bender	Tone Receive Bender Switch	OFF, ON	If you want the Tone to respond to Pitch Bend messages, turn this parameter on. If not, turn it off.	T
Rx MIDI Express	Tone Receive Expression Switch	OFF, ON	If you want the Tone to respond to Expression messages, turn this on. If not, turn it off.	T
Rx MIDI Pan	Tone Receive Pan Mode	CONT, KEY-ON	CONTINUOUS: Pan messages are responded to immediately, instantly changing the stereo position of the Tone. KEY-ON: The stereo location of the Tone is changed only when the next note is played. If a Pan message is received while a note is sounding, its stereo location will not change.	T
Rx MIDI Hold-1	Tone Receive Hold 1 Switch	OFF, ON	Set this to ON if you wish the tone to respond to Hold1 messages—these messages cause sounds to continue playing when a sustain/damper pedal is pressed. Set this to OFF when you don't want the Tone to respond to Hold1 messages.	T

Chapter 1 Creating a Patch

Parameter		Value	Description	
Rx MIDI Redamper	Tone Redamper Switch	OFF, ON	If a Hold 1 message is received during the time between a note-off—when you release the key—and the time at which the note actually disappears, any currently sounding notes will be sustained if Redamper is set to ON. To take advantage of this feature, you must also turn on the Tone Receive Hold 1 setting.	T
Env Mode	Tone Envelope Mode	NO-SUS, SUSTAIN	When a loop-type waveform is selected, it normally continues to sound as long as a key is pressed. If you want a note to decay naturally even when the key remains pressed, set this to “NO-SUS.” * If a one-shot type Wave is selected, it will not sustain even if this parameter is set to “SUSTAIN.”	T
TMT CONTROL				
TMT Control SW		OFF, ON	This setting determines whether or not the TMT is controlled by the Matrix Control. When TMT Velocity Control is set to OFF, turning this parameter on and off is a simple way to switch between playing all Tones or controlling them with the Matrix Control, making this an effective tool for auditioning Tones.	
Bend Range Down	Pitch Bend Range Down	-48-0	Specifies the amount of pitch change that’s applied to the Patch’s pitch when the Pitch Bend lever is moved fully left (or down on some MIDI controllers).	
Bend Range Up	Pitch Bend Range Up	0-48	Specifies the pitch change that occurs when the Pitch Bend lever is moved fully to the right (or up on some MIDI controllers).	
MATRIX CTRL This selects the parameters to be controlled by Matrix Control Source 1-4 and the Sens settings, as well as the specific Tones whose parameters you wish to control. Up to four destination parameters can be selected for each controller and controlled simultaneously.				
Ctrl 1-4 Src	Matrix Control 1-4 Source	OFF, CC01-31, CC33-95, BEND, AFTER, SYS1-4, VELOCITY, KEYFOLLOW, TEMPO, LFO1, LFO2, PIT-ENV, TVF-ENV, TVA-ENV	Assign one of the following controllers to Control Source 1-4. If you wish to use a controller that will apply to all Patches, or a controller that cannot be directly selected here, select SYS-CTRL1-4, and then select the controller using the Control Source 1-4 parameters (SYSTEM: CONTROL).	
Ctl1-4 Dest1-4	Matrix Control 1-4 Destination 1-4	OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LFO1(2), TVF-LFO1(2), TVA-LFO1(2), PAN-LFO1(2), LFO1(2)-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX-CTRL1-4	Selects a parameter to be controlled.	
Ctl1-4 Sens1-4	Matrix Control 1-4 Sens 1-4	-63+63	Adjusts the amount of change that occurs in response to controller changes. Negative (-) values invert the change. For LFO rates, negative (-) values slow down the LFO, and positive (+) values speed it up.	
Ctl1-4 Switch1-4	Matrix Control 1-4 Tone Control Switch 1-4	OFF, ON, REVERSE	Selects the Tone to which the two previous parameter settings are applied. “ON” turns signifies that the Tone is selected for control, “OFF” that it’s not selected, and “REVERSE” that the change being applied is inverted when applied to this Tone.	T

Adjusting Effect Settings

Refer to "Patch/Rhythm Set Mode Settings" (p. 70).

Saving Patches You Create

Refer to "Saving a Patch" (p. 104).

Copying Settings Between Patches (Patch Tone Copy)

Tone settings from a Patch can be copied to the currently selected Patch. You can use this feature to make the Patch-editing process faster and easier.

1. Make sure that a Patch is selected.
2. Press [UTILITY] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the upper left of the display.
4. Turn [VALUE] to choose "COPY TONE."

```
COPY TONE      [ENT]
TEMP: (TripTheAlarm)
```

5. Press [CURSOR ▶] twice to move the cursor to the lower right of the display.
6. Turn [VALUE] to choose the Patch containing the settings you wish to copy.
"TEMP" means the currently selected Patch.
7. Use [◀ CURSOR]/[CURSOR ▶] and [VALUE] to choose the Tone containing the settings you wish to copy (From), and the Tone to which you want to copy the settings (To).

```
COPY TONE      [ENT]
Eron:          TONE 1
```

8. Press [ENTER] to execute the Copy.
* To cancel, press [EXIT].
9. Press [EXIT] to return to the PATCH PLAY screen.

A "*" symbol appears at the left of the Patch name, indicating that the Copy has been executed.

Patch Name Copy

You can copy the name of a Patch to the currently selected Patch.

1. Select the Patch whose name you wish to change.
2. Press [UTILITY] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the upper left of the display.
4. Turn [VALUE] to choose "COPY NAME."

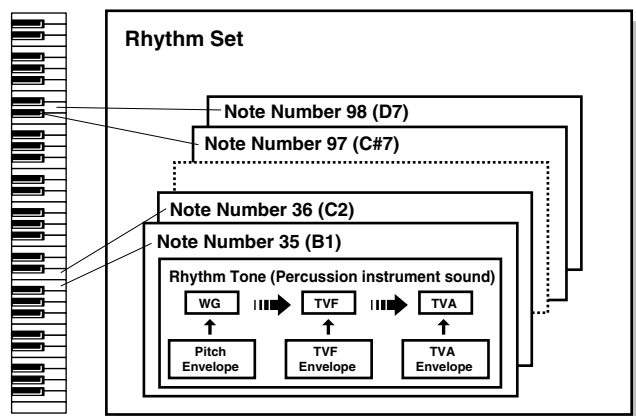
```
COPY NAME      [ENT]
US:001(TripTheAlarm)
```

5. Press [CURSOR ▶] to move the cursor to the lower right of the display.
6. Turn [VALUE] to choose the Patch whose name you wish to copy.
7. Press [ENTER] to execute the Copy.
* To cancel, press [EXIT].
8. Press [EXIT] to return to the PATCH PLAY screen.

Chapter 2. Creating a Rhythm Set

How Percussion Instruments Are Organized

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



WG (Wave Generator)

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

The XV-5050 has 1083 different waveforms. (See Waveform List p. 168.)

All Rhythm Sets built into the XV-5050 consist of Rhythm Tones based on these waveforms.

TVF (Time Variant Filter)

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

TVA (Time Variant Amplifier)

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

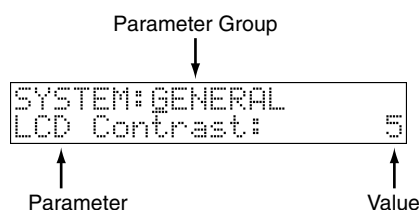
Envelope

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

Using MIDI Keyboard to Select a Percussion Instrument for Editing

You can set whether you'll be able to select percussion instruments for editing only by operating the XV-5050's front-panel controls or also by pressing keys on a connected MIDI keyboard.

1. Press [SYSTEM] to make its indicator light.
2. Press [◀ CURSOR] a few times to move the cursor to the parameter group in the upper line of the display.



3. Turn [VALUE] to choose "GENERAL."
4. Press [CURSOR ▶] to move the cursor to the parameter at the lower left of the display.
5. Turn [VALUE] to choose "Rhy EditKey."
6. Press [CURSOR ▶] to move the cursor to the value.
7. Turn [VALUE] to select the desired setting.
PANEL: Percussion instrument sounds can be selected only by using the XV-5050's TONE SW [1]–[4].
PANEL&MIDI: Percussion instrument sounds can be selected using the XV-5050's TONE SW [1]–[4] or by pressing a key on a connected MIDI keyboard.
8. Press [EXIT] to return to the previous screen.

MEMO

For example, if you wish to use the MIDI keyboard to preview the percussion sound, choose "PANEL."

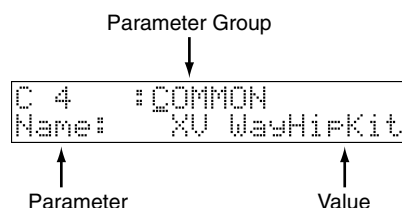
Settings Common to an Entire Rhythm Set

Setting Procedure:

1. Hold down [SHIFT] and press [PATCH] to make its indicator blink.

The XV-5050 enters Rhythm Set mode.

2. Choose the Rhythm Set you wish to use.
3. Press [EDIT] to make its indicator light.
4. Press [◀ CURSOR] a few times to move the cursor to the parameter group at the upper line of the display.



5. Turn [VALUE] to choose "COMMON."
6. Press [CURSOR ▶] to move the cursor to the parameter.
7. Turn [VALUE] to choose the parameter you want to set.
8. Press [CURSOR ▶] to move the cursor to the value.
9. Turn [VALUE] to choose the desired value.
10. Press [EXIT] to return to the RHYTHM PLAY screen.

A "*" symbol appears at the left of the Rhythm Set name, indicating that its settings have been changed.

```
RHYTHM:PLAY C 4
*15:001 XV WawHifKit
```

NOTE

If you turn off the power or choose another Rhythm Set while the "*" symbol is displayed, your new Rhythm Set settings will be lost. If you wish to preserve them, save the changed Rhythm Set using the Write operation. (p. 104)

Parameter		Value	Description
COMMON			
Name	Rhythm set name	space, A–Z, a–z, 0–9, ! " # \$ % & ' () * + , - . / : ; < = > ? @ [¥] ^ _ ` { }	You can name a Rhythm Set using up to 12 alphanumeric characters. Use [◀ CURSOR]/[CURSOR ▶] to move the cursor, and then turn the [VALUE] knob to select the desired character.
Level	Rhythm set level	0–127	This sets the overall volume of the Rhythm Set. * To set the volume of each Rhythm Tone, use the Tone Level (TVA p. 61).
Output Asgn	Rhythm output assign	MFX, OUTPUT A/B, INDIV 1–4, TONE	This sets the output destination of the Rhythm Set. MFX: The Rhythm Set is sent into the Multi-Effects. OUTPUT A/B: The Rhythm Set is sent to the selected pair of OUTPUTs, A or B. INDIV 1–4: The Rhythm Set is sent to the selected INDIVIDUAL output jack, 1–4. TONE: Each Rhythm Tone in the Rhythm Set is sent to its programmed output destination.
Clock Source	Rhythm set clock source	RHYTHM, SYSTEM	The LFO cycle, M-FX changes, phrase loop (break beats), and Tone delay time can be synchronized to a clock, or tempo. The Clock Source setting selects the timing reference to be used by the Rhythm Set. RHYTHM: The Rhythm Set Tempo will be used. SYSTEM: The global System Tempo or clock messages received from an external sequencer will be used.
Tempo	Rhythm set tempo	20–250	When Clock Source is set to "RHYTHM," this setting establishes the Rhythm Set's tempo. * Clock messages for the Rhythm Tempo are not transmitted from the MIDI OUT jack.

Setting up Individual Rhythm Tones

EFFECTS

Patch/Rhythm Set Mode Settings (p. 70)

CONTROL

Other Settings (p. 61)

WAVE

Modifying a Rhythm Tone's Waveform and Panning (p. 57)

PITCH

Modifying a Rhythm Tone's Pitch (p. 59)

TVF

Modifying the Brightness of a Sound with a Filter (p. 59)

TVA

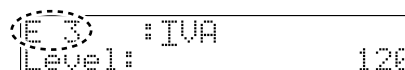
Making the Volume Change (p. 61)

Editing Procedure:

1. Choose the Rhythm Set you wish to set up.
2. Press [EDIT] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the parameter group in the upper line of the display.
4. Turn [VALUE] to choose the parameter group containing the parameter you wish to set up.
5. Press TONE SW [1]–[4] to choose the Tone you wish to set up.
 - [1]: Selects the key one octave below the currently selected key.
 - [2]: Selects the key a semitone below the currently selected key.
 - [3]: Selects the key a semitone above the currently selected key.
 - [4]: Selects the key one octave above the currently selected key.

* You can also press a key on a connected MIDI keyboard to select the desired percussion instrument sound (key). (p. 54)

The selected key appears in the upper left of the display.



6. Press [CURSOR ▶] to move the cursor to the parameter name.
7. Turn [VALUE] to choose the parameter you wish to set.
8. Press [CURSOR ▶] to move the cursor to the selected parameter's value.
9. Turn [VALUE] to choose the desired value.
10. Repeat Steps 3–10 to finish setting up the Rhythm Set.
11. Press [EXIT] to return to the RHYTHM PLAY screen.

A "*" symbol appears at the left of the Rhythm Set name, indicating that its settings have been changed.



NOTE

If you turn off the power or choose another Rhythm Set while the "*" symbol is displayed, your new Rhythm Set settings will be lost. If you wish to preserve them, save the changed Rhythm Set using the Write operation. (p. 104)

Tips for Choosing Rhythm Tone Waveforms

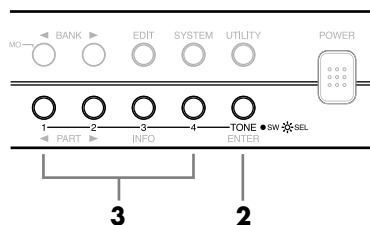


Refer to p. 43.

Modifying a Rhythm Tone's Waveform and Panning (WAVE)

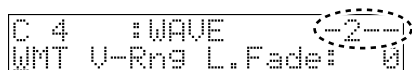
Selecting a Waveform for Editing

Some parameters can be set independently for each Waveform in a Rhythm Tone.



1. Choose the Rhythm Tone you wish to set up.
2. Press [TONE] to make its indicator light.
3. Press TONE SW [1]–[4] to choose the waveform you want to set up.

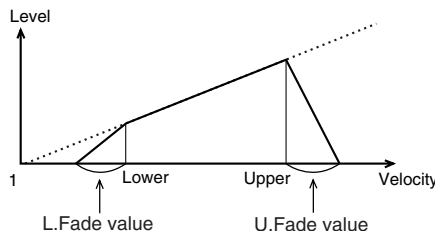
[TONE]'s indicator lights, and the Waveform number appears in the upper right of the display.



* Parameters that can be set independently for each Waveform are indicated by "W."

Parameter		Value	Description	
WAVE				
KeyName	Key name	space, A–Z, a–z, 0–9, ! " # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ` { }	You can name a percussion sound (key) using up to 12 alphanumeric characters. Use [◀ CURSOR]/[CURSOR ▶] to move the cursor, and then turn the [VALUE] knob to select the desired character.	
WMT				
With the XV-5050, up to four stereo Waves can be assigned to a single Rhythm Tone. You can select the way tones sound according to the force with which the keys are played, thus allowing you to create Rhythm Tones featuring great expressive power. This function is called WMT (Wave Mix Table) .				
WMT Group	Wave group	INT, XP-A, XP-B	This selects the desired waveform's group. INT: Internal XP-A, B: Wave Expansion Board A, B * It is not possible to select a Group of a Wave Expansion Board that is not installed.	W
L	Wave number left	0001–1083	This selects the desired waveform by its number. You can choose a separate waveform for each of the XV-5050's left and right channels. The selected wave's name will appear to the right of the wave number parameter.	W
R	Wave number right			
WMT Gain	Wave gain	-6, 0, +6, +12 dB	This specifies the gain (or amplitude) 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.	W
WMT Switch	Wave switch	OFF, ON	This specifies whether the Rhythm Tone will sound (ON) or not (OFF). In order to make best use of the available number of simultaneous voices, unused Rhythm Tones should be turned off.	W
WMT Tempo Sync	Wave tempo sync	OFF, ON	This determines whether the waveform is synchronized (ON) or not synchronized (OFF) to the Rhythm Set's tempo.	W
WMT Level	Wave level	0–127	This adjusts the volume of each of the Rhythm Tone's waveforms to establish the desired volume balance between the waves. * The overall volume of each waveform is determined by the Tone Level setting (TVA p. 61) combined with the WMT Wave Tone Level setting.	W
WMT Pan	Wave pan	L64–63R	This establishes the stereo location of the waveform. L64 places it hard left, 0 puts it dead-center and 63R pans it hard right. * The overall panning of the entire Rhythm Tone is set by the Tone Pan parameter (TVA p. 61), offsetting the WMT Wave Pan value.	W
WMT Random Pan	Wave random pan switch	OFF, ON	Use this setting to cause the waveform's panning to change randomly each time a key is pressed (ON) or not (OFF). The range of the panning change is set by the Tone Rhythm Pan Depth setting (TVA p. 61).	W
WMT Alternate Pan	Wave alternate pan switch	OFF, ON, REV	Set this to ON to pan the Wave according to the Alternate pan depth (TVA p. 61) settings, or to REVERSE 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.	W
WMT Coarse Tune	Wave coarse tune	-48– +48	This adjusts the pitch of Rhythm Tone in semitone steps (-4– +4 octaves).	W
WMT Fine Tune	Wave fine tune	-50– +50	This adjusts the pitch of the Rhythm Tone in 1-cent steps (1/100th of a semitone) over a range of half a semitone up or down.	W

Chapter 2. Creating a Rhythm Set

Parameter	Value		Description	
FXM FXM (Frequency cross modulation) uses a specified waveform to apply frequency modulation to the currently selected waveform, creating complex overtones. This can be useful when creating wilder sounds or sound effects.				
WMT FXM Switch	Wave FXM switch	OFF, ON	This sets whether FXM will be used (ON) or not (OFF).	W
WMT FXM Color	Wave FXM color	1–4	This specifies how FXM will perform its frequency modulation. Higher settings result in a grainier sound, while lower settings result in a more metallic sound.	W
WMT FXM Depth	Wave FXM depth	0–16	This specifies the depth of the modulation produced by FXM.	W
WMT V-Rng L.Fade	WMT velocity fade width lower	0–127	This determines what will happen to the waveform’s level when it is played at a velocity lower than its specified velocity range. Higher settings produce a more gradual change in volume. If you don’t want notes played outside the specified velocity range to be heard at all, set this to 0.	W
WMT V-Rng Lower	WMT velocity range lower	1–UPPER	This sets the lowest velocity at which the waveform will sound. This feature is useful when you want different waveforms to be heard depending on how hard you play the Rhythm Set.	W
WMT V-Rng Upper	WMT velocity range upper	LOWER–127	This sets the highest velocity at which the waveform will sound. This feature is useful when you want different waveforms to be heard depending on how hard you play the Rhythm Set. * It is not possible to set the Lower value higher than the Upper value, or the Upper value below the Lower value.	W
WMT V-Rng U.Fade	WMT velocity fade width upper	0–127	This determines what will happen to the waveform’s level when it is played at a velocity upper than its specified velocity range. Higher settings produce a more gradual change in volume. If you don’t want notes played outside the specified velocity range to be heard at all, set this to 0. 	W
WMT Vel Control	WMT velocity control	OFF, ON, RND	This determines whether Velocity range settings will be recognized (ON), or ignored (OFF). When set to RND, the Rhythm Set’s constituent Waves will sound randomly, regardless of any Velocity messages.	

Modifying a Rhythm Tone's Pitch (PITCH)

Parameter		Value	Description
PITCH			
Coarse Tune	Rhythm tone coarse tune	C-1–G9	This selects the basic pitch at which the Rhythm Tone will play.
Fine Tune	Rhythm tone fine tune	-50– +50	This adjusts the pitch of the percussion instrument sound in 1-cent steps (1/100th of a semitone) over a range of half a semitone up or down.
Random Pitch	Random pitch depth	0–1200	This specifies the width of random pitch deviation that will occur each time a key is pressed. If you don't want random pitch changes, set it to 0. The parameter can be adjusted in units of 1 cent (1/100th of a semitone).
PITCH ENVELOPE			
These parameters determine the amount of pitch enveloping—changes to your basic pitch settings that occur over time—the effect of velocity on the pitch envelope, and the basic characteristics of the pitch envelope itself.			
Envelope Depth	Pitch envelope depth	-12– +12	This determines the amount of pitch enveloping to be used—higher settings result in more extreme enveloping. Negative (-) settings invert the direction of the changes made by the Pitch Envelope.
Envelope V-Sens	Pitch envelope velocity sensitivity	-63– +63	Adjust this parameter when you want your keyboard playing dynamics (velocity) to affect the amount of pitch enveloping. With higher settings, there will be a greater difference in the amount of enveloping when notes are played softly or when they're played hard. Negative (-) settings will reverse the direction of change.
Envelope V-T1	Pitch envelope time 1 velocity sensitivity	-63– +63	Use this parameter when you want keyboard playing dynamics (velocity) to affect T1 (Time 1) of the pitch envelope. With higher settings, the T1 value will change more significantly depending on whether you play softly or with greater force. With positive (+) settings, greater keyboard velocity will reduce the T1 setting. With negative (-) settings, greater keyboard velocity will increase the T1 setting.
Envelope V-T4	Pitch envelope time 4 velocity sensitivity	-63– +63	Use this parameter when you want key-off velocity—the speed at which you release a key—to affect T4 (Time 4) of the pitch envelope. With higher settings, the T4 value will change more significantly depending on whether you release the key slowly or quickly. With positive (+) settings, faster key-off velocity will reduce the T4 setting. With negative (-) settings, faster key-off velocity will increase the T4 setting.
Envelope L0–L4	Pitch envelope level 0–4	-63– +63	Specify the pitch envelope levels. They determine how much the pitch changes from the reference pitch (the value set with Coarse Tune and Fine Tune) at each point. Positive (+) settings cause the pitch to be higher than the standard pitch, and negative (-) settings cause it to be lower.
Envelope T1–T4	Pitch envelope time 1–4	0–127	Specify the pitch envelope times. Higher settings lengthen the time until the next pitch is reached. (For example, T2 is the time over which the pitch changes from L1 to L2.)

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

The settings for the TVF (Time Variant Filter) allow you to change a Rhythm Tone's timbral content by altering its brightness or thickness.

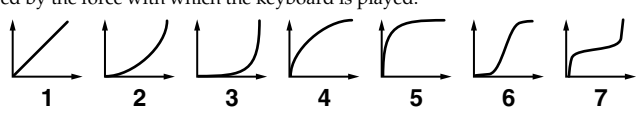
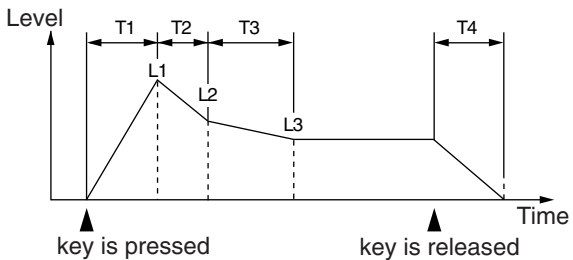
Parameter	Value	Description
TVF		
Filter Type	Filter type	OFF, LPF, BPF, HPF, PKG, LPF2, LPF3 This selects a filter type. A filter typically reduces, or attenuates, a specific frequency range within a Tone in order to accentuate its other frequencies. OFF: No filter is used. LPF: A Low Pass Filter reduces the volume of frequencies above the cutoff frequency in order to round off, or un-brighten, the sound. This is the most common filter used in synthesizers. BPF: A Band Pass Filter reduces the volume of frequencies below and above the cutoff frequency range. This is most effective when creating sounds with strong characteristics since it can accentuate a desired range of frequencies anywhere in the sound. HPF: A High Pass Filter reduces the volume of the frequencies below the cutoff frequency. This is suitable for creating percussive sounds by rolling off their lower frequencies, thus emphasizing their higher ones. PKG: A Peaking Filter emphasizes frequencies around the cutoff frequency by raising their level. You can use this to create wah-wah effects by employing an LFO to change the cutoff frequency cyclically. LPF2: Low Pass Filter 2. This reduces the volume of all frequencies above the cutoff frequency. This differs from LPF in that you can control the amount of the reduction using the TVF ENVELOPE settings while still maintaining a fixed cutoff frequency. This can be very effective with acoustic-instrument-based Tones, since nothing is done to weaken the power and energy of the sound. * This disables the Resonance setting. LPF3: Low Pass Filter 3 reduces the volume of frequencies above the cutoff frequency. While similar to LPF2, it filter reduces the frequencies more gently than LPF2. This can be very effective with acoustic-instrument-based Tones, since nothing is done to weaken the power and energy of the sound. * This disables the Resonance setting.
Cutoff Frequency	Cutoff frequency	0–127 This selects the frequency at which the filter begins to have an effect on the waveform's frequency components. With LPF/LPF2/LPF3 selected for the Filter Type parameter, lower cutoff frequency settings reduce a Rhythm Tone's upper harmonics for a more rounded, warmer sound. Higher settings make it sound brighter. When Filter Type is BPF, the cutoff frequency setting determines the range of frequencies within the Rhythm Tone that will be heard. This can be useful when creating distinctive sounds. When Filter Type is HPF, higher settings of the cutoff frequency decrease the level of the Rhythm Tone's low frequencies, preserving its brighter qualities. When Filter Type is PKG, the cutoff frequency setting determines the range of frequencies to be emphasized.

Chapter 2. Creating a Rhythm Set

Parameter		Value	Description
Resonance	Resonance	0–127	This increases the level of the cutoff frequency to add a popular classic synth character to the sound. Excessively high settings can produce oscillation, causing the sound to distort. LPF BPF HPF PKG
TVF VELOCITY This sets the amount of change to the original cutoff frequency in response to differences in velocity, as well as the velocity response curve and velocity's effect on Resonance.			
Cutoff V-Sens	TVF cutoff velocity sensitivity	-63–+63	This sets the amount of change to the Cutoff setting to be applied as a result of changes in playing velocity. With higher settings, there is a greater amount of change between softly and strongly played notes. Negative (-) settings reverse the direction of change.
Cutoff V-Curve	TVF cutoff velocity curve	FIXED, 1–7	This selects one of seven curves that determine how keyboard playing dynamics (velocity) influence the Rhythm Tone's cutoff frequency. When V-Curve is set to "FIXED," the cutoff frequency remains unchanged regardless of how hard or soft the keys are played.
Resonance V-Sens	TVF resonance velocity sensitivity	-63–+63	Use this parameter when you want velocity to affect the amount of Resonance. With higher settings, there is a greater difference in the amount of Resonance between softly and strongly played notes. Negative (-) values reverse the direction of the change.
TVF ENVELOPE These parameters determine the amount of filter enveloping—changes to your original cutoff frequency setting that occur over time—the effect of velocity on the TVF envelope, and the basic characteristics of the TVF envelope itself.			
Envelope Depth	TVF envelope depth	-63–+63	This adjusts the amount of filter enveloping. Higher settings produce more change. Negative (-) values invert the effect of the TVF envelope.
Envelope V-Sens	TVF envelope velocity sensitivity	-63–+63	Use this parameter when you want keyboard playing dynamics (velocity) to affect the depth of the TVF Envelope. With higher settings, there is a greater difference in the TVF envelope depth when you play softly or hard. Negative (-) settings reverse the direction of change.
Envelope V-Crv	TVF envelope velocity curve	FIXED, 1–7	This selects one of seven velocity curves that determine how velocity will affect the depth of the TVF Envelope. The selected curve is displayed graphically to the right of its value. When set to "FIXED," the TVF envelope depth remains unchanged, regardless of how hard or soft you play.
Envelope V-T1	TVF envelope time 1 velocity sensitivity	-63–+63	Use this parameter when you want keyboard playing dynamics (velocity) to affect T1 (Time 1) of the TVF envelope. With higher settings, the T1 value will change more significantly depending on whether you play softly or with greater force. With positive (+) settings, greater keyboard velocity will reduce the T1 setting. With negative (-) settings, greater keyboard velocity will increase the T1 setting. Use this parameter when you want velocity to affect T1 (time) of the TVF envelope. For higher settings, there will be a greater difference between softly and strongly played notes. For positive (+) settings, keyboard velocity will speed up the T1 time. For negative (-) settings, keyboard velocity will slow down the T1 time.
Envelope V-T4	TVF envelope time 4 velocity sensitivity	-63–+63	Use this parameter when you want key-off velocity—the speed at which you release a key—to affect T4 (Time 4) of the TVF envelope. With higher settings, the T4 value will change more significantly depending on whether you release the key slowly or quickly. With positive (+) settings, faster key-off velocity will reduce the T4 setting. With negative (-) settings, faster key-off velocity will increase the T4 setting.
Envelope L0–L4	TVF envelope level 0–4	0–127	Specify the TVF envelope levels. These settings specify how the cutoff frequency changes at each point, relative to the standard cutoff frequency.
Envelope T1–T4	TVF envelope time 1–4	0–127	Specify the TVF envelope times. Higher settings lengthen the time until the next cutoff frequency level is reached. (For example, T2 is the time over which L1 changes to L2.)

Making the Volume Change (TVA)

The TVA (Time Variant Amplifier) controls the Rhythm Tone's volume changes and stereo positioning.

Parameter	Value	Description
TVA		
Level	Rhythm tone level	0–127 This sets the Rhythm Tone's basic volume. This setting is useful primarily for adjusting the volume balance between Rhythm Tones in a Rhythm Set. * The overall volume of the Rhythm Set is set by the Level (Rhythm Set Level, COMMON group p. 55) setting, raising or lowering the Tone level settings of its individual Rhythm Tones by the selected amount.
Pan	Rhythm tone pan	L64–63R This specifies the stereo position of the Rhythm Tone. L64 places the Rhythm Tone hard left, 0 puts it dead-center and 63R pans it hard right.
Pan Random	Random pan depth	0–63 Use this parameter to activate random panning, note-by-note. Higher values result in more extreme fluctuations in the Rhythm Tone's stereo placement.
Pan Alternate	Alternate pan depth	L63–63R This setting causes panning to be alternated between left and right each time a key is pressed. Higher values result in a greater left/right width. You can select the stereo placement of the first key using this parameter—its opposite will be used for the second note, and so on back and forth. If you want to alternate the pan position of two Rhythm Tones, set them to the exact opposite L and R settings.
TVA VELOCITY		
Velocity Sens	TVA level velocity sensitivity	-63– +63 Use this setting when you want keyboard touch (velocity) to affect the Rhythm Tone volume. Set this to a positive value to have the changes in tone volume increase the more forcefully the keys are played; to make the Rhythm Tone play more softly as you play harder, set this to a negative value.
Velocity Curve	TVA level velocity curve	FIXED, 1–7 This setting allows you to select from seven velocity curves that determine how the force with which the keyboard is played is to affect the Rhythm Tone's volume. When set to "FIXED," the Rhythm Tone's volume will not be affected by the force with which the keyboard is played. 
TVA ENVELOPE This specifies the manner in which keyboard velocity will affect the times of the TVA envelope.		
		
Envelope V-T1	TVA envelope time 1 velocity sensitivity	-63– +63 Use this parameter when you want keyboard playing dynamics (velocity) to affect T1 (Time 1) of the TVA envelope. With higher settings, the T1 value will change more significantly depending on whether you play softly or with greater force. With positive (+) settings, greater keyboard velocity will reduce the T1 setting. With negative (-) settings, greater keyboard velocity will increase the T1 setting.
Envelope V-T4	TVA envelope time 4 velocity sensitivity	-63– +63 Use this parameter when you want key-off velocity—the speed at which you release a key—to affect T4 (Time 4) of the TVA envelope. With higher settings, the T4 value will change more significantly depending on whether you release the key slowly or quickly. With positive (+) settings, faster key-off velocity will reduce the T4 setting. With negative (-) settings, faster key-off velocity will increase the T4 setting.
Envelope T1–T4	TVA envelope time 1–4	0–127 Specify the TVA envelope times. Higher settings lengthen the time until the next volume level is reached. (For example, T2 is the time over which L1 changes to L2.)
Envelope L1–L3	(TVA envelope level 1–3)	0–127 Specify the TVA envelope levels. These settings specify how the volume changes at each point, relative to the standard volume.

Other Settings (CONTROL)

Parameter	Value	Description
CONTROL		
Bend Range	Rhythm tone pitch bend range	0–48 Specifies the amount of pitch change that will occur when you move the Pitch Bend Lever.
Env Mode	Rhythm tone envelope mode	NO-SUS, SUSTAIN When a loop-type waveform is selected, it will normally continue to sound as long as a key is pressed. If you want a note to decay naturally even when the key remains pressed, set this to "NO-SUSTAIN." * If a one-shot type Wave is selected, it will not sustain even if this parameter is set to "SUSTAIN."
Mute Group	Mute group	OFF, 1–31 The Mute Group function allows you to designate two or more Rhythm Tones that are not allowed to sound simultaneously. For example, in a real-world acoustic drum set, an open hi-hat and a closed hi-hat sound will never occur simultaneously, since they're produced by the same instrument. To simulate this behavior on the XV-5050, you can set the open and closed hi-hat Rhythm Tones to the same Mute Group. You can have up to 31 Mute Groups per Rhythm Set. If you do not want a Rhythm Tone to use a Mute Group, turn the feature off.
Assign Type	Assign type	MULTI, SINGLE This setting determines whether a Rhythm Tone note that is playing is stopped when the same note is played again (SINGLE), or whether it will continue to play, layered with the new note.
Rx MIDI (Receive MIDI) These parameters determine how each Rhythm Tone in a Rhythm Set will respond to received Expression/Pan/Hold 1 MIDI messages.		
Rx MIDI Express	Rhythm tone receive expression switch	OFF, ON If you want the Rhythm Tone to respond to Expression messages, turn this parameter on. If not, turn it off.
Rx MIDI Pan	Rhythm tone receive pan mode	CONT, KEY-ON CONT: Pan messages will be responded to immediately, instantly changing the stereo position of the Rhythm Tone. KEY-ON: The stereo location of the Rhythm Tone will be changed only when the next note is played. If a Pan message is received while a note is sounding, its stereo location will not change.
Rx MIDI Hold-1	Rhythm tone receive hold 1 switch	OFF, ON If you want the Tone to respond to Hold 1 messages, turn this parameter on. If not, turn it off.

Effects Settings

Refer to "Patch/Rhythm Set Mode Settings" (p. 70).

Saving Rhythm Sets You Create

Refer to "Saving a Rhythm Set" (p. 104).

Copying the Settings of Another Rhythm Tone (Rhythm Key Copy)

Rhythm Tone settings from any Rhythm Set can be copied to any key of the currently selected Rhythm Set. This function can save time and effort when creating a Rhythm Set.

1. Make sure that a Rhythm Tone (destination) is selected.
2. Press [UTILITY] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the upper left of the display.
4. Turn [VALUE] to choose "COPY KEY."

```
COPY KEY      [ENT]
05:001(R&B Kit 1  )
```

5. Press [CURSOR ▶] twice to move the cursor to the lower right of the display.
6. Turn [VALUE] to choose the Rhythm Set containing the settings you wish to copy.
"TEMP" means the currently selected Rhythm Set.
7. Use [◀ CURSOR]/[CURSOR ▶] and [VALUE] to choose the Rhythm Set containing the settings you wish to copy (From), and the Rhythm Set to which you want to copy the settings (To).

```
COPY KEY      [ENT]
From:         F 5
```

8. Press [ENTER] to execute the Copy.
* To cancel, press [EXIT].
9. Press [EXIT] to return to the RHYTHM PLAY screen.
A "*" symbol appears at the left of the Rhythm Set name, indicating that the Copy has been executed.

Rhythm Set Name Copy

You can copy the name of a Rhythm Set to the current Rhythm Set.

1. Select the Rhythm Set whose name you wish to change.
2. Press [UTILITY] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the upper left of the display.
4. Turn [VALUE] to choose "COPY NAME."

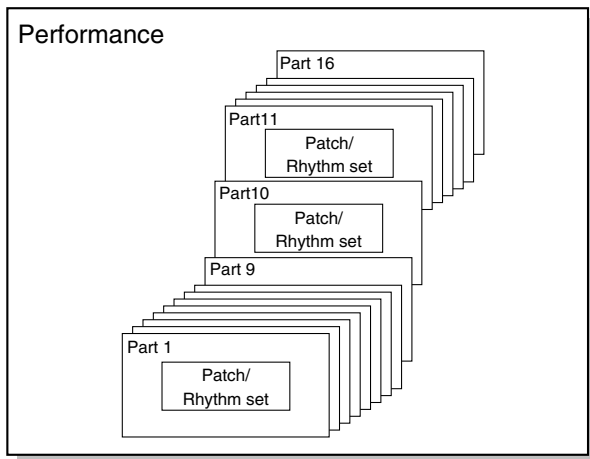
```
COPY NAME     [ENT]
05:001(R&B Kit 1  )
```

5. Press [CURSOR ▶] to move the cursor to the parameter at the lower left of the display.
6. Turn [VALUE] to choose the desired Rhythm Set whose name you wish to copy.
7. Press [ENTER] to execute the Copy.
* To cancel, press [EXIT].
8. Press [EXIT] to return to the RHYTHM PLAY screen.

Chapter 3 Creating a Performance

How a Performance Is Organized

In the XV-5050's Performance mode, you can play and control up to 16 instrument sounds at the same time, including Patches and/or Rhythm Sets. Such a set of sounds, as well as an effect setup, can be saved as a "Performance." Each Performance is comprised of 16 "Parts," each of which controls one of its sounds. Because the XV-5050 sound generator can play multiple sounds at the same time, it's called a "multitimbral sound module."



Basic Ways to Use Performances

There are three basic ways to use Performances.

Playing Multiple Layered Patches (Layer)

Refer to "Quick Start" (p. 25).

Playing Different Patches In Different Areas of the Keyboard (Split)

Refer to "Quick Start" (p. 28).

Using the XV-5050 as a Multitimbral Sound Module

In Performance mode, you can use the XV-5050 as a 16-part multitimbral sound module. Let's try choosing some Parts and their sounds, and then play the multiple Parts together as a Performance.

The basic steps for doing this include:

- Choosing the Parts to Play (p. 63)
- Choosing a Patch for each Part (p. 65)
- Setting the Parts' MIDI reception channels (p. 67)

After you've completed setting up your Performance, try playing a sequence from your computer or sequencer using the Performance's sounds.

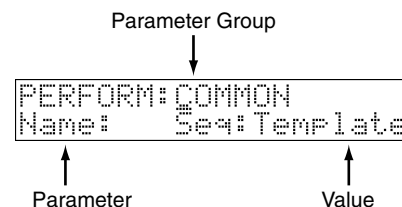
Turning a Part On or Off

Turn on each Part you wish to use.

1. Choose the Performance you wish to use.
2. Press [EDIT] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the parameter group in the upper line of the display.
4. Turn [VALUE] to select "MIDI."
5. Press [CURSOR ▶] to move the cursor to the parameter.
6. Turn [VALUE] to select "Rx Switch."
7. Press [CURSOR ▶] to move the cursor to the value.
8. Press [◀ PART]/[PART ▶] to select the Part you wish to turn on or off.
9. Turn [VALUE] to select "ON."
10. Press [EXIT] to return to the PERFORM PLAY screen.

How to Adjust a Performance Setting

1. Choose the Performance you wish to use.
2. Press [EDIT] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the parameter group in the upper line of the display.



4. Turn [VALUE] to choose "COMMON."
5. Press [CURSOR ▶] to move the cursor to the parameter.
6. Turn [VALUE] to choose the parameter you want to set.
7. Press [CURSOR ▶] to move the cursor to the value.
8. Turn [VALUE] to choose the desired value.
9. Press [EXIT] to return to the PERFORM PLAY screen.

A "*" symbol appears at the left of the Performance name, indicating that its settings have been changed.

The diagram shows a display screen with two lines of text. The top line is 'PERFORM: PLAY P 1' and the bottom line is '*PA:001 Seq: Template'. The asterisk at the beginning of the bottom line indicates that the settings have been changed.

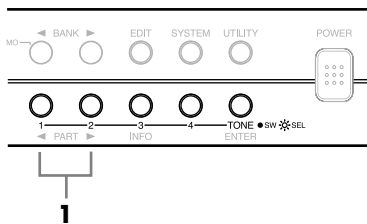
NOTE

If you turn off the power or choose another Performance while the "*" symbol is displayed, your new Performance settings will be lost. If you wish to preserve them, save the changed Performance using the Write operation. (p. 104)

Chapter 3 Creating a Performance

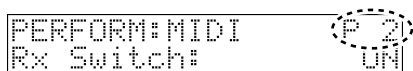
Selecting a Part for Editing

Some parameters can be set independently for each Part in a Performance.



1. In the **PERFORMANCE EDIT** screen, press [◀ PART]/[PART ▶] to choose the Part whose parameters you wish to edit.

The selected Part's number appears in the upper right of the display.



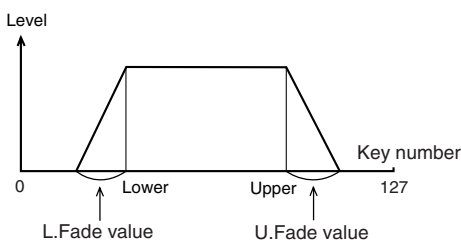
Establishing Settings for an Entire Performance (COMMON)

* Parameters that can be set independently for each Part are indicated by "P."

Parameter		Value	Description
COMMON			
Name	Performance Name	space, A–Z, a–z, 0–9, ! " # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ` { }	You can give a Performance a name of up to 12 characters. Use [◀ CURSOR]/[CURSOR ▶] to move the cursor to a character position, and then turn [VALUE] to choose the desired character.

Setting the Keyboard Range

You can set each Part's keyboard range (Key Range), the area on the keyboard in which the Part sounds. Adjust Part Key Ranges when you wish to divide the keyboard into areas with a different Patch in each area — this is called a "split."

Parameter		Value	Description	
COMMON				
Key Range L.Fade	Part Keyboard Fade Width Lower	0–127	Determines what happens to the Part’s level when a note that’s lower than its specified keyboard range is played. Higher settings result in a more gradual change in volume. If you don’t want the Part to sound at all when a note below the keyboard range is played, set this parameter to 0.	P
Key Range Lower	Part Keyboard Range Lower	C-1–UPPER	Specifies the lowest note that causes the Part to play its sound.	P
Key Range Upper	Part Keyboard Range Upper	LOWER–G9	Specifies the highest note that causes the Part to play its sound. * It is not possible to set Lower to a value greater than the Upper value, or Upper to a value less than the Lower value.	P
Key Range U.Fade	Part Keyboard Fade Width Upper	0–127	Determines what happens to the Part’s level when a note that’s higher than its specified keyboard range is played. Higher settings result in a more gradual change in volume. If you don’t want the Part to sound at all when a note above the keyboard range is played, set this parameter to 0. 	P

Other Settings

Parameter		Value	Description
COMMON			
MFX Control Ch	Multi-Effects Control Channel	1–16, OFF	Sets the channel that controls Multi-effects assigned to the Performance.
Solo Part Select		OFF, 1–16	Select the Part whose sound you want to hear. Parts other than the Part you choose here will not sound.

Settings for Each Part

Choosing a Part's Patch or Rhythm Set

You can choose the Patch or Rhythm Set that assigned to each Part.

Parameter	Value	Description
PART		
Part Type	PATCH, RHYTHM	Select the type of sound the Part plays.
Part Group	USER, PR-A-H, GM, XP-A, XP-B	Chooses the group (Bank) to which the desired Patch or Rhythm Set belongs. * It is not possible to choose XP-A, XP-B unless a wave expansion board is inserted into the corresponding slot. (p. 120)
(US:001-XB:***)	Patch/Rhythm Set Number	US:001-XB:*** Chooses the desired Patch or Rhythm Set by its number.

Setting a Part's Volume, Pan, Pitch, and Polyphony

You can set a Part's volume, panning, and the number of notes it can play simultaneously.

Parameter	Value	Description
PART		
Level	Part Level	0-127 Sets the volume of the Part. This setting's main purpose is to adjust the volume balance between Parts.
Pan	Part Pan	L64-63R Specifies the stereo position of the Part's sound. L64 pans the sound hard left, 0 puts it dead-center and 63R pans it hard right.
Voice Rsv	Voice Reserve	0-63, FULL Specifies the number of voices that reserved for each Part when more than 64 voices are played simultaneously. * It is not possible for the settings of all Parts to total an amount greater than 64. The remaining number of available voices is displayed in round brackets at the right of this parameter. Pay attention to this readout as you make set the Voice Reserve parameter.

Calculating the Number of Voices Being Used

The number of notes, or "voices," that the XV-5050 can sound simultaneously depends on the number of Tones in the Patches you're using and the number of keys being pressed. For example, if you play one note using a Patch that consists of only one Tone, you'll use up one voice of polyphony. XV-5050 Tones may use two Waveforms. If a Patch's Tone uses two Waveforms, the number of voices it requires is doubled. If two keys are pressed with a Patch that has four Tones, and each Tone uses two Waveforms, a total of sixteen voices are used.

This number is obtained by performing the following calculation. Count the number of Tones with two Waveforms and multiply this number by 2. Add the number of Tones that use one Waveform. Multiply this total by the number of keys pressed.

The XV-5050 can play up to 64 Tones simultaneously. When you're using the XV-5050 multitimbrally, keep this in mind, and adjust your Voice Reserve settings so that each Part is guaranteed at least the minimum number of voices it requires.

Editing the Attack and Release of a Part's Sound

You can determine how a Part plays a sound by setting it to modify the sound's programmed cutoff frequency, Resonance, Velocity Sense, and TVF and TVA Envelope attack and release time settings.

Parameter	Value	Description
PART		
Cutoff Offset	Part Cutoff Offset	-64+63 Raises or lowers the TVF cutoff frequency settings for each of the Tones in the Part's sound.
Resonance Offset	Part Resonance Offset	-64+63 Raises or lowers the TVF Resonance settings for each of the Tones in the Part's sound.
Attack Offset	Part Attack Time Offset	-64+63 Raises or lowers the TVF/TVA attack time (T1) settings for each of the Tones in the Part's sound.
Decay Offset	Part Decay Offset	-64+63 Raises or lowers the TVF/TVA attack time (T2 and T3) settings for each of the Tones in the Part's sound.
Release Offset	Part Release Time Offset	-64+63 Raises or lowers the TVF/TVA release time (T4) settings for each of the Tones in the Part's sound.
Vibrato Rate	Part Vibrato Rate	-64+63 Adjusts 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.
Vibrato Depth	Part Vibrato Depth	-64+63 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.
Vibrato Delay	Part Vibrato Delay	-64+63 Adjusts the delay time 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.
Velocity Sens	Part Velocity Sensitivity Offset	-63+63 Raises or lowers the VELOCITY V-Cutoff and the TVA V-Sens settings for each of the Tones in the Part's sound.

Chapter 3 Creating a Performance

Changing the Pitch

You can set the pitch and bend range each Part uses when playing its sound.

Parameter	Value	Description
PART		
Octave Shift	Part Octave Shift	-3+3
Coarse Tune	Part Coarse Tune	-48+48
Fine Tune	Part Fine Tune	-50+50
Bend Range	Part Pitch Bend Range	0-24, PATCH
Adjusts the pitch of the Part's sound up or down in units of an octave (+/-3 octaves).		
Adjusts the pitch of the Part's sound up or down in semitone steps over a range of +/-4 octaves.		
Adjusts the pitch of the Part's sound up or down in 1-cent steps (1/100th of a semitone) over a range of half a semitone up or down.		
Specifies the amount of pitch change that occurs when you move the Pitch Bend Lever. This overrides the sound's own pitch-bend settings. The amount of pitch change downward or upward that occurs when the lever is moved is the same for both its left and right directions (or down and up on some MIDI controllers). When PATCH is chosen, the bend range settings for the assigned Patch take effect.		

Changing the Way a Part's Sound is Played

You can set the MONO/POLY, Legato and Portamento each Part uses when playing its sound.

Parameter	Value	Description
PART		
Mono/Poly	Part Mono/Poly	MONO, POLY, PATCH
Legato Switch	Part Legato Switch	OFF, ON, PATCH
Portamento SW	Part Portamento Switch	OFF, ON, PATCH
Portamento Time	Part Portamento Time	0-127, PATCH
Sets how the Patch's notes play. The MONO setting is effective when playing a solo instrument Patch such as sax or flute. MONO: Only one note sounds at a time. POLY: Two or more notes can be played simultaneously. PATCH: The Part uses the Patch's Mono/Poly setting.		
Turn this parameter on when you want to use the Legato feature and off when you don't. Legato is a feature that works only when the Key Assign Mode is MONO. When Legato is ON, pressing one key when another is already pressed causes the currently playing note's pitch to change to that of the newly pressed key while continuing to sound. This can be effective when you wish to simulate performance techniques such as a guitarist's hammering on and pulling off strings. When PATCH is selected, the Patch's own settings take effect.		
Specifies whether the portament effect is applied (ON) or not (OFF). When PATCH is selected, the settings for the assigned Patch take effect.		
Specifies the time over which the pitch changes. Higher settings cause the pitch change to the next note to take more time. When PATCH is chosen, the settings for the assigned Patch take effect.		

What is Portamento?

Portamento is an effect that smoothly changes the pitch from the first-played key to the next-played key. When Key Assign is MONO, applying portamento produces an effect similar to the slide performance technique of a violinist. Portamento can also be applied when Key Assign is polyphonic (POLY).

Scale Tune

The XV-5050 allows you to use temperaments other than equal temperament.

One set of Scale Tune settings can be created in Patch mode. In Performance mode, each Part can have its own Scale Tune settings.

* The selected scale applies to MIDI messages received from an external MIDI device as well as to local sound generation.

Parameter	Value	Description
PART		
Key C-B Scale	Key Scale C-B	-64+63
Adjusts the pitch of each note in one-cent steps (1/100th of a semitone) relative to its equal-tempered pitch.		

<Equal Temperament>

This scale divides an octave into 12 equal parts using the tuning system that is most widely used in Western music.

<Pure Temperament>

With this tuning, the three fundamental chords sound richer compared to equal temperament. This effect only applies to one key, and transposition can produce less-pleasing results.

<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 XV-5050, you can use Arabian temperament in the three keys of G, C and F.

Example: Tonic C

Note name	Equal temperament	Pure temperament	Arabian scale temperament
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

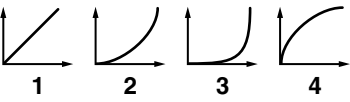
Establishing a Part's MIDI Settings

* Parameters that can be set independently for each Part are indicated by "P."

* Parameters that can be set independently for each MIDI channel are indicated by "C."

To choose the MIDI channel whose parameters you wish to set, press [◀ PART]/[PART ▶].

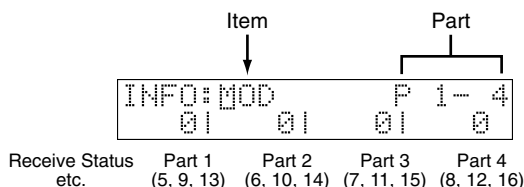
The selected MIDI channel's number appears in the upper right of the display.

Parameter		Value	Description	
MIDI				
Rx Channel	Receive Channel	1–16	Sets the MIDI channel to which the Part responds.	P
Rx Switch	Receive Switch	OFF, ON	This enables (ON) or disables (OFF) the Part's response to received MIDI messages.	P
Mute Switch		OFF, MUTE	This silences, or "mutes," the Part when set to MUTE. * Although the Part's sound is muted, the Part still receives MIDI messages. Thus, even when the Part's sound is switched on or off during playback of a song, the Part continues to keep up with the latest received MIDI data.	P
Rx Bank Select	Receive Bank Select Switch	OFF, ON	Sets whether the Part responds to received MIDI Bank Select messages (ON) or not (OFF).	C
Rx Prog Change	Receive Program Change Switch	OFF, ON	Sets whether the Part responds to received MIDI Program Change messages (ON) or not (OFF).	C
Rx Volume	Receive Volume Switch	OFF, ON	Sets whether the Part responds to received MIDI Volume messages (ON) or not (OFF).	C
Rx Pan	Receive Pan Switch	OFF, ON	Sets whether the Part responds to received MIDI Pan messages (ON) or not (OFF).	C
Rx Expression	Receive Expression Switch	OFF, ON	Sets whether the Part responds to received MIDI Expression messages (ON) or not (OFF).	C
Rx Hold-1	Receive Hold 1 Switch	OFF, ON	Sets whether the Part responds to received MIDI Hold 1 messages (ON) or not (OFF).	C
Rx Bender	Receive Pitch Bend Switch	OFF, ON	Sets whether the Part responds to received MIDI Bender messages (ON) or not (OFF).	C
Rx Modulation	Receive Modulation Switch	OFF, ON	Sets whether the Part responds to received MIDI Modulation messages (ON) or not (OFF).	C
Rx Ch Pressure	Receive Channel Pressure Switch	OFF, ON	Sets whether the Part responds to received MIDI Aftertouch messages (ON) or not (OFF).	C
Rx Poly Pressure	Receive Polyphonic Pressure Switch	OFF, ON	Sets whether the Part responds to received MIDI Polyphonic Aftertouch messages (ON) or not (OFF).	C
Velocity Curve		OFF, 1–4	For each Part, you can select from among four velocity curves to find the one that best matches the touch of the MIDI keyboard connected to the XV-5050. Set this to "OFF" if you're using the MIDI keyboard's own velocity curve. 	C
Phase Lock	Phase Lock Switch	OFF, ON	This setting activates (ON) or de-activates (OFF) synchronization of the timing of Parts that share a common MIDI channel. * When Part sounds are layered on top of each other as a result of sharing a MIDI channel, there may be a discrepancy in their timing. The Phase Lock feature can synchronize the sounds so that they start precisely at the same time. However, since this delays the sounds slightly in order to line them up, turn this feature off when it's not needed.	C

Confirming MIDI Information for Each Part (INFO)

In this display you can check the receive status of various types of MIDI message for each Part. This is a convenient way to check that the sound generator is responding correctly to messages from the keyboard or external MIDI controllers.

1. In Performance mode, press [INFO].



2. Turn [VALUE] to choose the item you wish to confirm.

3. Press [◀ PART]/[PART ▶] to choose the Part you wish to confirm.

4. Press [INFO] or [EXIT] to return to the previous screen.

Adjusting Effect Settings

Refer to "Performance Mode Settings" (p. 72).

Saving Performances You Create

Refer to "Saving a Performance" (p. 104).

Copying Settings from One Part to Another (Performance Part Copy)

Part settings from any Performance can be copied to the currently selected Part. This can save you time when setting up Parts.

1. Make sure that a Part is selected.
2. Press [UTILITY] to make its indicator light.
3. Press [◀ CURSOR] some times to move the cursor to the upper left of the display.
4. Turn [VALUE] to choose "COPY PART."

```
COPY PART      [ENT]
05:001(Voltage Ctrl)
```

5. Press [CURSOR ▶] twice to move the cursor to the lower right of the display.
6. Turn [VALUE] to choose the Performance containing the Part whose settings you wish to copy.
"TEMP" means the currently selected Performance.
7. Use [◀ CURSOR]/[CURSOR ▶] and [VALUE] to select the Part whose settings you want to copy (From) and the Part to which you want to copy those settings (To).

```
COPY PART      [ENT]
Eron:          PART 1
```

8. Press [ENTER] to execute the Copy.
* To cancel, press [EXIT].
9. Press [EXIT] to return to the PERFORM PLAY screen.
A "*" symbol appears at the left of the Performance name, indicating that the Copy has been executed.

Performance Name Copy

You can copy the name from any Performance to the current Performance.

1. Select the Performance whose name you want to change.
2. Press [UTILITY] to make its indicator light.
3. Press [◀ CURSOR] some times to move the cursor to the upper left of the display.
4. Turn [VALUE] to choose "COPY NAME."

```
COPY NAME      [ENT]
05:001(TripTheAlarm)
```

5. Press [CURSOR ▶] to move the cursor to the lower right of the display.
6. Turn [VALUE] to choose the desired Performance whose name you wish to copy.
7. Press [ENTER] to execute the Copy.
* To cancel, press [EXIT].
8. Press [EXIT] to return to the PERFORM PLAY screen.

Chapter 4 Using the XV-5050 Effects

This chapter explains how effects are applied in Patch/Rhythm Set mode or Performance mode.



For information about the application of effects in GM mode, refer to “Making Effects Settings in GM Mode (EFFECTS)” (p. 112).

Effect Types

The XV-5050 has the following four onboard effect processors, and settings can be made independently for each.

MFX (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.



In GM mode, you cannot use Multi-effects.

Chorus

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



A GM-exclusive Chorus can be used in GM mode.

Reverb

Reverb adds an ambience to sounds so they seem to be playing in an actual physical space. Five different types are offered, so you can select and use the type that suits your purpose.



A GM-exclusive Reverb is used in GM mode.

EQ (Equalizer)

Equalizer boosts or cuts specific frequencies within a sound to adjust the tone.

* Equalizer is set in System mode (p. 109).

Turning Effects On/Off

The XV-5050'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.

1. Hold down [SHIFT] and press [PATCH FINDER] to make its indicator blinking.

MFX	Chorus	Rev	EQ
ON	ON	ON	ON

2. Press [◀ CURSOR]/[CURSOR ▶] to select the effect that you wish to turn on/off.

3. Turn [VALUE] to select ON or OFF.

MEMO

Effect ON/OFF settings are global XV-5050 settings. These settings cannot be made for each Patch or Performance individually.

Patch/Rhythm Set Mode Settings

Only one Multi-effect, Chorus, or Reverb effect can be set for each Patch or Rhythm Set. You cannot apply differing types of Multi-effects, Chorus, or Reverb to each of the Tones or Rhythm Tones comprising the Patch or Rhythm Set.

Basic Process of Making Effects Settings

When applying effects in Patch/Rhythm Set mode, the following procedure is used to make the settings.

1. Setting the Output Method of the Direct Sound (Output Assign)

Settings determining whether or not the signal passes through the Multi-effects, the jack used to output the sound, and the type of output (stereo or mono) are made for each individual Patch or Rhythm Set, or each Tone or Rhythm Tone. -> (p. 71)

2. Setting the Amount of Each Effect Applied (Send Level)

Set the level (volume) of each effect signal to be sent for each Tone or Rhythm Tone. -> (p. 71)

3. Making Multi-Effects Settings

Select the type of Multi-effects to be used, and set the parameters for the selected Multi-effect. -> (pp. 74–101)

4. Setting the Multi-Effects Controller

When using MIDI messages to change the Multi-effects parameters in realtime, select the Multi-effects controller. -> (p. 74)

5. Setting the Output Destination and Volume for the Sounds Passing Through the Multi-Effects

Select the output jack and set the output level (volume) of the sounds passing through the Multi-effects. You can also apply Chorus or Reverb to the sound that passes through Multi-effects. -> (p. 74)

6. Making Chorus Settings

Select the Chorus type to be used, and set each of the parameters for the selected Chorus. -> (p. 74, p. 102)

7. Setting the Output Destination and Volume for the Sounds Passing Through the Chorus

Select the output jack and set the output level (volume) of the sounds passing through the Chorus. You can also apply Reverb to the sound that passes through Chorus. -> (p. 74)

8. Making Reverb Settings

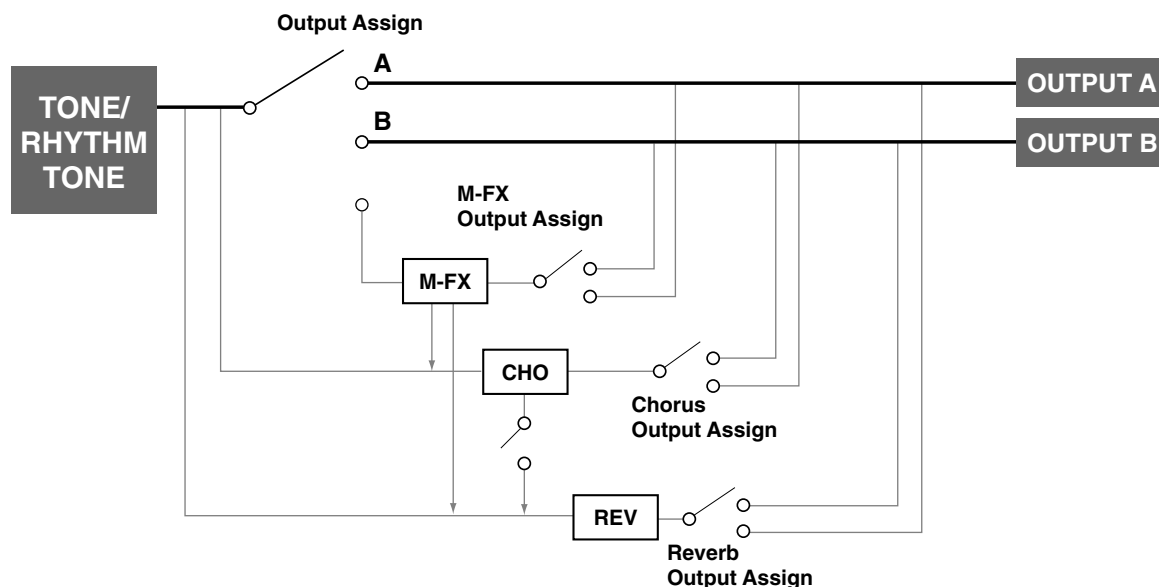
Select the Reverb type to be used, and set each of the parameters for the selected Reverb. -> (p. 74, p. 103)

9. Setting the Output Destination and Volume for the Sounds Passing Through the Reverb

Select the output jack and set the output level (volume) of the sounds passing through the Reverb. -> (p. 74)

Audio Signal Flow

The audio path of direct sounds or sounds that have been passed through the effects in Patch/Rhythm Set mode is shown in the figure below.



Setting Procedure

You can set the direct sound's output method and the amount of effect applied for each Tone or Rhythm Tone individually.

1. Choose the Patch/Rhythm Set you wish to use.
2. Press [EDIT] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the parameter group in the upper line of the display.
4. Turn [VALUE] to choose "EFFECTS."
5. Press [CURSOR ▶] to move the cursor to the parameter.
6. Turn [VALUE] to choose the parameter you want to set.
7. Choose the Tone/Rhythm Tone for which you want to make settings.

For more information on how to choose Tone/Rhythm Tone, refer to pages 39 and 56.

8. Press [CURSOR ▶] to move the cursor to the value.
9. Turn [VALUE] to select the desired setting.
10. Press [EXIT] to return to the PATCH/RHYTHM PLAY screen.

A "*" symbol appears at the left of the Patch/Rhythm Set name, indicating that its settings have been changed.

NOTE

If you turn off the power or choose another Patch/Rhythm Set while the "*" symbol is displayed, your new Patch/Rhythm Set settings will be lost. If you wish to preserve them, save the changed Patch/Rhythm Set using the Write operation. (p. 104)

Parameter		Value	Description
EFFECTS			
Output Asgn	Tone Output Assign	MFX, OUTPUT A/B, INDIV 1-4	Sets the direct sound's output method for each Tone or Rhythm Tone. MFX: Output in stereo through Multi-effects. You can also apply Chorus or Reverb to the sound that passes through Multi-effects. OUTPUT A/B: Output to the OUTPUT A (MIX) / B jacks in stereo without passing through Multi-effects. INDIV 1-4: Output to the INDIVIDUAL 1-4 jack in mono without passing through Multi-effects.
Output Level	Tone Output Level	0-127	Sets the direct sound's volume for each Tone or Rhythm Tone. When Multi-effects are being applied, this sets the amount of the effect that is applied; when Multi-effects are not applied, this sets the volume of the direct sound.
Chorus Send	Tone Chorus Send Level	0-127	Sets the chorus depth for individual Tone/Rhythm Tone. If you don't want to add the Chorus effect, set it to 0.
Reverb Send	Tone Reverb Send Level	0-127	Sets the reverb depth for individual Tone/Rhythm Tone. If you don't want to add the Reverb effect, set it to 0.

NOTE

- When the Output Assign parameter (p. 40)/(p. 55) is set to anything but TONE, the setting made here has no effect.
- When the Struct Type (PATCH:COMMON) parameter 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, the setting of Tone 1 will follow the setting of Tone 2, and the setting of Tone 3 will follow the setting of Tone 4 (p. 41).
- When outputting in mono, the Pan setting is disabled.
- Chorus and Reverb are output in mono at all times.
- 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. 107).



For more on how to set each effect, refer to the pages shown below.

- Multi-effects -> (p. 74, pp. 75-101)
- Chorus -> (p. 74, p. 102)
- Reverb -> (p. 74, p. 103)

Performance Mode Settings

Three different Multi-effects can be used in a Performance. Select which of these three Multi-effects to use with Part Output MFX Select. With this parameter, the same Multi-effects are applied to all selected Parts. You can adjust the amount of effect to be applied to the Parts by adjusting their Send Levels to each of the effect units.

The Send Level setting for each Tone can also influence effect intensity.

Furthermore, you can take the Multi-effects you have applied to a Patch in a Part and apply them to the entire Performance, or just part of the Performance.

Basic Process of Making Effects Settings

When applying effects in Performance mode, the following procedure is used to make the settings.

1. Setting the Output Method Used by the Direct Sound (Output Assign)

Settings determining whether or not the signal passes through the Multi-effects, the jack used to output the sound, and the type of output (stereo or mono) for each Part. You can also settings for a Patch or Rhythm Set assigned to a Part. -> (p. 73)

2. Setting the Amount of Each Effect Applied (Send Level)

Sets the level (volume) of each effect signal to be sent for each Part. -> (p. 73)

3. Making Multi-Effects Settings

Select the type of Multi-effects to be used, and set the parameters for the selected Multi-effect. You can also Multi-effects settings for a Patch or Rhythm Set assigned to a Part. -> (pp. 74–101)

4. Setting the Multi-Effects Controller

When using MIDI messages to change the Multi-effects parameters in realtime, select the Multi-effects controller. -> (p. 74)

5. Setting the Output Destination and Volume for the Sounds Passing Through the Multi-Effects

Select the output jack and set the output level (volume) of the sounds passing through the Multi-effects. You can also apply Chorus or Reverb to the sound that passes through Multi-effects. -> (p. 74)

6. Making Chorus Settings

Select the Chorus type to be used, and set each of the parameters for the selected Chorus. -> (p. 74, p. 102)

7. Setting the Output Destination and Volume for the Sounds Passing Through the Chorus

Select the output jack and set the output level (volume) of the sounds passing through the Chorus. You can also apply Reverb to the sound that passes through Chorus. -> (p. 74)

8. Making Reverb Settings

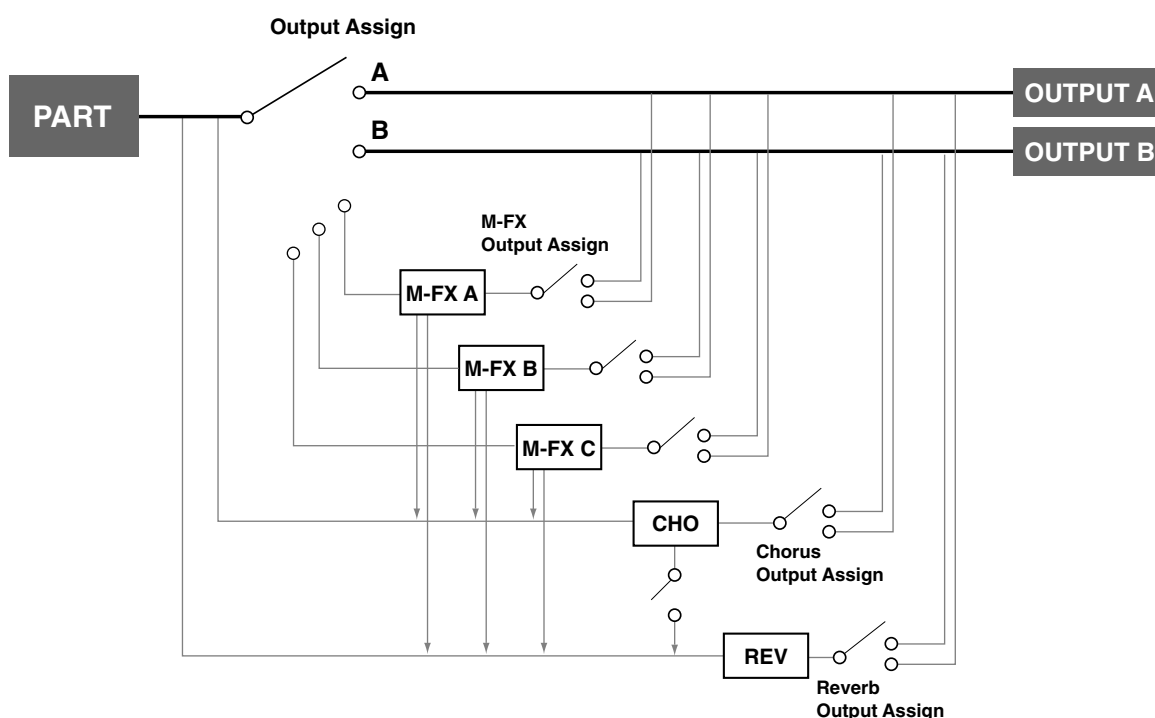
Select the Reverb type to be used, and set each of the parameters for the selected Reverb. -> (p. 74, p. 103)

9. Setting the Output Destination and Volume for the Sounds Passing Through the Reverb

Select the output jack and set the output level (volume) of the sounds passing through the Reverb. -> (p. 74)

Audio Signal Flow

The audio path of direct sounds or sounds that have been passed through the effects in Performance mode is shown in the figure below.



Setting Procedure

Here, set the way the direct sound is output and the amount of each effect to be applied. The settings made here determine whether or not the signal passes through the Multi-effects, the jack used to output the sound, and the type of output (stereo or mono).

1. Choose the Performance Set you wish to use.
2. Press [EDIT] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the parameter group in the upper line of the display.
4. Turn [VALUE] to choose "EFFECTS."
5. Press [CURSOR ▶] to move the cursor to the parameter.
6. Turn [VALUE] to choose the parameter you want to set.

7. Press [◀ PART]/[PART ▶] to choose the Part for which you want to make settings.

8. Press [CURSOR ▶] to move the cursor to the value.

9. Turn [VALUE] to select the desired setting.

10. Press [EXIT] to return to the PERFORM PLAY screen.

A "*" symbol appears at the left of the Performance name, indicating that its settings have been changed.

NOTE

If you turn off the power or choose another Performance while the "*" symbol is displayed, your new Performance settings will be lost. If you wish to preserve them, save the changed Performance using the Write operation. (p. 104)

Parameter		Value	Description
EFFECTS			
Output Asgn	Part Output Assign	MFX, OUTPUT A/B, INDIV 1-4, PATCH	Sets the direct sound's output method for each Part. MFX: Output in stereo through Multi-effects. You can also apply Chorus or Reverb to the sound that passes through Multi-effects. OUTPUT A/B: Output to the OUTPUT A (MIX)/B jacks in stereo without passing through Multi-effects. INDIV 1-4: Output to the INDIVIDUAL 1-4 jack in mono without passing through Multi-effects. PATCH: The Part's output destination is determined by the settings of the Patch or Rhythm Set assigned to the Part.
Output Level	Part Output Level	0-127	Sets the direct sound's volume for each Part.
Chorus Send	Part Chorus Send Level	0-127	Adjusts the amount of Chorus for each Part. If you don't want to add the Chorus effect, set it to 0.
Reverb Send	Part Reverb Send Level	0-127	Adjusts the amount of Reverb for each Part. If you don't want to add the Reverb effect, set it to 0.
Output Select	Part Output MFX Select	MFX-A-C	Selects which of the three Multi-effects is to be used.

NOTE

- When outputting in mono, the Pan setting is disabled.
- Chorus and Reverb are output in mono at all times.
- 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. 107).

HINT

When the Output Assign parameter is set to PATCH, the output level settings for the Patch or Rhythm Set as well as the Part go into effect. If you want the various level settings of the Patch/Rhythm Set to be reflected as they are, set the various Part levels to 127 (maximum).



For more on how to set each effect, refer to the pages shown below.

- Multi-effects -> (p. 74, pp. 75-101)
- Chorus -> (p. 74, p. 102)
- Reverb -> (p. 74, p. 103)

Multi-Effects Settings

Parameter		Value	Description
EFFECTS MFX			
Source	Multi-Effects Source	PERFORM, PART 1–16	Selects the Multi-effects parameter settings that will be used by the Performance. If you wish to use the Performance settings, select PERFORM. If you wish to use the settings of the Patch/Rhythm Set assigned to one of the Parts, select the Part number.
Type	Multi-Effects Type	00 (THROUGH) –90	Use this parameter to select from among the 90 available Multi-effects. * For details on Multi-effects parameters, refer to “Multi-Effects Parameters” (p. 75).
Ctrl Src 1–4	Multi-Effects Control Source 1–4	OFF, CC01–31, CC33–95, BEND, AFTER, SYS1–4	Selects the Control Source to be used for changing the Multi-effects parameters.
Ctrl Dest 1–4	Multi-Effects Control Destination 1–4	Refer to “Multi-Effects Parameters” (p. 75).	Selects the Multi-effects parameter to be controlled using Ctrl Src 1–4. The parameters that can be selected depend on which type of Multi-effects is set to MFX Type.
Ctrl Sens 1–4	Multi-Effects Control Sensitivity 1–4	–63– +63	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. Higher numbers produce a greater amount of change.
Output Asgn	Multi-Effects Output Assign	OUTPUT A/B	Adjusts the output destination of the sound that has passed through the Multi-effects. OUTPUT A: Output to the OUTPUT A (MIX) jacks in stereo. OUTPUT B: Output to the OUTPUT B jacks in stereo.
Output Dry Send	Multi-Effects Dry Send Level	0–127	Adjusts the volume of the sound that has passed through the Multi-effects.
Output Cho Send	Multi-Effects Chorus Send Level	0–127	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.
Output Rev Send	Multi-Effects Reverb Send Level	0–127	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.

Chorus Settings

Parameter		Value	Description
EFFECTS CHO			
Source	Chorus Source	PERFORM, PART 1–16	Selects the Chorus parameter settings that will be used by the Performance. If you wish to use the Performance settings, select PERFORM. If you wish to use the settings of the Patch/Rhythm Set assigned to one of the Parts, select the Part number.
Type	Chorus Type	OFF, CHORUS, DELAY, GM2 CHORUS	Selects either Chorus or Delay. * For details on Chorus parameters, refer to “Chorus Parameters” (p. 102).
Output Asgn	Chorus Output Assign	OUTPUT A/B	Selects the pair of OUTPUT jacks to which the Chorus sound is routed when Chorus Output Select is set to MAIN or MAIN+REV. OUTPUT A: Output to the OUTPUT A (MIX) jacks in stereo. OUTPUT B: Output to the OUTPUT B jacks in stereo.
Level	Chorus Level	0–127	Adjusts the volume of the sound that has passed through chorus.
Out Select	Chorus Output Select	MAIN, REV, MAIN+REV	Specifies how the sound routed through Chorus will be output. MAIN: Output to the OUTPUT jacks in stereo. REV: Output to Reverb in mono. MAIN+REV: Output to the OUTPUT jacks in stereo, and to Reverb in mono.

Reverb Settings

Parameter		Value	Description
EFFECTS REV			
Source	Reverb Source	PERFORM, PART 1–16	Selects the Reverb parameter settings that will be used by the Performance. If you wish to use the Performance settings, select PERFORM. If you wish to use the settings of the Patch/Rhythm Set assigned to one of the Parts, select the Part number.
Type	Reverb Type	OFF, REVERB, SRV ROOM, SRV HALL, SRV PLATE, GM2 REVERB	Selects the type of Reverb. * For details on Reverb parameters, refer to “Reverb Parameters” (p. 103).
Output Asgn	Reverb Output Assign	OUTPUT A/B	Specifies how the sound routed through Reverb will be output. OUTPUT A: Output to the OUTPUT A (MIX) jacks in stereo. OUTPUT B: Output to the OUTPUT B jacks in stereo.
Level	Reverb Level	0–127	Adjusts the volume of the sound that has passed through Reverb.

Multi-Effects Parameters

The multi-effects feature 90 different kinds of effects. Some of the effects consist of two or more different effects connected in series or in parallel.

Parameters marked with a sharp “#” can be simultaneously controlled using the selected controller.

1:	STEREO EQ	◆	(p. 76)
2:	OVERDRIVE	◆	(p. 76)
3:	DISTORTION	◆	(p. 76)
4:	PHASER	◆	(p. 76)
5:	SPECTRUM	◆	(p. 76)
6:	ENHANCER	◆	(p. 76)
7:	AUTO WAH	◆	(p. 77)
8:	ROTARY	◆	(p. 77)
9:	COMPRESSOR	◆	(p. 77)
10:	LIMITER	◆	(p. 77)
11:	HEXA-CHORUS	◆	(p. 78)
12:	TREMOLO CHO	◆	(p. 78)
13:	SPACE-D	◆	(p. 78)
14:	St CHORUS	◆	(p. 78)
15:	St FLANGER	◆	(p. 79)
16:	STEP FLANGER	◆	(p. 79)
17:	St DELAY	◆	(p. 79)
18:	MOD DELAY	◆	(p. 80)
19:	3 TAP DELAY	◆	(p. 80)
20:	4 TAP DELAY	◆	(p. 80)
21:	TM CTRL DLY	◆	(p. 81)
22:	2V PCH SHIFT	◆	(p. 81)
23:	FB PCH SHIFT	◆	(p. 81)
24:	REVERB		(p. 81)
25:	GATED REVERB		(p. 82)
26:	OD -> CHORUS	◆	(p. 82)
27:	OD -> FLANGER	◆	(p. 82)
28:	OD -> DELAY	◆	(p. 82)
29:	DIST -> CHORUS	◆	(p. 83)
30:	DIST -> FLANGER	◆	(p. 83)
31:	DIST -> DELAY	◆	(p. 83)
32:	ENH -> CHORUS	◆	(p. 83)
33:	ENH -> FLANGER	◆	(p. 83)
34:	ENH -> DELAY	◆	(p. 83)
35:	CHORUS -> DELAY	◆	(p. 84)
36:	FLG -> DELAY	◆	(p. 84)
37:	CHO -> FLANGER	◆	(p. 84)
38:	CHORUS/DELAY	◆	(p. 84)
39:	FLG/DELAY	◆	(p. 84)
40:	CHO/FLANGER	◆	(p. 85)
41:	St PHASER	◆	(p. 85)
42:	KEYSYNC FLG		(p. 85)
43:	FORMANT FLTR		(p. 86)
44:	RING MOD	◆	(p. 86)
45:	MLT TAP DLY	◆	(p. 86)
46:	REVERSE DLY		(p. 86)

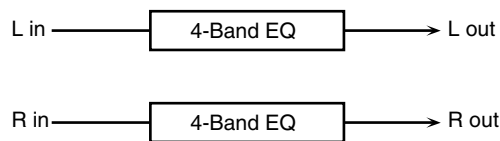
47:	SHUFFLE DLY		(p. 87)
48:	3D DELAY		(p. 87)
49:	3V PCH SHIFT		(p. 87)
50:	LOFI COMP		(p. 88)
51:	LOFI NOISE		(p. 88)
52:	SPEAKER SIM	◆	(p. 88)
53:	OVERDRIVE 2	◆	(p. 88)
54:	DISTORTION 2	◆	(p. 89)
55:	STEREO COMP	◆	(p. 89)
56:	St LIMITER	◆	(p. 89)
57:	GATE	◆	(p. 89)
58:	SLICER	◆	(p. 90)
59:	ISOLATOR		(p. 90)
60:	3D CHORUS		(p. 90)
61:	3D FLANGER		(p. 91)
62:	TREMOLO	◆	(p. 91)
63:	AUTO PAN	◆	(p. 91)
64:	St PHASER 2		(p. 91)
65:	St AUTO WAH		(p. 92)
66:	St FORMN FLT		(p. 92)
67:	MLT TAP DLY2		(p. 92)
68:	REVERSE DLY2		(p. 92)
69:	SHUFFLE DLY2		(p. 93)
70:	3D DELAY 2		(p. 93)
71:	ROTARY 2		(p. 93)
72:	ROTARY MULTI		(p. 94)
73:	KEYBD MULTI		(p. 94)
74:	RHODES MULTI		(p. 95)
75:	JD MULTI		(p. 95)
76:	St LOFI COMP		(p. 96)
77:	St LOFI NOIZ		(p. 96)
78:	GTR AMP SIM		(p. 97)
79:	STEREO OD		(p. 97)
80:	STEREO DIST		(p. 97)
81:	GTR MULTI A		(p. 98)
82:	GTR MULTI B		(p. 98)
83:	GTR MULTI C		(p. 99)
84:	CL GTR MLT A		(p. 99)
85:	CL GTR MLT B		(p. 100)
86:	BASS MULTI		(p. 100)
87:	ISOLATOR 2		(p. 101)
88:	St SPECTRUM		(p. 101)
89:	3D AUTO SPIN		(p. 101)
90:	3D MANUAL		(p. 101)

If a multi-effect marked by a “◆” symbol is selected as the MFX-A multi-effect in Performance mode, three types (MFX-A–MFX-C) of multi-effect can be used simultaneously. Only multi-effects marked by this symbol can be selected for MFX-B and MFX-C.

Chapter 4 Using the XV-5050 Effects

1: STEREO EQ (Stereo Equalizer)

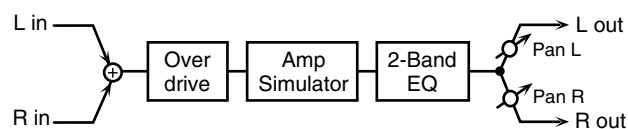
This is a four-band stereo equalizer (low, mid x 2, high).



Parameter	Value	Description
Low Freq	200, 400 Hz	Frequency of the low range
Low Gain	-15+15 dB	Gain of the low frequency range
Mid1 Freq	200-8000 Hz	Frequency of Middle Range 1
Mid1 Gain	-15+15 dB	Gain of Middle Range 1
Mid1 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of Middle Range 1 Select a higher Q value to narrow Middle Range 1.
Mid2 Freq	200-8000 Hz	Frequency of Middle Range 2
Mid2 Gain	-15+15 dB	Gain of Middle Range 2
Mid2 Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of Middle Range 2 Select a higher Q value to narrow Middle Range 2.
High Freq	2000, 4000, 8000 Hz	Frequency of the high range
High Gain	-15+15 dB	Gain of the high frequency range
Level #	0-127	Output level

2: OVERDRIVE

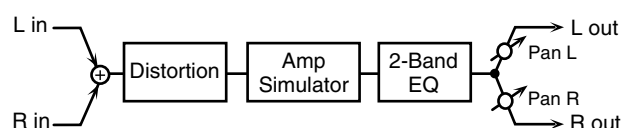
Creates a soft distortion similar to that produced by vacuum tube amplifiers.



Parameter	Value	Description
Drive #	0-127	Amount of distortion Also changes the volume.
Amp Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp SMALL: small amp BUILT-IN: single-unit type amp 2-STACK: large double-stack amp 3-STACK: large triple-stack amp
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Level	0-127	Output level
Pan #	L64-63R	Stereo location of the OVERDRIVE output

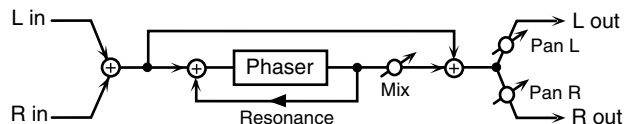
3: DISTORTION

Produces a more intense distortion than Overdrive. The parameters are the same as for "2: OVERDRIVE."



4: PHASER

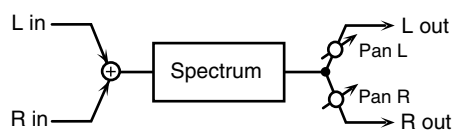
Adds a phase-shifted sound to the original sound, producing a swirling modulation that creates spaciousness and depth.



Parameter	Value	Description
Manual #	100-8000 Hz	Adjusts the basic frequency at which the sound will be modulated.
Rate #	0.05-10.00 Hz	Frequency of modulation
Depth	0-127	Depth of modulation
Resonance	0-127	Amount of feedback
Mix Level	0-127	Level of the phase-shifted sound
Level	0-127	Output Level
Pan	L64-63R	Stereo location of the PHASER output

5: SPECTRUM

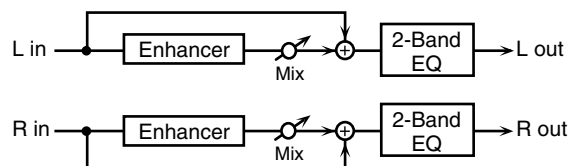
This is a type of filter that modifies the timbre by boosting or cutting the level of specific frequencies. It is similar to an equalizer, but has eight frequency points fixed at locations most useful for adding character to the sound.



Parameter	Value	Description
250Hz Gain	-15+15 dB	Gain of each frequency band
500Hz Gain		
1000Hz Gain		
1250Hz Gain		
2000Hz Gain		
3150Hz Gain		
4000Hz Gain		
8000Hz Gain		
Band Width Q	0.5, 1.0, 2.0, 4.0, 8.0	Simultaneously adjusts the width of the adjusted ranges for all of the frequency bands.
Level #	0-127	Output level
Pan #	L64-63R	Stereo location of the SPECTRUM output

6: ENHANCER

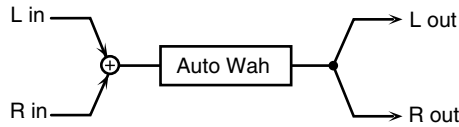
Controls the overtone structure of the high frequencies, adding sparkle and brightness to the sound.



Parameter	Value	Description
Sens #	0-127	Sensitivity of the enhancer
Mix #	0-127	Level of the overtones generated by the enhancer
Low Gain	-15+15 dB	Gain of the low frequency range of frequencies
High Gain	-15+15 dB	Gain of the high frequency range of frequencies
Level	0-127	Output level

7: AUTO WAH

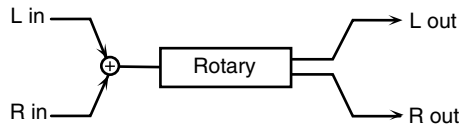
A filter that turns on and off to create a cyclical change in timbre.



Parameter	Value	Description
Filter Type	LPF, BPF	Type of filter LPF: The wah effect is applied over a wide frequency range. BPF: The wah effect is applied over a narrow frequency range
Sens	0-127	Adjusts the sensitivity with which the filter is controlled.
Manual #	0-127	Adjusts the center frequency at which the effect is applied.
Peak	0-127	Adjusts the amount of the wah effect that occurs in the range of the center frequency. Set a higher value for Q to narrow the range to be affected.
Rate #	0.05-10.00 Hz	Frequency of modulation
Depth	0-127	Depth of modulation
Level	0-127	Output level

8: ROTARY

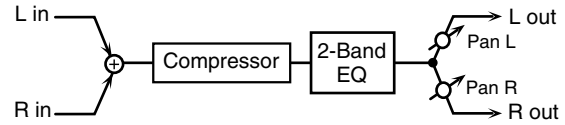
The Rotary effect simulates the sound of the rotary speakers often used with the classic electric organs. Since the movement of the high-range and low-range rotors can be set independently, the unique characteristics of these speakers can be simulated quite accurately. This effect is most suitable for electric organ Patches.



Parameter	Value	Description
Speed #	SLOW, FAST	Simultaneously switches the rotational speed of the low frequency rotor and high frequency rotor. SLOW: Slows down the speed to the Slow Rate. FAST: Speeds up the speed to the Fast Rate.
Low Slow	0.05-10.00 Hz	Slow speed (SLOW) of the low-frequency rotor
Low Fast	0.05-10.00 Hz	Fast speed (FAST) of the low-frequency rotor
Low Accel	0-15	Adjusts the time it takes the low frequency rotor to reach the newly selected speed when switching between fast and slow speeds. Lower values result in longer transitions.
Low Level	0-127	Volume of the low frequency rotor
High Slow	0.05-10.00 Hz	Settings for the high-frequency rotor The parameters are the same as for the low-frequency rotor
High Fast	0.05-10.00 Hz	
High Accel	0-15	
High Level	0-127	
Separation	0-127	Stereo width of the sound
Level #	0-127	Output level

9: COMPRESSOR

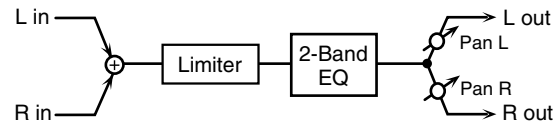
Flattens out high levels and boosts low levels, smoothing out fluctuations in volume.



Parameter	Value	Description
Attack	0-127	Sets the speed at which compression starts
Sustain	0-127	Sets the duration of the compression.
Post Gain	0, +6, +12, +18 dB	Adjusts the output gain.
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Level #	0-127	Output level
Pan #	L64-63R	Stereo location of the COMPRESSOR output

10: LIMITER

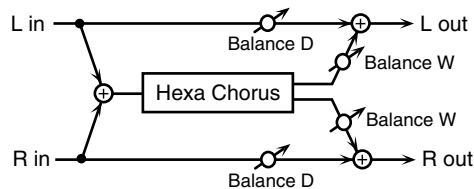
Compresses signals that exceed a specified volume level, preventing distortion from occurring.



Parameter	Value	Description
Threshold	0-127	Adjusts the volume at which compression begins
Ratio	1.5:1, 2:1, 4:1, 100:1	Compression ratio
Release	0-127	Adjusts the time after the signal volume falls below the Threshold Level until compression is no longer applied.
Post Gain	0, +6, +12, +18 dB	Adjusts the output gain.
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Level #	0-127	Output level
Pan #	L64-63R	Stereo location of the LIMITER output

11: HEXA-CHORUS

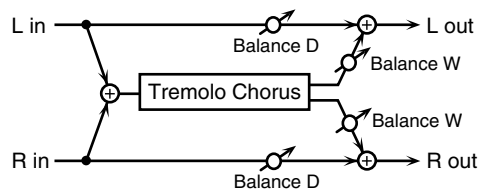
Uses a six-phase chorus (six layers of chorused sound) to give richness and spaciousness to the sound.



Parameter	Value	Description
Rate #	0.05-10.00 Hz	Frequency of modulation
Depth	0-127	Depth of modulation
Depth Deviation	-20-+20	Adjusts the difference in modulation depth between each chorus layer.
Pre Delay	0.0-100.0 ms	Adjusts the time until chorusing is heard.
Delay Deviation	0-20	Adjusts the differences in Pre Delay between each chorus layer.
Pan Deviation	0-20	Adjusts the difference in stereo location between each chorus layer. 0: All chorus layers are in the center. 20: The chorus layers are spaced at 60-degree intervals relative to the center.
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0-127	Output level

12: TREMOLO CHO (Tremolo Chorus)

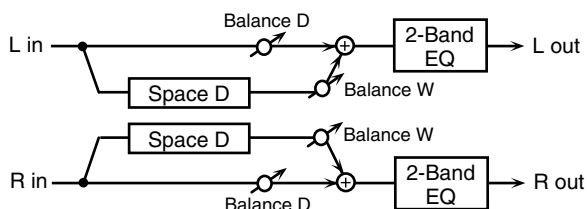
This is a chorus effect with added Tremolo (cyclic modulation of volume).



Parameter	Value	Description
Cho Rate	0.05-10.00 Hz	Modulation frequency of the chorus effect
Chorus Depth	0-127	Modulation depth of the chorus effect
Pre Delay	0.0-100.0 ms	Adjusts the time until the chorus sound is heard.
Trem1 Rate #	0.05-10.00 Hz	Modulation frequency of the tremolo effect
Phase	0-180 deg	Depth of the tremolo effect
Trem1 Separation	0-127	Spread of the tremolo effect
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the tremolo chorus sound (W)
Level	0-127	Output level

13: SPACE-D

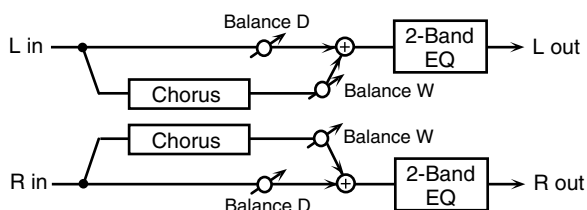
This is a multiple chorus that applies two-phase modulation in stereo. It creates no audible modulation, yet produces a transparent chorus effect.



Parameter	Value	Description
Cho Rate #	0.05-10.00 Hz	Frequency of modulation
Cho Depth	0-127	Depth of modulation
Cho Phase	0-180 deg	Spatial spread of the sound
Pre Delay	0.0-100.0 ms	Adjusts the time until the chorus sound is heard.
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0-127	Output level

14: ST CHORUS (Stereo Chorus)

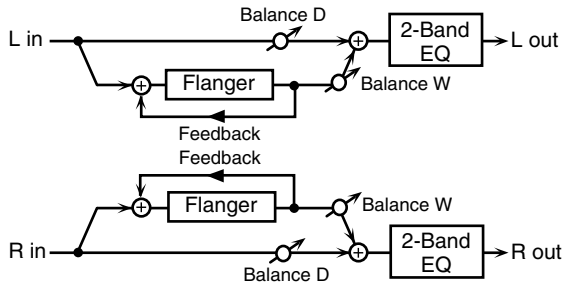
This is a stereo chorus. A filter is provided so that you can adjust the timbre of the chorused sound.



Parameter	Value	Description
Rate #	0.05-10.00 Hz	Frequency of modulation
Depth	0-127	Depth of modulation
Phase	0-180 deg	Spatial spread of the sound
Pre Delay	0.0-100.0 ms	Adjusts the time until the chorus sound is heard.
Filter Type	OFF, LPF, HPF	Type of filter OFF: no filter is used LPF: cuts the frequency range above the Cutoff Freq HPF: cuts the frequency range below the Cutoff Freq
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Level	0-127	Output level

15: St FLANGER (Stereo Flanger)

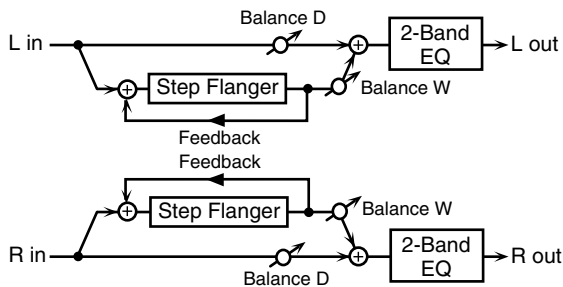
This is a stereo flanger. (The LFO has the same phase for left and right.) It produces a metallic resonance that rises and falls somewhat like a jet airplane taking off or landing. A filter is provided so that you can adjust the timbre of the flanged sound.



Parameter	Value	Description
Rate #	0.05-10.00 Hz	Frequency of modulation
Depth	0-127	Depth of modulation
Feedback #	-98+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
Phase	0-180 deg	Spatial spread of the sound
Pre Delay	0.0-100.0 ms	Adjusts the time until the flanger sound is heard.
Filter Type	OFF, LPF, HPF	Type of filter OFF : no filter is used LPF : cuts the frequency range above the Cutoff Freq HPF : cuts the frequency range below the Cutoff Freq
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Balance	D100:0W-D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0-127	Output level

16: STEP FLANGER

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

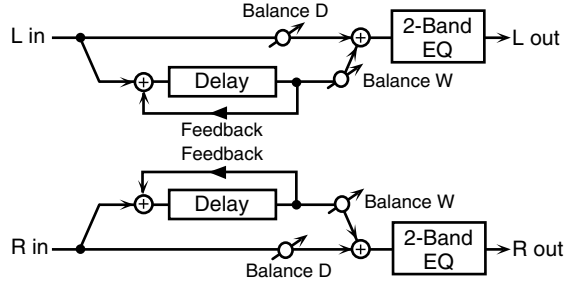


Parameter	Value	Description
Rate	0.05-10.00 Hz	Frequency of modulation
Depth	0-127	Depth of modulation
Feedback #	-98+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
Phase	0-180 deg	Spatial spread of the sound
Pre Delay	0.0-100.0 ms	Adjusts the time until the flanger sound is heard.
Step Rate #	0.10-20.00 Hz, note *1	Rate (period) of pitch change
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Balance	D100:0W-D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0-127	Output level

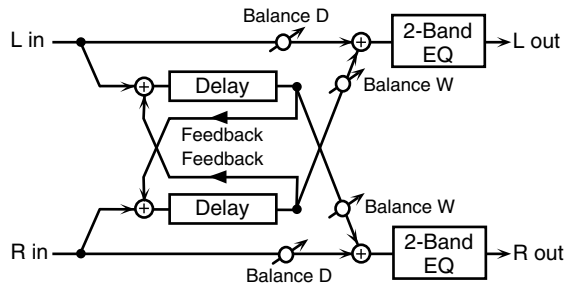
17: St DELAY (Stereo Delay)

This is a stereo delay.

When Mode is NORMAL:



When Mode is CROSS:

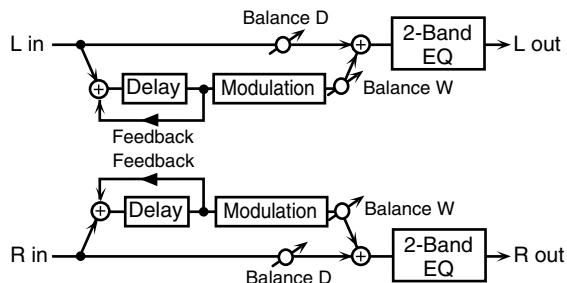


Parameter	Value	Description
Delay L	0.0-500.0 ms	Adjusts the time until the delay sound is heard.
Delay R		
Feedback #	-98+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect. (See the figures above.)
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Phase L	NORMAL, INVERT	Phase of the delay sound
Phase R		
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0-127	Output level

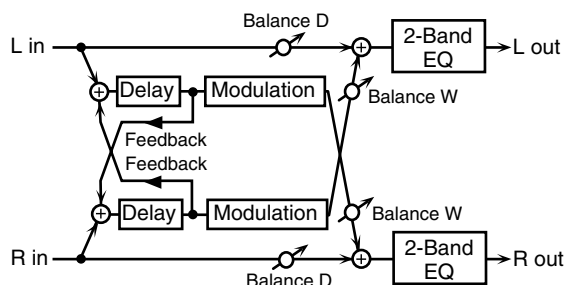
18: MOD DELAY (Modulation Delay)

Adds modulation to the delayed sound, producing an effect similar to a flanger.

When Mode is **NORMAL**:



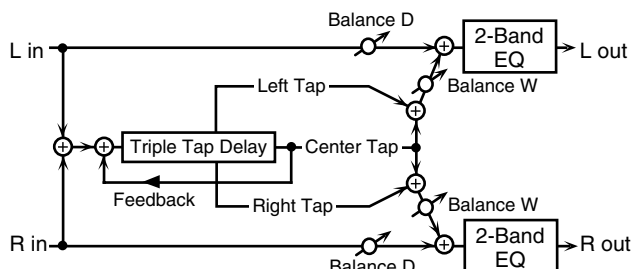
When Mode is **CROSS**:



Parameter	Value	Description
Delay Left	0.0-500.0 ms	Adjusts the time until the delay sound is heard.
Delay Right		
Feedback	-98-+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
Mode	NORMAL, CROSS	Selects the way in which delay sound is fed back into the effect (See the figures above.)
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Rate #	0.05-10.00 Hz	Frequency of modulation
Depth	0-127	Depth of modulation
Phase	0-180 deg	Spatial spread of the sound
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0-127	Output level

19: 3 TAP DELAY (Triple Tap Delay)

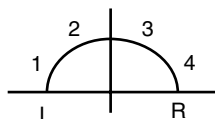
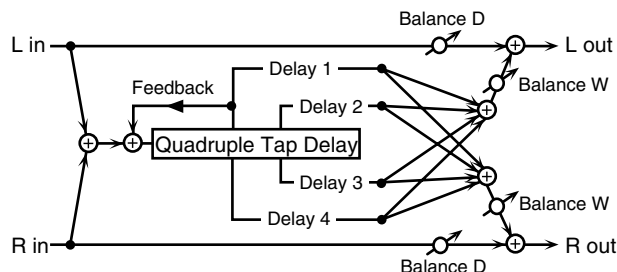
Produces three delay sounds; center, left and right.



Parameter	Value	Description
Delay C	200-1000 ms, note *1	Adjusts the time until the delay sound is heard.
Delay L		
Delay R		
Feedback #	-98-+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Delay C Level	0-127	Volume of each delay
Delay L Level		
Delay R Level		
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0-127	Output level

20: 4 TAP DELAY (Quadruple Tap Delay)

This effect has four delays.

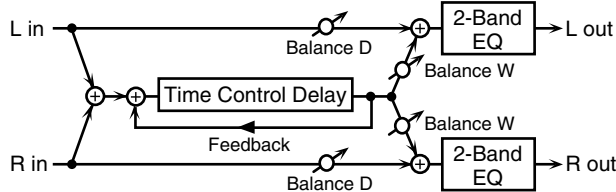


Stereo location of each delay

Parameter	Value	Description
Delay 1	200-1000 ms, note *1	Adjusts the time until the delay sound is heard.
Delay 2		
Delay 3		
Delay 4		
Feedback #	-98-+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Delay Level 1	0-127	Volume of each delay
Delay Level 2		
Delay Level 3		
Delay Level 4		
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0-127	Output level

21: TM CTRL DLY (Time Control Delay)

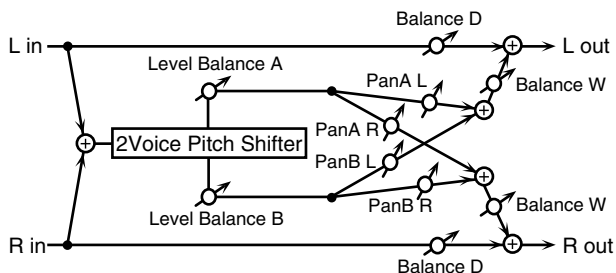
This effect allows you to use a specified controller — the controller selected in EFX Control Source — to control the delay time and pitch in realtime. Lengthening the delay lowers the pitch, and shortening it raises the pitch.



Parameter	Value	Description
Delay #	200-1000 ms	Adjusts the time until the delay is heard.
Acceleration	0-15	Adjusts the time over which the Delay Time changes from the current setting to a specified new setting. The rate of change for the Delay Time directly affects the rate of pitch change.
Feedback #	-98-+98 %	Adjusts the amount of the delay that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Balance	D100:0W- D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Level	0-127	Output level
Pan	L64-63R	Stereo location of the delay

22: 2V PCH SHIFT (2-Voice Pitch Shifter)

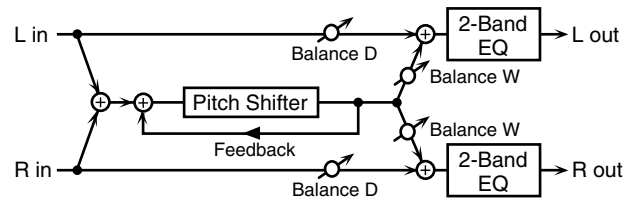
Shifts the pitch of the original sound. This 2-voice pitch shifter has two pitch shifters, and can add two pitch-shifted versions of the original sound.



Parameter	Value	Description
Coarse A #1	-24-+12 semi	Adjusts the pitch of Pitch Shift A in semitone steps.
Fine A #1	-100-+100 cent	Adjusts the pitch of Pitch Shift A in 2-cent steps.
Pre Dly A	0.0-500 ms	Adjusts the time until Pitch Shift A is heard.
Pan A	L64-63R	Stereo location of Pitch Shift A
Coarse B #2	-24-+12 semi	Settings for Pitch Shift B The parameters are the same as for Pitch Shift A.
Fine B #2	-100-+100 cent	
Pre Dly B	0.0-500.0 ms	
Pan B	L64-63R	
Mode	1, 2, 3, 4, 5	Setting a higher value for this parameter results in a slower response, but steadier pitch.
Level Bal	A100:0B- A0:100B	Volume balance between Pitch Shift A and Pitch Shift B
Balance	D100:0W- D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Level	0-127	Output level

23: FB PCH SHIFT (Feedback Pitch Shifter)

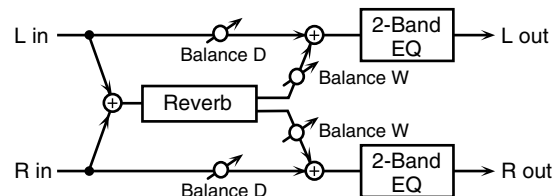
This allows the pitch-shifted sound to be fed back into the effect.



Parameter	Value	Description
Coarse #1	-24-+12 semi	Adjusts the pitch of the pitch-shifted sound in semitone steps.
Fine #1	-100-+100 cent	Adjusts the pitch of the pitch-shifted sound in 2-cent steps.
Pre Delay	0.0-500.0 ms	Adjusts the time until the pitch shifted sound is heard.
Mode	1, 2, 3, 4, 5	Setting a higher value for this parameter results in a slower response, but steadier pitch.
Feedback #	-98-+98 %	Adjusts the amount of the pitch-shifted sound that's fed back into the effect. Negative (-) settings invert the phase.
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Balance	D100:0W- D0:100W	Volume balance between the direct sound (D) and the pitch-shifted sound (W)
Level	0-127	Output level
Pan	L64-63R	Stereo location of the pitch-shifted sound

24: REVERB

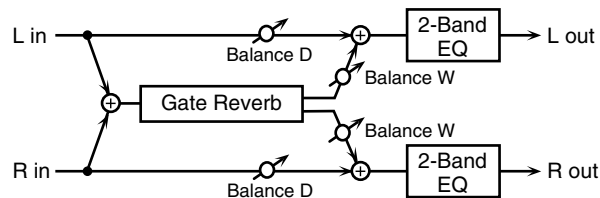
Adds reverberation to the sound, simulating an acoustic space.



Parameter	Value	Description
Type	ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2	Type of reverb ROOM1: dense reverb with short decay ROOM2: sparse reverb with short decay STAGE1: reverb with fewer early reflections STAGE2: reverb with strong early reflections HALL1: clear reverb HALL2: rich reverb
Pre Delay	0.0-100.0 ms	Adjusts the time until the reverb is heard.
Time #	0-127	Duration of reverberation
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which the reverb is reduced in level. As the frequency is set lower, more of the high frequencies are cut, resulting in a softer and more muted reverb. If you don't want to cut any high frequencies, set this parameter to BYPASS.
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Balance #	D100:0W- D0:100W	Volume balance between the direct sound (D) and the reverb sound (W)
Level	0-127	Output level

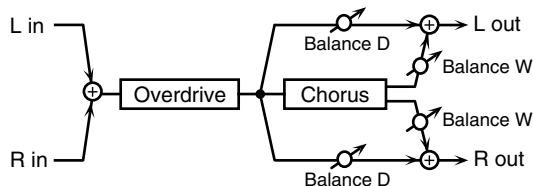
25: GATED REVERB

This is a special type of reverb in which the reverb is cut off without being allowed to decay naturally.



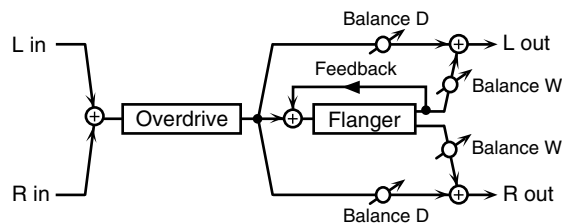
Parameter	Value	Description
Type	NORMAL, REVERSE, SWEEP1, SWEEP2	Type of reverb NORMAL: conventional gated reverb REVERSE: backwards reverb SWEEP1: the reverb moves from right to left SWEEP2: the reverb moves from left to right
Pre Delay	0.0-100.0 ms	Adjusts the time until the reverb sound is heard.
Gate Time	5-500 ms	Adjusts the time from when the reverb is first heard until it disappears.
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the reverb sound (W)
Level #	0-127	Output level

26: OD -> CHORUS



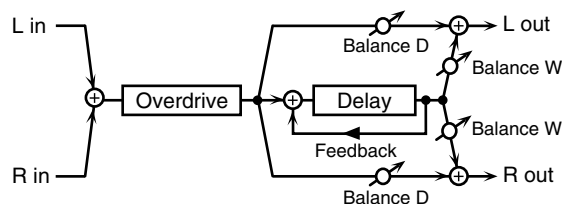
Parameter	Value	Description
OD Drive	0-127	Degree of distortion Also changes the volume.
OD Pan #	L64-63R	Stereo location of the overdrive
Cho Rate	0.05-10.00 Hz	Frequency of modulation
Cho Depth	0-127	Depth of modulation
Cho Delay	0.0-100.0 ms	Adjusts the time until the chorus sound is heard.
Cho Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound sent through the chorus (W) and the sound that's not sent through the chorus (D).
Level	0-127	Output level

27: OD -> FLANGER



Parameter	Value	Description
OD Drive	0-127	Degree of distortion Also changes the volume.
OD Pan #	L64-63R	Stereo location of the overdrive
Flg Rate	0.05-10.00 Hz	Frequency of modulation
Flg Depth	0-127	Depth of modulation
Flg Feedback	-98+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
Flg Delay	0.0-100.0 ms	Adjusts the time until the flanger is heard.
Flg Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound sent through the flanger (W) and the sound that's not sent through the flanger (D).
Level	0-127	Output level

28: OD -> DELAY

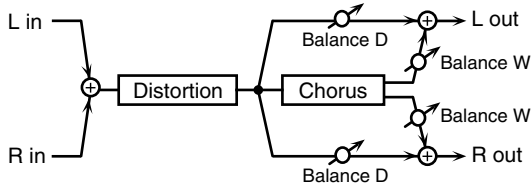


Parameter	Value	Description
OD Drive	0-127	Degree of distortion Also changes the volume.
OD Pan #	L64-63R	Stereo location of the overdrive
Delay Time	0.0-500.0 ms	Adjusts the time until the delay is heard.
Dly Feedback	-98+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
Dly HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Dly Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound sent through the delay (W) and the sound that's not sent through the delay (D).
Level	0-127	Output level

29: DIST -> CHORUS

The parameters are essentially the same as in "26: OD -> CHORUS," with the exception of the following two.

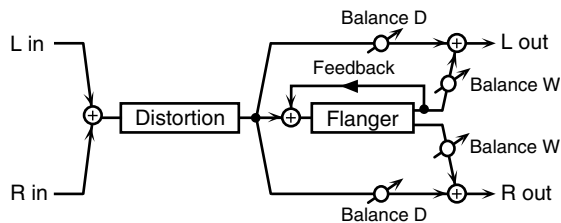
OD Drive -> Dist Drive, OD Pan -> Dist Pan



30: DIST -> FLANGER

The parameters are essentially the same as in "27: OD -> FLANGER," with the exception of the following two.

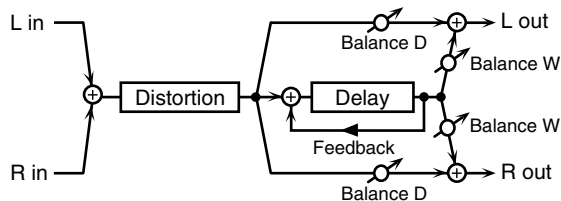
OD Drive -> Dist Drive, OD Pan -> Dist Pan



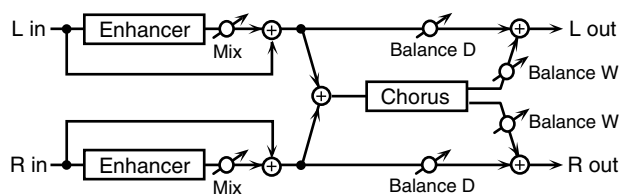
31: DIST -> DELAY

The parameters are essentially the same as in "28: OD -> DELAY," with the exception of the following two.

OD Drive -> Dist Drive, OD Pan -> Dist Pan

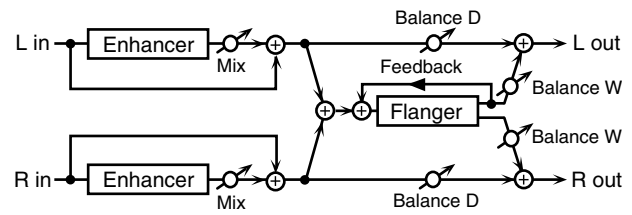


32: ENH -> CHORUS



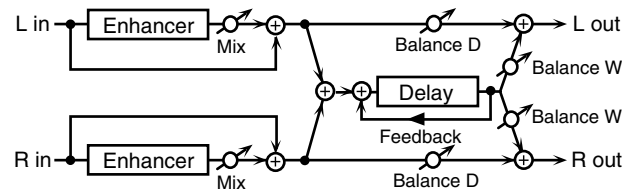
Parameter	Value	Description
Enhancer Sens #	0-127	Sensitivity of the enhancer
Enhancer Mix	0-127	Level of the overtones generated by the enhancer
Cho Rate	0.05-10.00 Hz	Frequency of modulation
Cho Depth	0-127	Depth of modulation
Cho Delay	0.0-100.0 ms	Adjusts the time until the chorus is heard.
Cho Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound sent through the chorus (W) and the sound that's not sent through the chorus (D).
Level	0-127	Output level

33: ENH -> FLANGER



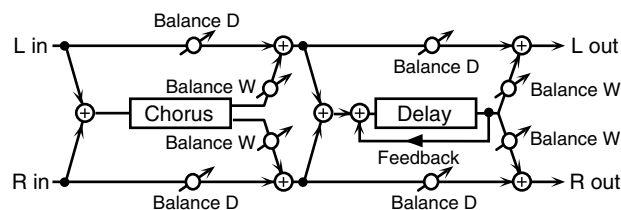
Parameter	Value	Description
Enhancer Sens #	0-127	Sensitivity of the enhancer
Enhancer Mix	0-127	Level of the overtones generated by the enhancer
Flg Rate	0.05-10.00 Hz	Frequency of modulation
Flg Depth	0-127	Depth of modulation
Flg Feedback	-98+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
Flg Delay	0.0-100.0 ms	Adjusts the time until the flanger is heard.
Flg Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound sent through the flanger (W) and the sound that's not sent through the flanger (D).
Level	0-127	Output level

34: ENH -> DELAY



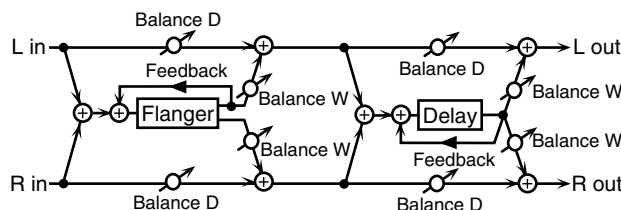
Parameter	Value	Description
Enhancer Sens #	0-127	Sensitivity of the enhancer
Enhancer Mix	0-127	Level of the overtones generated by the enhancer
Delay Time	0.0-500.0 ms	Adjusts the time until the delay is heard.
Dly Feedback	-98+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings will invert the phase.
Dly HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Dly Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound sent through the delay (W) and the sound that's not sent through the delay (D).
Level	0-127	Output level

35: CHORUS -> DELAY



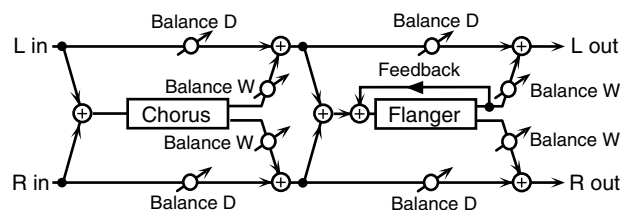
Parameter	Value	Description
Cho Rate	0.05-10.00 Hz	Frequency of modulation
Cho Depth	0-127	Depth of modulation
Cho Delay	0.0-100.0 ms	Adjusts the time until the chorus is heard.
Cho Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Delay Time	0.0-500.0 ms	Adjusts the time until the delay is heard.
Dly Feedback	-98+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
Dly HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any the high frequencies, set this parameter to BYPASS.
Dly Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound sent through the delay (W) and the sound that's not sent through the delay (D).
Level	0-127	Output level

36: FLG -> DELAY



Parameter	Value	Description
Flg Rate	0.05-10.00 Hz	Frequency of modulation
Flg Depth	0-127	Depth of modulation
Flg Feedback	-98+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
Flg Delay	0.0-100.0 ms	Adjusts the time until the flanger is heard.
Flg Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Delay Time	0.0-500.0 ms	Adjusts the time until the delay sound is heard.
Dly Feedback	-98+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
Dly HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
Dly Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound sent through the delay (W) and the sound that's not sent through the delay (D).
Level	0-127	Output level

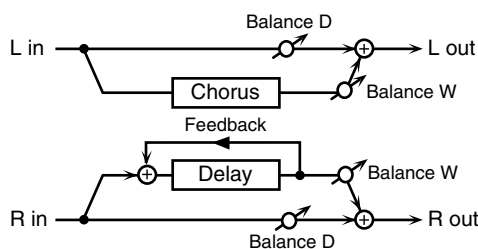
37: CHO -> FLANGER



Parameter	Value	Description
Cho Delay	0.0-100.0 ms	Adjusts the time until the chorus is heard.
Cho Rate	0.05-10.00 Hz	Modulation frequency of the chorus effect
Cho Depth	0-127	Modulation depth of the chorus effect
Cho Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Flg Rate	0.05-10.00 Hz	Modulation frequency of the flanger effect
Flg Depth	0-127	Modulation depth of the flanger effect
Flg Feedback	-98+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
Flg Delay	0.0-100.0 ms	Adjusts the time until the flanger sound is heard.
Flg Balance #	D100:0W-D0:100W	Adjusts the volume balance between the sound sent through the flanger (W) and the sound that's not sent through the flanger (D).
Level	0-127	Output level

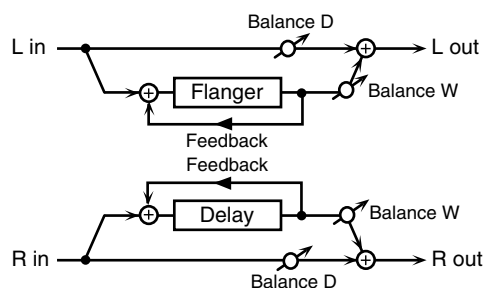
38: CHORUS/DELAY

The parameters are the same as for "35: CHORUS -> DELAY." However, the Delay Balance parameter adjusts the volume balance between the direct sound and the delay sound.



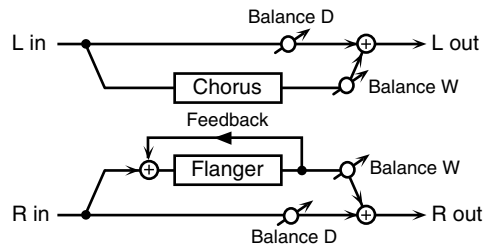
39: FLG/DELAY

The parameters are the same as for "36: FLG -> DELAY." However, the Delay Balance parameter adjusts the volume balance between the direct sound and the delay sound.



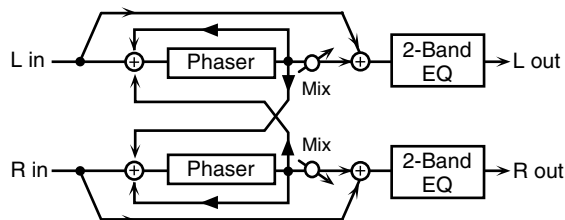
40: CHO/FLANGER

The parameters are the same as for "37: CHO -> FLANGER." However, the Flanger Balance parameter adjusts the volume balance between the direct sound and the flanger sound.



41: St PHASER (Stereo Phaser)

This is a stereo phaser. With the Step effects, you can also make stepped changes in the pitch of sounds to which the Phaser effect is applied.

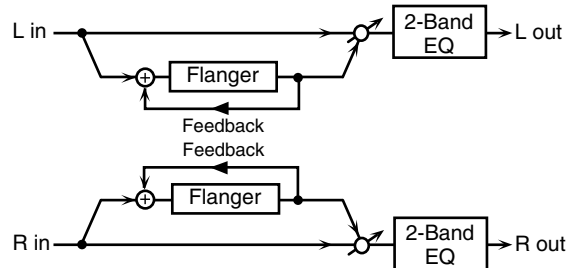


Parameter	Value	Description
Type	1, 2	Type of phaser Type 2 adds more of the phaser effect to the high frequencies than Type 1.
Mode	4-STAGE, 8-STAGE	Number of stages in the phaser
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation are the same or opposite each other. INVERSE: The left and right phase are opposite. When using a mono source, this spreads the sound in stereo. SYNCHRO: The left and right phase are the same. Select this when working with a stereo source.
Manual #	0-127	Adjusts the basic frequency from which the sound is modulated.
Rate #	0.05-10.00 Hz, note *2	Frequency of modulation
Depth	0-127	Depth of modulation
Resonance	0-127	Amount of feedback
X-Feedback	-98-+98 %	Adjusts the amount of the phaser sound that's fed back into the effect. Negative (-) settings invert the phase.
Mix	0-127	Level of the phase-shifted sound
Step Switch	OFF, ON	Determines whether the pitch is changed in a stepped fashion (ON) or not (OFF).
Step Rate #	0.10-20.00 Hz, note *2	Rate (period) of pitch change
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Level	0-127	Output level

42: KEYSYNC FLG (Keysync Flanger)

This effect controls the Flanger by resetting the effect at the volume of the sound sent into to the effect, restarting from the same pitch each time the Flanger is reset.

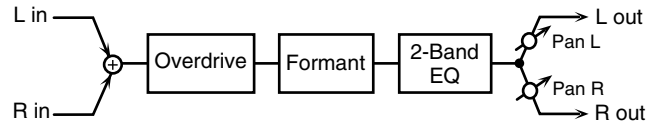
This parameter lets your playing dynamics on the keyboard control the flanger effect.



Parameter	Value	Description
LFO Rate #	0.05-10.00 Hz, note *2	Frequency of modulation
LFO Depth	0-127	Depth of modulation
Feedback #	-98-+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
Phase	0-180 deg	Spatial spread of the sound
Pre Delay	0.0-100 ms	Adjusts the time until the flanger is heard.
Filter Type	OFF, LPF, HPF	Type of filter OFF: no filter is used LPF: cuts the frequency range above the Cutoff Freq HPF: cuts the frequency range below the Cutoff Freq
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Step Sw	OFF, ON	Determines whether the pitch is changed in a stepped fashion (ON) or not (OFF).
Step Rate #	0.10-20.00 Hz, note *2	Rate (period) of pitch change
Keysync	OFF, ON	Determines whether the Flanger LFO is reset by the input signal (ON) or not (OFF).
Threshold	0-127	Adjusts the volume level at which the reset is applied.
Ksync Phase	0-360 deg	LFO phase when the LFO is reset
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Level	0-127	Output level

43: FORMANT FLTR (Formant Filter)

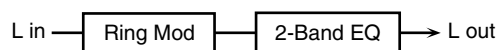
Adds a vowel character to the sound, making it similar to a human voice.



Parameter	Value	Description
Drive Switch	OFF, ON	Turns Drive on/off.
Drive #	0-127	Degree of distortion Also changes the volume.
Vowel1	a, e, i, o, u	Selects the vowel.
Vowel2		
Rate #	0.05-10.00 Hz, note *2	Frequency at which the two vowels switch
Depth #	0-127	Effect depth
Manual #	0-100	Adjusts the point at which the two vowels switch. When set to 50, Vowels 1 and 2 switch in the same amount of time. Setting this lower than 50 increases the time for Vowel 1; setting this higher than 50 decreases the time for Vowel 1.
Keysync	OFF, ON	Determines whether the LFO for switching the vowels is reset by the input signal (ON) or not (OFF).
Threshold	0-127	Volume level at which reset is applied
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Level	0-127	Output level
Pan	L64-63R	Stereo location of the output

44: RING MOD (Ring Modulator)

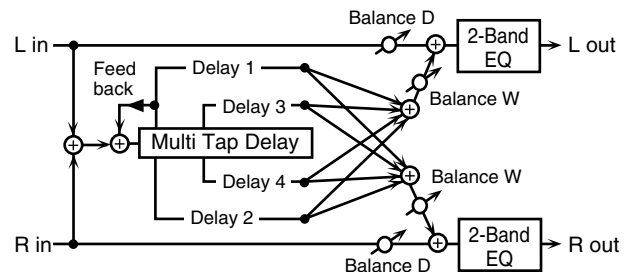
This is an effect that applies amplitude modulation (AM) to the input signal, producing bell-like sounds. You can also change the modulation frequency in response to changes in the volume of the sound sent into the effect.



Parameter	Value	Description
Frequency #	0-127	Adjusts the frequency at which modulation is applied.
Modulator	OFF, SOURCE, A, B	Selects the source sound for the envelope controlling the modulation. SOURCE: The frequency is modulated according to the envelope of the sound sent into the multi-effects A, B: The frequency is modulated according to the envelope of the direct sound sent to the OUTPUT A or OUTPUT B jacks
Monitor	OFF, ON	Determines whether the input signal used as the modulator is included in the effect output (ON) or not (OFF). * This parameter is disabled when Modulator is set to OFF or SOURCE.
Sens #	0-127	Adjusts the amount of frequency modulation applied.
Polarity	UP, DOWN	Determines whether the frequency modulation moves towards higher frequencies (UP) or lower frequencies (DOWN).
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level

45: MLT TAP DLY (Multi Tap Delay)

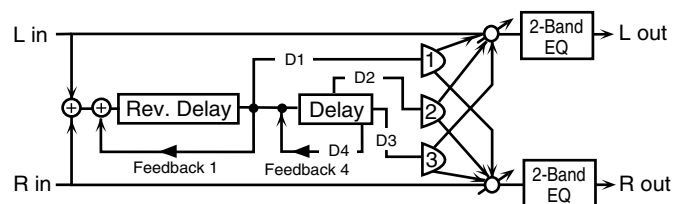
This effect provides four delays. Each of the Delay Time parameters can be set to a note length based on the selected tempo. You can also set the panning and level of each delay sound.



Parameter	Value	Description
Delay 1-4	0-1800 ms, note *2	Adjusts the time until Delays 1-4 are heard.
Feedback #	-98+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any the high frequencies, set this parameter to BYPASS.
Delay Level 1-4	0-127	Output level of Delays 1-4
Delay Pan 1-4	L64-63R	Stereo location of Delays 1-4
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level

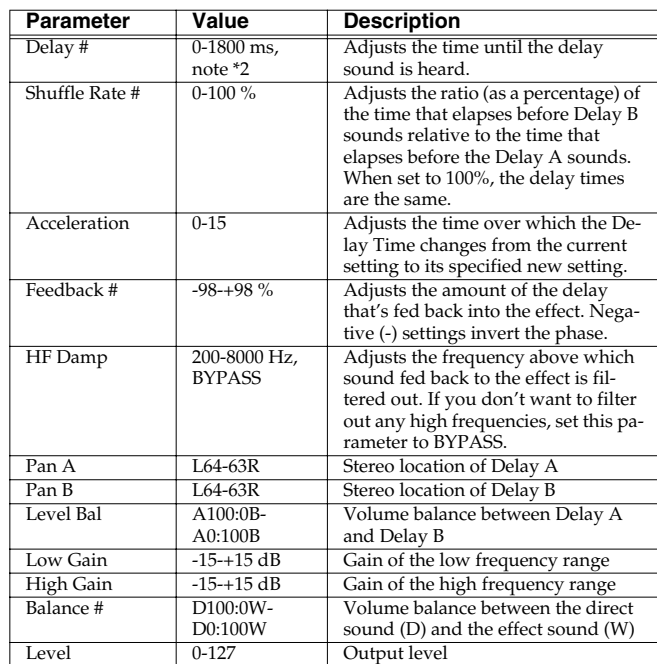
46: REVERSE DLY (Reverse Delay)

Adds the reverse of the input sound as a delay.

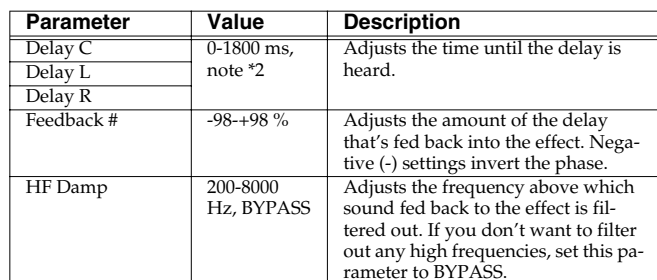


Parameter	Value	Description
Delay 1-4	0-900 ms, note *2	Adjusts the time until Delays 1-4 are heard.
Feedback 1 #	-98+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
Feedback 4 #		
HF Damp 1	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you do not want to filter out any high frequencies, set this parameter to BYPASS.
HF Damp 4		
Delay Level 1-3	0-127	Output level of Delays 1-3 sound
Delay Pan 1-3	L64-63R	Stereo location of Delays 1-3 sound
Threshold	0-127	Volume level at which the reverse delay begins
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level

Adds a shuffle to the delay sound, giving the sound a bouncy delay effect with a swing feel.

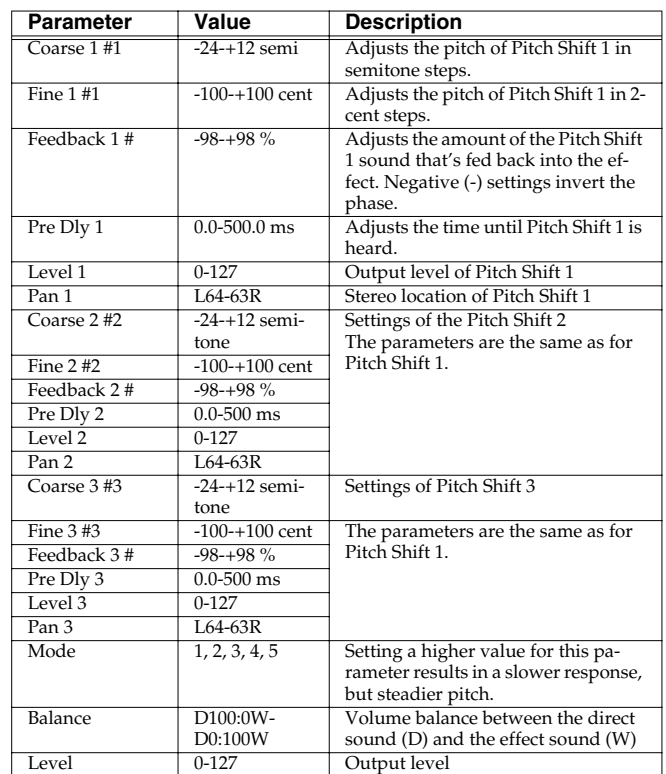


This applies a 3D effect to the delay sound. The delay sound is positioned 90 degrees left and 90 degrees right.



49: 3V PCH SHIFT (3-Voice Pitch Shifter)

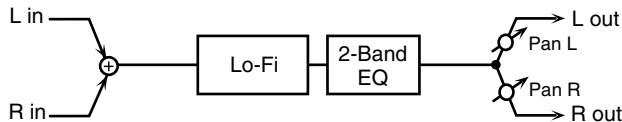
This 3-voice pitch shifter has three pitch shifters, and can add three pitch-shifted signals to the original sound.



Chapter 4 Using the XV-5050 Effects

50: LOFI COMP (Lo-Fi Compress)

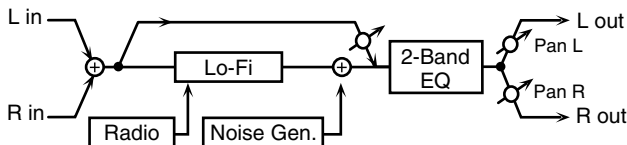
This is an effect that intentionally degrades the sound quality for creative purposes.



Parameter	Value	Description
LoFi Type	1-9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Pre Filter	1-6	Selects the type of filter applied to the sound before it passes through the Lo-Fi effect.
Post Filter 1	1-6	Adjusts the type of filter applied to the sound after it passes through the Lo-Fi effect.
Post Filter 2	OFF, LPF, HPF	Type of filter OFF : no filter is used LPF : cuts the frequency range above the Cutoff HPF : cuts the frequency range below the Cutoff
Post Cutoff	200-8000 Hz	Basic frequency of the filter
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level
Pan	L64-63R	Stereo location of the output

51: LOFI NOISE (Lo-Fi Noise)

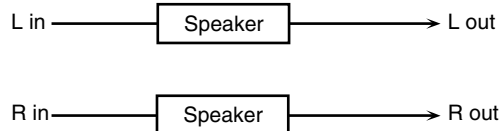
In addition to a Lo-Fi effect, this effect also generates various types of noise, such as radio noise and disc noise.



Parameter	Value	Description
LoFi Type	1-9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter Type	OFF, LPF, HPF	Type of filter OFF : no filter is used LPF : cuts the frequency range above the Cutoff HPF : cuts the frequency range below the Cutoff
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Radio Detune #	0-127	Simulates the tuning noise of a radio. As this value is raised, the tuning drifts further.
Radio N Level	0-127	Volume of the radio noise
Disc Noise Type	LP, EP, SP, RND	Type of record noise The frequency at which the noise is heard depends on the selected type.
Disc N LPF	200-8000 Hz, BYPASS	Adjusts the cutoff frequency of the low pass filter applied to the record noise. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Disc N Level	0-127	Volume of the record noise
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level
Pan	L64-63R	Stereo location of the output

52: SPEAKER SIM (Speaker Simulator)

Simulates speaker types and mic settings used to capture the speaker's sound.



Parameter	Value	Description
Type	(See the table below.)	Type of speaker
Mic Setting	1, 2, 3	Adjusts the location of the mic capturing the sound of the speaker. This can be adjusted in three steps, from 1 to 3 with the mic becoming more distant as the value is raised.
Mic Level #	0-127	Volume of the microphone
Direct Level #	0-127	Volume of the direct sound
Level #	0-127	Output level

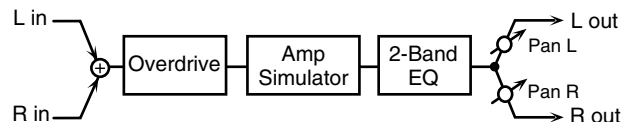
Specifications for each Speaker Type

The speaker column indicates the diameter of each speaker unit (in inches) and the number of units.

Type	Cabinet	Speaker	Microphone
SMALL 1	small open-back enclosure	10	dynamic
SMALL 2	small open-back enclosure	10	dynamic
MIDDLE	open back enclosure	12 x 1	dynamic
JC-120	open back enclosure	12 x 2	dynamic
BUILT IN 1	open back enclosure	12 x 2	dynamic
BUILT IN 2	open back enclosure	12 x 2	condenser
BUILT IN 3	open back enclosure	12 x 2	condenser
BUILT IN 4	open back enclosure	12 x 2	condenser
BUILT IN 5	open back enclosure	12 x 2	condenser
BG STACK 1	sealed enclosure	12 x 2	condenser
BG STACK 2	large sealed enclosure	12 x 2	condenser
MS STACK 1	large sealed enclosure	12 x 4	condenser
MS STACK 2	large sealed enclosure	12 x 4	condenser
METAL STACK	large double stack	12 x 4	condenser
2-STACK	large double stack	12 x 4	condenser
3-STACK	large triple stack	12 x 4	condenser

53: OVERDRIVE 2

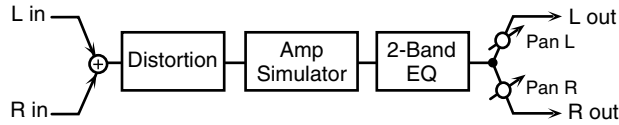
This is an overdrive that provides heavy distortion.



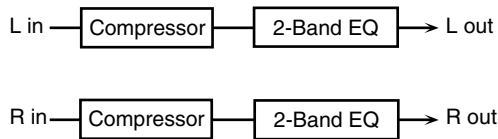
Parameter	Value	Description
Drive #	0-127	Degree of distortion Also changes the volume.
Tone	0-127	Sound quality of the Overdrive effect
Amp Simulator Sw	OFF, ON	Turns the Amp Simulator on/off.
Amp Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp SMALL : small amp BUILT-IN : single-unit type amp 2-STACK : large double stack amp 3-STACK : large triple stack amp
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Level	0-127	Output level
Pan #	L64-63R	Stereo location of the output

54: DISTORTION 2

This is a distortion effect that provides heavy distortion. The parameters are the same as for "53: OVERDRIVE 2."

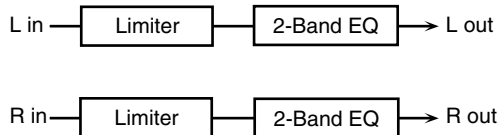


55: STEREO COMP (Stereo Compressor)



Parameter	Value	Description
Attack	0-127	Sets the speed at which compression starts
Sustain	0-127	Adjusts the duration of the compression.
Post Gain	0, +6, +12, +18 dB	Adjusts the output gain.
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Level #	0-127	Output level

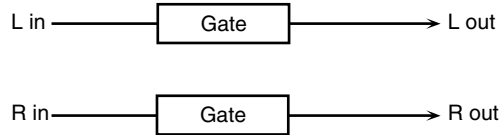
56: St LIMITER (Stereo Limiter)



Parameter	Value	Description
Threshold	0-127	Adjusts the volume at which compression begins.
Ratio	1.5:1, 2:1, 4:1, 100:1	Compression ratio
Release	0-127	Adjusts the time from when the volume falls below the Threshold Level until compression is no longer applied.
Post Gain	0, +6, +12, +18 dB	Adjusts the output gain.
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Level #	0-127	Output level

57: GATE

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

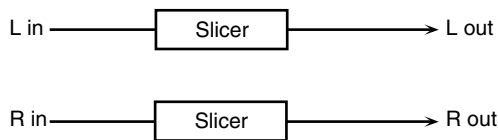


Parameter	Value	Description
Mode	GATE, DUCK	Type of gate GATE (Gated Reverb): When the source volume falls below a certain level, the gate closes, cutting off the tail of the reverb. DUCK (Ducking Reverb): When the source volume gets high enough, the gate closes, creating a ducking reverb-type effect. The reverb stops when the input signal becomes so loud that the sound becomes unclear.
Attack	0-127	Adjusts the time it takes for the gate to fully open after being triggered.
Hold	0-127	Adjusts the time it takes for the gate to start closing after the source sound falls beneath the Threshold.
Release	0-127	Adjusts the time it takes the gate to fully close after the hold time.
Key	SOURCE, A, B	Selects the source sound that acts as the trigger for closing the gate. SOURCE: The gate is closed by the sound sent into the Multi-effects. A, B: The gate is closed by the direct sound sent to the OUTPUT A or OUTPUT B jacks
Threshold	0-127	Volume level at which the gate begins to close
Monitor	OFF, ON	Determines whether the sound used as the gate trigger is included in the effect output (ON) or not (OFF). * This parameter is disabled when Key is set to SOURCE.
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level

Chapter 4 Using the XV-5050 Effects

58: SLICER

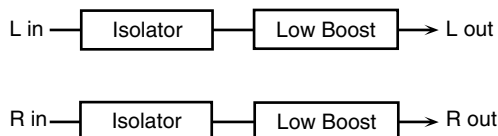
By applying successive cuts to the sound, this effect turns a conventional sound into a sound that appears to be played as a backing phrase. This is especially effective when applied to sustain-type sounds.



Parameter	Value	Description
Level Beat 1-1-4-4	0-127	For a single measure containing four quarter notes, this sets the level of each sixteenth note when the measure is divided into sixteenth notes.
Rate #	0.05-10.00 Hz, note *2	Cycle for one measure
Attack	0-127	Speed at which the volume changes between beats
Reset Trigger #	OFF, SOURCE, A, B	Selects the source sound that acts as the trigger resetting the one-measure pattern. OFF: The pattern is not reset, even if the input signal is present. SOURCE: The pattern is reset by the sound sent into the multi-effects. A, B: The pattern is reset by the direct sound sent to the OUTPUT A or OUTPUT B jacks. * When Reset Trigger is selected as the MFX Control parameter, you can use an external MIDI device to reset the pattern.
Reset Threshold	0-127	Volume level at which the reset begins
Reset Monitor	OFF, ON	Determines whether the sound used as the reset trigger is included in the effect output (ON) or not (OFF). * This parameter is disabled when Reset Trigger is set to OFF or SOURCE.
Beat Chg Mode	LEGATO, SLASH	Sets the manner in which the volume changes as one beat progresses to the next. LEGATO: The change in volume from one beat's level to the next remains unaltered. If the level of a following beat is the same as the one preceding it, there is no change in volume. SLASH: The level is momentarily set to 0 before progressing to the level of the next beat. This change in volume occurs even if the level of the following beat is the same as the preceding beat.
Shuffle #	0-127	Timing of volume changes in levels for even-numbered Beats (Beat 1-2/Beat 1-4/Beat 2-2/...). The higher the value, the later the beat progresses.
Level	0-127	Output level

59: ISOLATOR

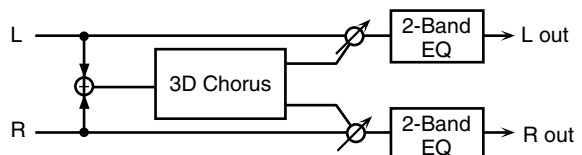
This is an equalizer that radically cuts the volume of selected frequencies, allowing you to create special effects cutting the volume in various ranges.



Parameter	Value	Description
Low #	-60+4 dB	These boost and cut each of the High, Middle, and Low frequency ranges. At -60 dB, the sound becomes inaudible. 0 dB is equivalent to the input level of the sound.
Mid #		
High #		
AntiPhase Low Sw	OFF, ON	Turns the Anti-Phase function on and off for the Low frequency ranges. When turned on, a stereo copy of the sound is phase-inverted and added to the signal.
AntiPhase LowLev	0-127	Adjusts the level settings for the Low frequency ranges. Adjusting this level for certain frequencies allows you to lend emphasis to specific elements within a sound. (This is effective only for stereo source.)
AntiPhase Mid Sw	OFF, ON	Settings of the Anti-Phase function for the Middle frequency ranges The parameters are the same as for the Low frequency ranges.
AntiPhase MidLev	0-127	
Low Boost Sw	OFF, ON	Turns Low Booster on/off. This emphasizes the bottom frequencies to create a heavy bass sound.
Low Boost Level	0-127	Increasing this value gives you a heavier low end. * Depending on the Isolator and filter settings, this effect may be hard to hear.
Level	0-127	Output level

60: 3D CHORUS

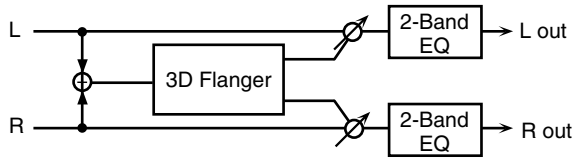
This applies 3D chorusing to a sound. The chorus is positioned 90 degrees left and 90 degrees right.



Parameter	Value	Description
LFO Rate #	0.05-10.00 Hz, note *2	Frequency of modulation
LFO Depth	0-127	Modulation depth of the chorus effect
Phase	0-180 deg	Spatial spread of the sound
Pre Delay	0.0-100.0 ms	Adjusts the time until the chorus is heard.
Filter Type	OFF, LPF, HPF	Type of filter OFF: no filter is used LPF: cuts the frequency range above the Cutoff Freq HPF: cuts the frequency range below the Cutoff Freq
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus sound (W)
Output Mode	SPEAKER, PHONES	Selects the method by which the effect is sent to the OUTPUT jacks. The optimal 3D effect is if you select SPEAKER when using speakers, or PHONES when using headphones.
Level	0-127	Output level

61: 3D FLANGER

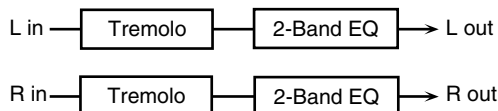
This applies a 3D effect to the flanger sound. The flanger sound is positioned 90 degrees left and 90 degrees right.



Parameter	Value	Description
LFO Rate #	0.05-10.00 Hz, note *2	Frequency of modulation
LFO Depth	0-127	Depth of modulation
Feedback #	-98-+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
Phase	0-180 deg	Spatial spread of the sound
Pre Delay	0.0-100.0 ms	Adjusts the time until the flanger sound is heard.
Filter Type	OFF, LPF, HPF	Type of filter OFF : no filter is used LPF : cuts the frequency range above the Cutoff Freq HPF : cuts the frequency range below the Cutoff Freq
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Step Sw	OFF, ON	Determines whether the pitch is changed in a stepped fashion (ON) or not (OFF).
Step Rate #	0.10-20.00 Hz, note *2	Rate (period) of pitch change
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the flanger sound (W)
Output Mode	SPEAKER, PHONES	Select the method by which the effect is sent to the OUTPUT jacks. The optimal 3D effect is achieved if you select SPEAKER when using speakers, or PHONES when using headphones.
Level	0-127	Output level

62: TREMOLO

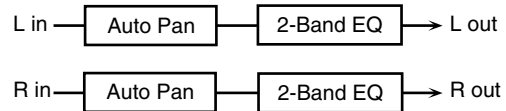
Cyclically modulates the volume to add tremolo to the sound.



Parameter	Value	Description
Mod Wave	TRI, SQR, SIN, SAW1, SAW2	Modulation Wave TRI : triangle wave SQR : square wave SIN : sine wave SAW1/2 : sawtooth wave
	SAW1 SAW2	
Rate #	0.05-10.00 Hz, note *2	Frequency of the change
Depth #	0-127	Depth to which the effect is applied
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Level	0-127	Output level

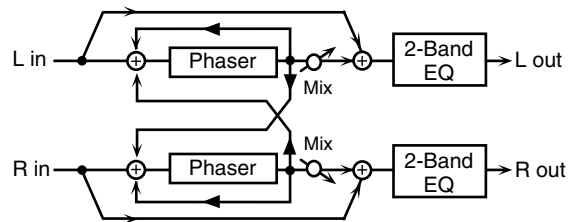
63: AUTO PAN

Cyclically modulates the stereo location of the sound.



Parameter	Value	Description
Mod Wave	TRI, SQR, SIN, SAW1, SAW2	Modulation Wave TRI : triangle wave SQR : square wave SIN : sine wave SAW1/2 : sawtooth wave
	SAW1 SAW2	
Rate #	0.05-10.00 Hz, note *2	Frequency of the change
Depth #	0-127	Depth to which the effect is applied
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Level	0-127	Output level

64: St PHASER 2 (Stereo Phaser 2)



Parameter	Value	Description
Type	1, 2	Type of phaser Type 2 adds more of the phaser effect to the high frequencies than Type 1.
Mode	4-STAGE, 8-STAGE, 12-STAGE, 16-STAGE	Number of stages in the phaser
Polarity	INVERSE, SYNCHRO	Selects whether the left and right phase of the modulation are the same or opposite each other. INVERSE : The left and right phase are opposite. When using a mono source, this spreads the sound. SYNCHRO : The left and right phase are the same. Select this when inputting a stereo source.
Manual #	0-127	Adjusts the basic frequency from which the sound is modulated.
Rate #	0.05-10.00 Hz, note *2	Frequency of modulation
Depth	0-127	Depth of modulation
Resonance	0-127	Amount of feedback
X-Feedback	-98-+98 %	Adjusts the amount of the phaser sound that's fed back into the effect. Negative (-) settings invert the phase.
Mix Level	0-127	Level of the phase-shifted sound
Step Sw	OFF, ON	Determines whether the pitch is changed in a stepped fashion (ON) or not (OFF).
Step Rate #	0.10-20.00 Hz, note *2	Rate (period) of pitch change
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Level	0-127	Output level

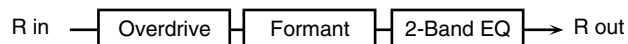
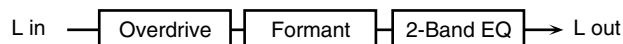
Chapter 4 Using the XV-5050 Effects

65: ST AUTO WAH (Stereo Auto Wah)



Parameter	Value	Description
Filter Type	LPF, BPF	Type of filter LPF: The wah effect is applied over a wide frequency range. BPF: The wah effect is applied over a narrow frequency range.
Sens #	0-127	Adjusts the sensitivity with which the filter is controlled.
Manual #	0-127	Adjusts the center frequency at which the effect is applied.
Peak	0-127	Adjusts the amount of the wah effect that occurs in the center frequency range. Set a higher value for Q to narrow the affect range.
Rate #	0.05-10.00 Hz, note *2	Frequency of modulation
Depth #	0-127	Depth of modulation
Polarity	UP, DOWN	Sets the direction in which the frequency changes when the auto-wah filter is modulated. UP: The filter changes toward a higher frequency. DOWN: The filter changes toward a lower frequency.
Phase #	0-180 deg	Adjusts the degree of phase shift of the left and right sounds when the wah effect is applied.
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Level	0-127	Output level

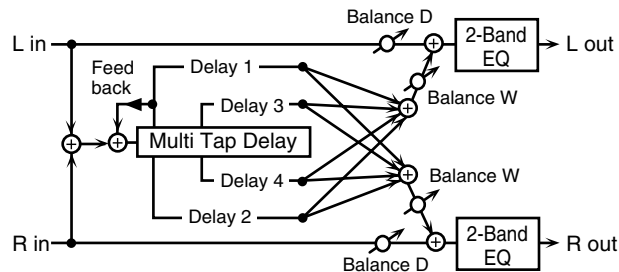
66: ST FORMN FLT (Stereo Formant Filter)



Parameter	Value	Description
Drive Sw	OFF, ON	Turns Drive on/off.
Drive #	0-127	Degree of distortion Also changes the volume.
Vowel 1	a, e, i, o, u	Selects the vowel.
Vowel 2		
Rate #	0.05-10.00 Hz, note *2	Frequency at which the two vowels switch
Depth #	0-127	Effect depth
Manual #	0-100	Adjusts the point at which the two vowels switch. When set to 50, Vowels 1 and 2 switch in the same amount of time. Setting this lower than 50 increases the time for Vowel 1; setting this higher than 50 decreases the time for Vowel 1.
Phase #	0-180 deg	Adjusts the phase shift of the left and right sounds when the two vowels are switched.
Keysync Sw	OFF, ON	Determines whether the LFO for switching the vowels is reset according to the input sound (ON) or not (OFF).
Keysync Thresh	0-127	Volume level at which reset is applied
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Level	0-127	Output level

67: MLT TAP DLY2 (Multi Tap Delay 2)

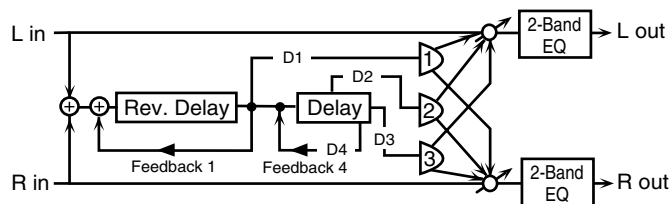
This allows you to achieve longer delay times (max. 3000 ms) for the Multi-Tap Delay function.



Parameter	Value	Description
Delay 1-4	0-3000 ms, note *2	Adjusts the time until Delay 1-4s are heard.
Feedback #	-98-+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Delay Level 1-4	0-127	Output level of Delays 1-4
Delay Pan 1-4	L64-63R	Stereo location of Delays 1-4
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level

68: REVERSE DLY2 (Reverse Delay 2)

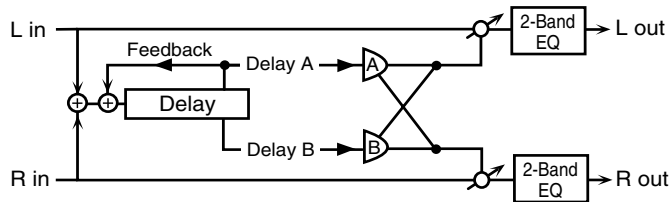
This allows you to achieve longer delay times (max. 1500 ms) for the Reverse Delay function.



Parameter	Value	Description
Delay 1-4	0-1500 ms, note *2	Adjusts the time until Delays 1-4 are heard.
Feedback 1 #	-98-+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
Feedback 4 #		
HF Damp 1	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
HF Damp 4		
Delay Level 1-3	0-127	Output level of Delays 1-3
Delay Pan 1-3	L64-63R	Stereo location of Delays 1-3
Threshold	0-127	Volume level at which the reverse delay begins
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level

69: SHUFFLE DLY2 (Shuffle Delay 2)

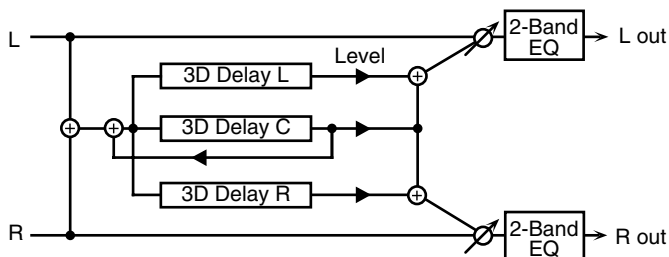
This allows you to achieve longer delay times (max. 3000 ms) for the Shuffle Delay function.



Parameter	Value	Description
Delay #	0-3000 ms, note *2	Adjusts the time until the delay is heard.
Shuffle Rate #	0-100 %	Sets the ratio (as a percentage) of the time that elapses before Delay B sounds relative to the time that elapses before Delay A sounds. When set to 100%, the delay times are the same.
Acceleration	0-15	Adjusts the time over which the Delay Time changes from the current setting to a specified new setting.
Feedback #	-98-+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Pan A, B	L64-63R	Stereo location of the Delays A and B
Level Bal	A100:0B-A0:100B	Volume balance between Delay A and Delay B
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level

70: 3D DELAY 2

This allows you to achieve longer delay times (max. 3000 ms) for the 3D Delay function.



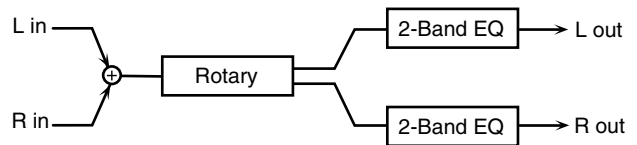
Parameter	Value	Description
Delay C	0-3000 ms, note *2	Adjusts the time until the delay is heard.
Delay L		
Delay R		
Feedback #	-98-+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Level C	0-127	Output level of the delay sound
Level L		
Level R		
Low Gain	-15-+15 dB	Gain of the low frequency range
High Gain	-15-+15 dB	Gain of the high frequency range

Parameter	Value	Description
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Output Mode	SPEAKER, PHONES	Select the method by which the effect is sent to the OUTPUT jacks. The optimal 3D effect is achieved if you select SPEAKER when using speakers, or PHONES when using headphones.
Level	0-127	Output level

71: ROTARY 2

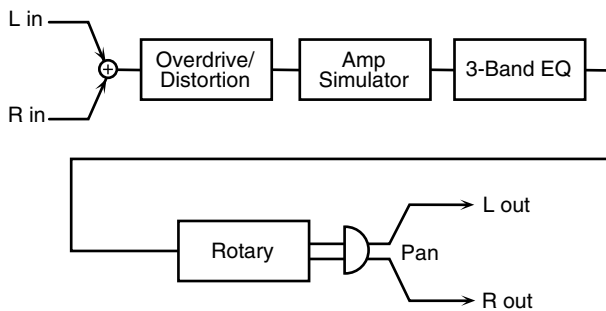
This type provides for a second type of rotary speaker simulation, with a low-end boost.

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



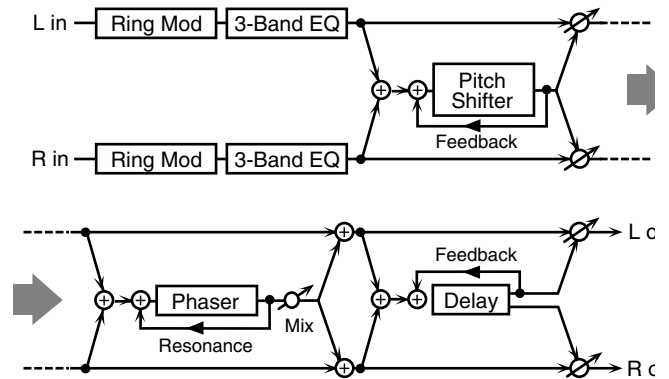
Parameter	Value	Description
Speed #	SLOW, FAST	Rotational speed of the rotating speaker
Brake #	OFF, ON	Switches the rotation of the rotary speaker. When this is turned off, the rotation gradually stops. When it's turned on, the rotation gradually resumes.
Spread	0-10	Sets the rotary speaker stereo image. The higher the value set, the wider the stereo image.
Low Slow	0.05-10.00 Hz, note *2	Low-speed rotation rate of the woofer
Low Fast	0.05-10.00 Hz, note *2	High-speed rotation rate of the woofer
Low Trans Up	0-127	Adjusts the rate at which the woofer rotation speeds up when the rotation is switched from Slow to Fast.
Low Trans Down	0-127	Adjusts the rate at which the woofer rotation when the rotation is switched from Fast to Slow.
Low Level	0-127	Volume of the woofer
High Slow	0.05-10.00 Hz, note *2	Settings for the tweeter The parameters are the same as for the woofer.
High Fast	0.05-10.00 Hz, note *2	
High Trans Up	0-127	
High Trans Down	0-127	
High Level	0-127	Gain of the high frequency range
Low Gain	-15-+15 dB	
High Gain	-15-+15 dB	Gain of the low frequency range
Level #	0-127	Output level

72: ROTARY MULTI



Parameter	Value	Description
OD/Dist		
Switch	OFF, ON	Turns the Overdrive/Distortion on/off.
Type	OVERDRIVE, DISTORTION	Selects either Overdrive or Distortion.
Drive #	0-127	Degree of distortion Also changes the volume.
Tone	0-127	Sound quality of the Overdrive/Distortion effect
Level	0-127	Volume of the Overdrive/Distortion sound
Amp Simulator		
Switch	OFF, ON	Turns the Amp Simulator on/off.
Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp SMALL: small amp BUILT-IN: single-unit type amp 2-STACK: large double stack amp 3-STACK: large triple stack amp
3 Band EQ		
Switch	OFF, ON	Turns the 3 Band EQ on/off.
Low Gain	-15+15 dB	Gain of the low frequency range
Mid Freq	200-8000 Hz	Frequency of the middle range
Mid Gain	-15+15 dB	Gain of the middle range
Mid Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle range Set a higher value for Q to narrow the range to be affected.
High Gain	-15+15 dB	Gain of the high frequency range
Rotary		
Switch	OFF, ON	Turns the Rotary on/off.
Speed #	SLOW, FAST	Rotational speed of both the low-range and the high-range rotors
Low Freq Slow	0.05-10.00 Hz, note *2	Speed of the low-range rotor for the slow-speed setting
Low Freq Fast	0.05-10.00 Hz, note *2	Speed of the low-range rotor for the fast-speed setting
Low Freq Accel	0-15	Adjusts the time over which the rotation speed of the low-range rotor changes from slow-speed to fast-speed (or fast-speed to slow-speed) rotation. Lower values produce longer times.
Low Freq Level	0-127	Volume of the low-range rotor
High Freq Slow	0.05-10.00 Hz, note *2	Settings of the high-range rotor The parameters are the same as for the low-range rotor.
High Freq Fast	0.05-10.00 Hz, note *2	
High Freq Accel	0-15	
High Freq Level	0-127	
Separation	0-127	Spatial spread of the rotary sound
Output		
Level	0-127	Output level
Pan	L64-63R	Stereo location of the output

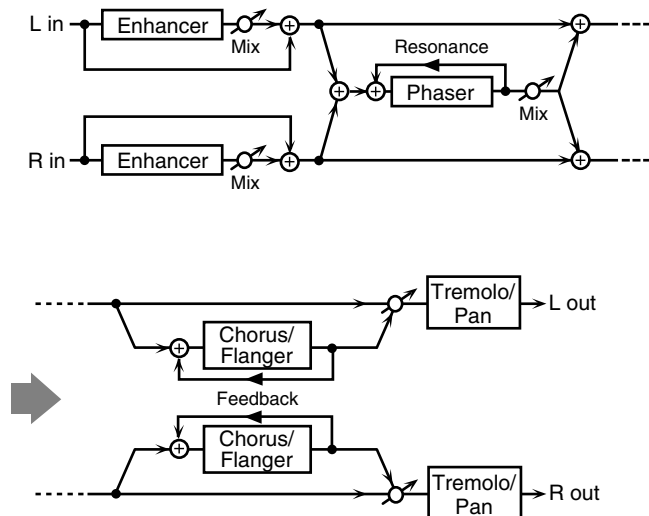
73: KEYBD MULTI (Keyboard Multi)



* Ring Modulator is an effect that applies amplitude modulation (AM) to the input signal, producing bell-like sounds.

Parameter	Value	Description
Ring Mod		
Switch	OFF, ON	Turns the Ring Modulator on/off.
Freq #	0-127	Frequency at which modulation is applied
Bal #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the ring modulated sound (W)
3 Band EQ		
Switch	OFF, ON	Turns the 3 Band EQ on/off.
Low Gain	-15+15 dB	Gain of the low frequency range
Mid Freq	200-8000 Hz	Frequency of the middle frequency range
Mid Gain	-15+15 dB	Gain of the middle frequency range
Mid Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle frequency range Set a higher value for Q to narrow the frequency range to be affected.
High Gain	-15+15 dB	Gain of the high frequency range
Pitch Shift		
Switch	OFF, ON	Turns the Pitch Shifter on/off
Mode	1, 2, 3, 4, 5	Setting a higher value for this parameter results in a slower response, but steadier pitch.
Coarse #1	-24+12 semi	Adjusts the pitch of the pitch-shifted sound in semitone steps.
Fine #1	-100+100 cent	Adjusts the pitch of the pitch-shifted sound in 2-cent steps.
Dly	0.0-500.0 ms	Adjusts the time until the pitch-shifted sound is heard.
Feedback #	-98+98 %	Adjusts the amount of the pitch-shifted sound that's fed back into the effect. Negative (-) settings invert the phase.
Balance	D100:0W-D0:100W	Volume balance between the direct sound (D) and the pitch shifted sound (W)
Phaser		
Switch	OFF, ON	Turns the Phaser on/off.
Mode	4-STAGE, 8-STAGE	Number of stages in the phaser
Manual #	0-127	Adjusts the basic frequency from which the sound is modulated.
Rate #	0.05-10.00 Hz, note *2	Frequency of modulation
Depth	0-127	Depth of modulation
Resonance	0-127	Amount of feedback
Mix	0-127	Level of the phase-shifted sound
Delay		
Switch	OFF, ON	Turns the Delay on/off.
Time L	0-3000 ms, note *2	Adjusts the time until the delay is heard.
Time R	0-3000 ms, note *2	Adjusts the time until the delay is heard.
Feedback	-98+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Output		
Level	0-127	Output level

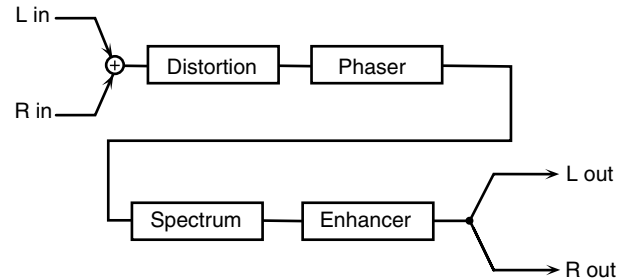
74: RHODES MULTI



Parameter	Value	Description
Enhancer		
Switch	OFF, ON	Turns the Enhancer on/off.
Sens #	0-127	Sensitivity of the enhancer
Mix	0-127	Level of the overtones generated by the enhancer
Phaser		
Switch	OFF, ON	Turns the Phaser on/off.
Mode	4-STAGE, 8-STAGE	Number of stages in the phaser
Manual #	0-127	Adjusts the basic frequency from which the sound is modulated.
Rate #	0.05-10.00 Hz, note *2	Frequency of modulation
Depth	0-127	Depth of modulation
Resonance	0-127	Amount of feedback
Mix	0-127	Level of the phase-shifted sound
Cho/Flg		
Switch	OFF, ON	Turns the Chorus/Flanger on/off.
Type	CHORUS, FLANGER	Selects either Chorus or Flanger.
Rate	0.05-10.00 Hz, note *2	Frequency of modulation
Depth	0-127	Depth of modulation
Feedback	-98+98 %	Adjusts the amount of the flanger sound that is fed back into the effect. Negative (-) settings invert the phase.
Pre Dly	0.0-100.0 ms	Adjusts the time until the chorus/flanger is heard.
Filter Type	OFF, LPF, HPF	Type of filter OFF : no filter is used LPF : cuts the frequency range above the Cutoff Freq HPF : cuts the frequency range below the Cutoff Freq
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus/flanger sound (W)
Tre/Pan		
Switch	OFF, ON	Turns Tremolo/Pan on/off.
Type	TREMOLO, AUTO PAN	Selects either Tremolo or Pan.
Mod Wave	TRI, SQR, SIN, SAW1, SAW2	Modulation Wave TRI : triangle wave SQR : square wave SIN : sine wave SAW1/2 : sawtooth wave
SAW1 (R) (L)		
SAW2 (R) (L)		
Rate #	0.05-10.00 Hz, note *2	Frequency of modulation
Depth #	0-127	Depth of modulation
Output		
Level	0-127	Output level

75: JD MULTI

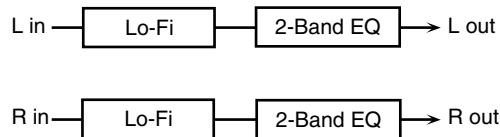
This allows the Distortion (DS), Phaser (PH), Spectrum (SP), and Enhancer (EH) effects to be connected in series in any desired order.



Parameter	Value	Description
Sequence	D5-PH-SP-EN : EN-SP-PH-DS	Order in which effects are connected
Dist		
Switch	OFF, ON	Turns the Distortion on/off.
Type	MELLOW DRIVE, OVERDRIVE, CRY DRIVE, MELLOW DIST, LIGHT DIST, FAT DIST, FUZZ DIST	Type of distortion MELLOW DRIVE : A soft, mellow distortion; somewhat dark sounding. OVERDRIVE : The classic sound of an overdriven tube amp. CRY DRIVE : Distortion with a high-frequency boost. MELLOW DIST : Sounds like the distortion you'd get from a really big amp. LIGHT DIST : A distortion with an intense, brilliant feel. FAT DIST : Boosted lows and highs gives this one a thick, fat sound. FUZZ DIST : Like FAT DIST, but with even more distortion.
Drive #	0-100	Amount of distortion
Level	0-100	Distortion output level
Phaser		
Switch	OFF, ON	Turns the Phaser on/off.
Manual #	50 Hz-15.0 kHz	Adjusts the basic frequency from which the sound is modulated.
Rate #	0.1-10.0 Hz	Frequency of modulation
Depth #	0-100	Depth of modulation
Resonance #	0-100	Amount of feedback
Mix Level #	0-100	Level of the phase-shifted sound
Spectrum		
Switch	OFF, ON	Turns the Spectrum on/off.
Band1 (250Hz)	-15+15 dB	Gain of each frequency band
Band2 (500Hz)		
Band3 (1000Hz)		
Band4 (2000Hz)		
Band5 (4000Hz)		
Band6 (8000Hz)		
Width	1, 2, 3, 4, 5	Simultaneously adjusts the width of all frequency bands.
Enhancer		
Switch	OFF, ON	Turns the Enhancer on/off.
Sens	0-100	Sensitivity of the enhancer
Mix Level #	0-100	Level of the overtones generated by the enhancer
Output		
Level	0-127	Output level
Pan	L64-63R	Stereo location of the output

76: St LOFI COMP (Stereo Lo-Fi Compress)

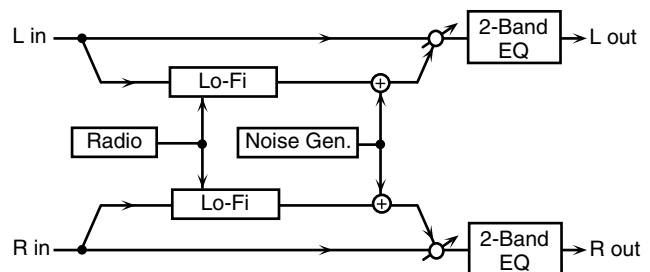
This is a stereo Lo-Fi compressor. It deliberately degrades the sound quality for creative effect.



Parameter	Value	Description
LoFi Type	1-9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Pre Filter	1-6	Adjusts the type of filter applied to the sound before it passes through the Lo-Fi effect.
Post Filter 1	1-6	Adjusts the type of filter applied to the sound after it passes through the Lo-Fi effect.
Post Filter 2	OFF, LPF, HPF	Type of filter OFF : no filter is used LPF : cuts the frequency range above the Cutoff HPF : cuts the frequency range below the Cutoff
Post Cutoff	200-8000 Hz	Basic frequency of the filter
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level

77: St LOFI NOIZ (Stereo Lo-Fi Noise)

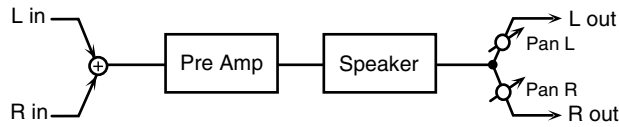
This is a stereo Lo-Fi noise. In addition to a Lo-Fi effect, this effect also generates various types of noise such as radio noise and disc noise.



Parameter	Value	Description
LoFi Type	1-9	Degrades the sound quality. The sound quality grows poorer as this value is increased.
Post Filter	OFF, LPF, HPF	Type of filter OFF : no filter is used LPF : cuts the frequency range above the Cutoff HPF : cuts the frequency range below the Cutoff
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Hum N Type	50 Hz, 60 Hz	Type of hum noise
Hum N LPF	200-8000 Hz, BYPASS	Adjusts the cutoff frequency of the low pass filter applied to the hum noise. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Hum N Level	0-127	Volume of the hum noise
Radio Detune #	0-127	Simulates the tuning noise of a radio. As this value is raised, the tuning drifts further.
RadioNoise Level	0-127	Volume of the radio noise
W/P Noise Type	WHITE, PINK	Selects either white noise or pink noise.
W/P LPF	200-8000 Hz, BYPASS	Adjusts the cutoff frequency of the low pass filter applied to the white noise or pink noise. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
White/Pink Level	0-127	Volume of the white noise or pink noise
Disc N Type	LP, EP, SP, RND	Type of record noise The frequency at which the noise is heard depends on the selected type.
Disc N LPF	200-8000 Hz, BYPASS	Adjusts the cutoff frequency of the low pass filter applied to the record noise. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Disc N Level	0-127	Volume of the record noise
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the effect sound (W)
Level	0-127	Output level

78: GTR AMP SIM (Guitar Amp Simulator)

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



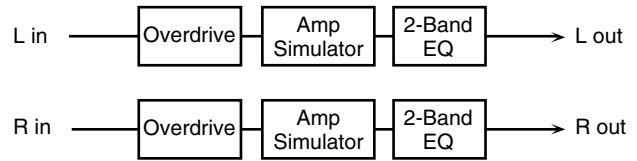
Parameter	Value	Description
Amp Simulator Sw	OFF, ON	Turns the amp switch on/off.
Amp Type	JC-120, CLEAN TWIN, MATCH DRIVE, BG LEAD, MS1959I, MS1959II, MS1959I+II, SLDN LEAD, METAL 5150, METAL LEAD, OD-1, OD-2 TURBO, DISTORTION, FUZZ	Type of guitar amp
Amp Volume #	0-127	Volume and amount of distortion of the amp
Amp Master Vol #	0-127	Volume of the entire pre-amp
Amp Gain	LOW, MID, HIGH	Amount of pre-amp distortion
Amp Presence	0-127 (MATCH DRIVE: -127 - 0)	Tone for the ultra-high frequency range
Amp Bright	OFF, ON	Turning this "On" produces a sharper and brighter sound. * This parameter applies to the "JC-120," "CLEAN TWIN," and "BG LEAD" Pre Amp Types.
Amp Bass	0-127	Tone of the bass/mid/treble frequency range * Middle cannot be set if "MATCH DRIVE" is selected as the Pre Amp Type.
Amp Middle		
Amp Treble		
Speaker Switch	OFF, ON	Determines whether the signal passes through the speaker (ON), or not (OFF).
SP Type	(See the table below.)	Type of speaker
Mic Setting	1, 2, 3	Adjusts the location of the mic that's capturing the sound of the speaker. This can be adjusted in three steps, from 1 to 3, with the mic becoming more distant as the value increases.
Mic Level	0-127	Volume of the microphone
Direct Level	0-127	Volume of the direct sound
Level #	0-127	Output level
Pan #	L64-63R	Stereo location of the output

Specifications for each Speaker Type

The speaker column indicates the diameter of each speaker unit (in inches) and the number of units.

Type	Cabinet	Speaker	Microphone
SMALL 1	small open-back enclosure	10	dynamic
SMALL 2	small open-back enclosure	10	dynamic
MIDDLE	open back enclosure	12 x 1	dynamic
JC-120	open back enclosure	12 x 2	dynamic
BUILT IN 1	open back enclosure	12 x 2	dynamic
BUILT IN 2	open back enclosure	12 x 2	condenser
BUILT IN 3	open back enclosure	12 x 2	condenser
BUILT IN 4	open back enclosure	12 x 2	condenser
BUILT IN 5	open back enclosure	12 x 2	condenser
BG STACK 1	sealed enclosure	12 x 2	condenser
BG STACK 2	large sealed enclosure	12 x 2	condenser
MS STACK 1	large sealed enclosure	12 x 4	condenser
MS STACK 2	large sealed enclosure	12 x 4	condenser
METAL STACK	large double stack	12 x 4	condenser
2-STACK	large double stack	12 x 4	condenser
3-STACK	large triple stack	12 x 4	condenser

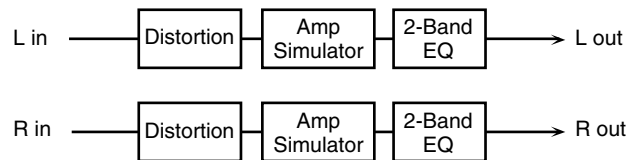
79: STEREO OD (Stereo Overdrive)



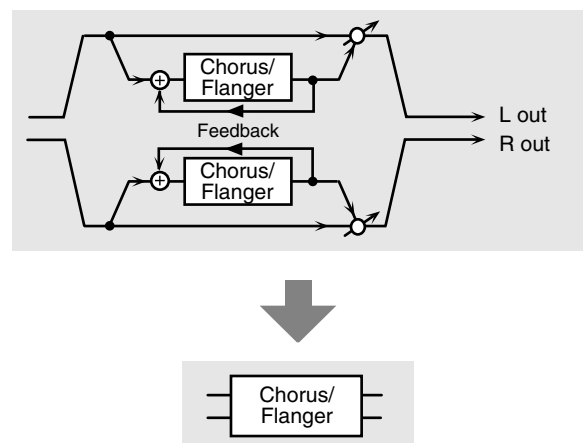
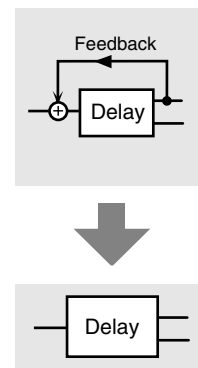
Parameter	Value	Description
Drive #	0-127	Degree of distortion Also changes the volume.
Tone	0-127	Sound quality of the Overdrive effect
Amp Switch	OFF, ON	Turns the Amp Simulator on/off.
Amp Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp SMALL: small amp BUILT-IN: single-unit type amp 2-STACK: large double stack amp 3-STACK: large triple stack amp
Low Gain	-15+15 dB	Gain of the low frequency range
High Gain	-15+15 dB	Gain of the high frequency range
Level	0-127	Output level

80: STEREO DIST (Stereo Distortion)

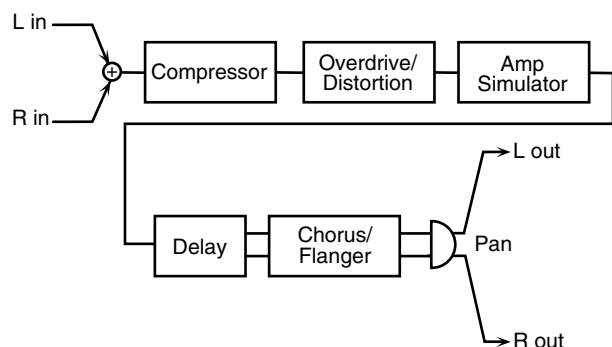
The parameters are the same as for "79: STEREO OD."



In this section, the Delay and Chorus/Flanger are depicted in diagrams. When these same effects are discussed later on, these diagrams also apply.

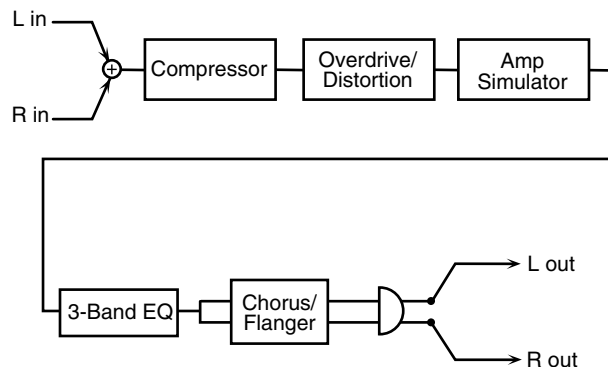


81: GTR MULTI A (Guitar Multi A)



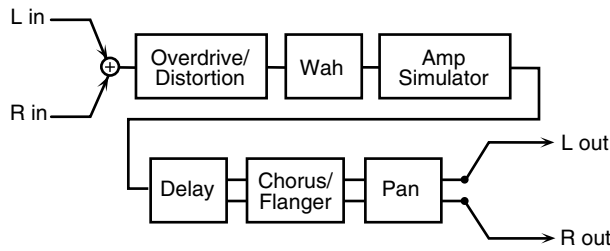
Parameter	Value	Description
Compressor		
Switch	OFF, ON	Turns the Compressor on/off.
Attack	0-127	Sets the speed at which compression starts
Sustain	0-127	Adjusts the duration of the compression.
Level #	0-127	Volume of the Compressor sound
OD/Dist		
Switch	OFF, ON	Turns the Overdrive/Distortion on/off.
Type	OVERDRIVE, DISTORTION	Selects either Overdrive or Distortion.
Drive #	0-127	Amount of distortion Also changes the volume.
Tone	0-127	Sound quality of the Overdrive/Distortion effect
Level	0-127	Volume of the Overdrive/Distortion sound
Amp Simulator		
Switch	OFF, ON	Turns the Amp Simulator on/off.
Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp SMALL: small amp BUILT-IN: single-unit type amp 2-STACK: large double stack amp 3-STACK: large triple stack amp
Delay		
Switch	OFF, ON	Turns the Delay on/off.
Time L	0-3000 ms, note *2	Adjusts the time until the delay is heard.
Time R		
Feedback	-98+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Cho/Flg		
Switch	OFF, ON	Turns the Chorus/Flanger on/off.
Type	CHORUS, FLANGER	Selects either Chorus or Flanger.
Rate	0.05-10.00 Hz, note *2	Frequency of modulation
Depth	0-127	Depth of modulation
Feedback	-98+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
PreDly	0.0-100.0 ms	Adjusts the time until the chorus/flanger is heard.
Filter Type	OFF, LPF, HPF	Type of filter OFF: no filter is used LPF: cuts the frequency range above the Cutoff Freq HPF: cuts the frequency range below the Cutoff Freq
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus/flanger sound (W)
Output		
Level	0-127	Output level
Pan	L64-63R	Stereo location of the output

82: GTR MULTI B (Guitar Multi B)



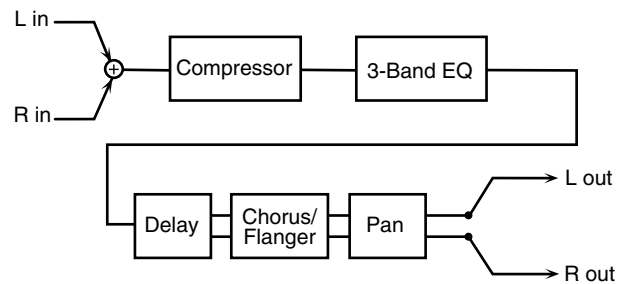
Parameter	Value	Description
Compressor		
Switch	OFF, ON	Turns the Compressor on/off.
Attack	0-127	Sets the speed at which compression starts
Sustain	0-127	Adjusts the duration of the compression.
Level #	0-127	Volume of the Compressor sound
OD/Dist		
Switch	OFF, ON	Turns the Overdrive/Distortion on/off.
Type	OVERDRIVE, DISTORTION	Selects either Overdrive or Distortion.
Drive #	0-127	Degree of distortion Also changes the volume.
Tone	0-127	Sound quality of the Overdrive/Distortion effect
Level	0-127	Volume of the Overdrive/Distortion sound
Amp Simulator		
Switch	OFF, ON	Turns the Amp Simulator on/off.
Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp SMALL: small amp BUILT-IN: single-unit type amp 2-STACK: large double stack amp 3-STACK: large triple stack amp
3 Band EQ		
Switch	OFF, ON	Turns the 3 Band EQ on/off.
Low Gain	-15+15 dB	Gain of the low frequency range
Mid Freq	200-8000 Hz	Frequency of the middle frequency range
Mid Gain	-15+15 dB	Gain of the middle frequency range
Mid Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle frequency range Set a higher value for Q to narrow the frequency range to be affected.
High Gain	-15+15 dB	Gain of the high frequency range
Cho/Flg		
Switch	OFF, ON	Turns the Chorus/Flanger on/off.
Type	CHORUS, FLANGER	Selects either Chorus or Flanger.
Rate	0.05-10.00 Hz, note *2	Frequency of modulation
Depth	0-127	Depth of modulation
Feedback	-98+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
PreDly	0.0-100.0 ms	Adjusts the time until the chorus/flanger is heard.
Filter Type	OFF, LPF, HPF	Type of filter OFF: no filter is used LPF: cuts the frequency range above the Cutoff Freq HPF: cuts the frequency range below the Cutoff Freq
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus/flanger sound (W)
Output		
Level	0-127	Output level
Pan	L64-63R	Stereo location of the output

83: GTR MULTI C (Guitar Multi C)



Parameter	Value	Description
OD/Dist		
Switch	OFF, ON	Turns the Overdrive/Distortion on/off.
Type	OVERDRIVE, DISTORTION	Selects either Overdrive or Distortion.
Drive #	0-127	Degree of distortion Also changes the volume.
Tone	0-127	Sound quality of the Overdrive/Distortion effect
Level	0-127	Volume of the Overdrive/Distortion sound
Wah		
Switch	OFF, ON	Turns the Auto Wah on/off.
Filter Type	LPF, BPF	Type of filter LPF: The wah effect is applied over a wide frequency range. BPF: The wah effect is applied over a narrow frequency range.
Rate	0.05-10.00 Hz, note *2	Frequency of modulation
Depth	0-127	Depth of modulation
Sens	0-127	Adjusts the sensitivity with which the filter is controlled.
Manual #	0-127	Adjusts the center frequency at which the effect is applied.
Peak	0-127	Adjusts the amount of the wah effect that occurs in the center frequency range. Set a higher value for Q to narrow the affected frequency range.
Amp Simulator		
Switch	OFF, ON	Turns the Amp Simulator on/off.
Type	SMALL, BUILT-IN, 2-STACK, 3-STACK	Type of guitar amp SMALL: small amp BUILT-IN: single-unit type amp 2-STACK: large double stack amp 3-STACK: large triple stack amp
Delay		
Switch	OFF, ON	Turns the Delay on/off.
Time L	0-3000 ms, note *2	Adjusts the time until the delay is heard.
Time R		
Feedback	-98+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Cho/Flg		
Switch	OFF, ON	Turns the Chorus/Flanger on/off.
Type	CHORUS, FLANGER	Selects either Chorus or Flanger.
Rate	0.05-10.00 Hz, note *2	Frequency of modulation
Depth	0-127	Depth of modulation
Feedback	-98+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
PreDly	0.0-100.0 ms	Adjusts the time until the chorus/flanger is heard.
Filter Type	OFF, LPF, HPF	Type of filter OFF: no filter is used LPF: cuts the frequency range above the Cutoff Freq HPF: cuts the frequency range below the Cutoff Freq
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus/flanger sound (W)
Output		
Level	0-127	Output level
Pan	L64-63R	Stereo location of the output

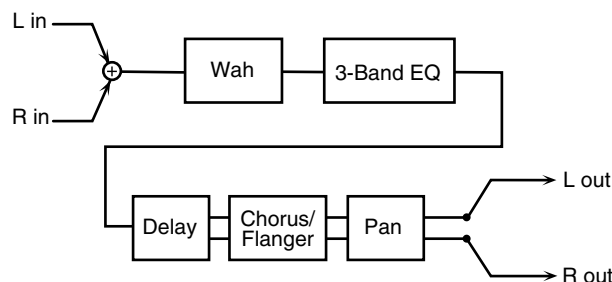
84: CL GTR MLT A (Clean Guitar Multi A)



Parameter	Value	Description
Compressor		
Switch	OFF, ON	Turns the Compressor on/off.
Attack	0-127	Sets the speed at which compression starts
Sustain	0-127	Adjusts the duration of the compression.
Level #	0-127	Volume of the Compressor sound
3 Band EQ		
Switch	OFF, ON	Turns the 3 Band EQ on/off.
Low Gain	-15+15 dB	Gain of the low frequency range
Mid Freq	200-8000 Hz	Frequency of the middle frequency range
Mid Gain	-15+15 dB	Gain of the middle frequency range
Mid Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle frequency range Set a higher value for Q to narrow the affected frequency range.
High Gain	-15+15 dB	Gain of the high frequency range
Delay		
Switch	OFF, ON	Turns the Delay on/off.
Time L	0-3000 ms, note*2	Adjusts the time until the delay is heard.
Time R		
Feedback	-98+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Cho/Flg		
Switch	OFF, ON	Turns the Chorus/Flanger on/off.
Type	CHORUS, FLANGER	Selects either Chorus or Flanger.
Rate	0.05-10.00 Hz, note *2	Frequency of modulation
Depth	0-127	Depth of modulation
Feedback	-98+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
Pre Delay	0.0-100.0 ms	Adjusts the time until the chorus/flanger is heard.
Filter Type	OFF, LPF, HPF	Type of filter OFF: no filter is used LPF: cuts the frequency range above the Cutoff Freq HPF: cuts the frequency range below the Cutoff Freq
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus/flanger sound (W)
Output		
Level	0-127	Output level
Pan	L64-63R	Stereo location of the output

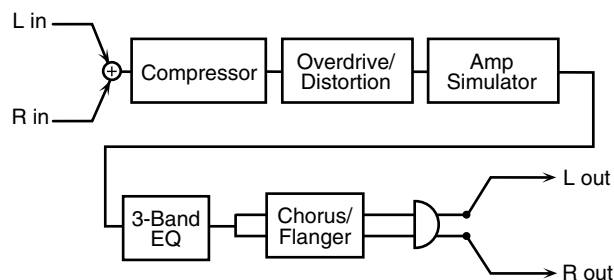
Chapter 4 Using the XV-5050 Effects

85: CL GTR MLT B (Clean Guitar Multi B)



Parameter	Value	Description
Wah		
Switch	OFF, ON	Turns the Auto Wah on/off.
Filter Type	LPF, BPF	Type of filter LPF: The wah effect is applied over a wide frequency range. BPF: The wah effect is applied over a narrow frequency range.
Rate	0.05-10.00 Hz, note *2	Frequency of modulation
Mod Depth	0-127	Depth of modulation
Sens	0-127	Adjusts the sensitivity with which the filter is controlled.
Manual #	0-127	Adjusts the center frequency at which the effect is applied.
Peak	0-127	Adjusts the amount of the wah effect that occurs in the center frequency range. Set a higher value for Q to narrow the affected frequency range.
3 Band EQ		
Switch	OFF, ON	Turns the 3 Band EQ on/off.
Low Gain	-15-+15 dB	Gain of the low frequency range
Mid Freq	200-8000 Hz	Frequency of the middle frequency range
Mid Gain	-15-+15 dB	Gain of the middle frequency range
Mid Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle frequency range Set a higher value for Q to narrow the affected frequency range.
High Gain	-15-+15 dB	Gain of the high frequency range
Delay		
Switch	OFF, ON	Turns the Delay on/off.
Time L	0-3000 ms, note *2	Adjusts the time until the delay is heard.
Time R		
Feedback	-98-+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the delay sound (W)
Cho/Flg		
Switch	OFF, ON	Turns the Chorus/Flanger on/off.
Type	CHORUS, FLANGER	Selects either Chorus or Flanger.
Rate	0.05-10.00 Hz, note *2	Frequency of modulation
Depth	0-127	Depth of modulation
Feedback	-98-+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
PreDly	0.0-100.0 ms	Adjusts the time until the chorus/flanger sound is heard.
Filter Type	OFF, LPF, HPF	Type of filter OFF: no filter is used LPF: cuts the frequency range above the Cutoff Freq HPF: cuts the frequency range below the Cutoff Freq
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus/flanger sound (W)
Output		
Level	0-127	Output level
Pan	L64-63R	Stereo location of the output

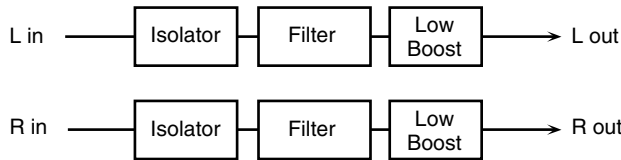
86: BASS MULTI



Parameter	Value	Description
Compressor		
Switch	OFF, ON	Turns the Compressor on/off.
Attack	0-127	Sets the speed at which compression starts
Sustain	0-127	Adjusts the duration of the compression.
Level #	0-127	Volume of the Compressor sound
OD/Dist		
Switch	OFF, ON	Turns the Overdrive/Distortion on/off.
Type	OVERDRIVE, DISTORTION	Selects either Overdrive or Distortion.
Drive #	0-127	Degree of distortion Also changes the volume.
Level	0-127	Volume of the Overdrive/Distortion sound
Amp Simulator		
Switch	OFF, ON	Turns the Amp Simulator on/off.
Type	SMALL, BUILT-IN, 2-STACK	Type of bass amp SMALL: small amp BUILT-IN: single-unit type amp 2-STACK: large double stack amp
3 Band EQ		
Switch	OFF, ON	Turns the 3 Band EQ on/off.
Low Gain	-15-+15 dB	Gain of the low frequency range
Mid Freq	200-8000 Hz	Frequency of the middle frequency range
Mid Gain	-15-+15 dB	Gain of the middle frequency range
Mid Q	0.5, 1.0, 2.0, 4.0, 8.0	Width of the middle frequency range Set a higher value for Q to narrow the affected frequency range.
High Gain	-15-+15 dB	Gain of the high frequency range
Cho/Flg		
Switch	OFF, ON	Turns the Chorus/Flanger on/off.
Type	CHORUS, FLANGER	Selects either Chorus or Flanger.
Rate	0.05-10.00 Hz, note *2	Frequency of modulation
Depth	0-127	Depth of modulation
Feedback	-98-+98 %	Adjusts the amount of the flanger sound that's fed back into the effect. Negative (-) settings invert the phase.
PreDly	0.0-100.0 ms	Adjusts the time until the chorus/flanger is heard.
Filter Type	OFF, LPF, HPF	Type of filter OFF: no filter is used LPF: cuts the frequency range above the Cutoff Freq HPF: cuts the frequency range below the Cutoff Freq
Cutoff Freq	200-8000 Hz	Basic frequency of the filter
Balance #	D100:0W-D0:100W	Volume balance between the direct sound (D) and the chorus/flanger sound (W)
Output		
Level	0-127	Output level
Pan	L64-63R	Stereo location of the output

87: ISOLATOR 2

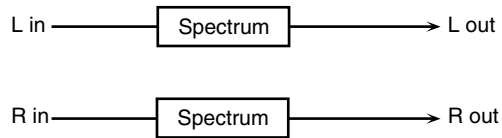
This adds a filter to the ISOLATOR effect. Isolator is an equalizer that radically cuts the volume of selected frequencies, allowing you to create special effects to the sound by cutting the volume in various frequency ranges.



Parameter	Value	Description
Level Low #	-60-+4 dB	These boost and cut each of the High, Middle, and Low frequency ranges. At -60 dB, the sound becomes inaudible. 0 dB is equivalent to the input level of the sound.
Level Middle #		
Level High #		
AntiPhase Low Sw	OFF, ON	Turns the Anti-Phase function on and off for the Low frequency ranges. When turned on, a stereo copy of the sound is phase-inverted and added to the signal.
AntiPhase Lo Lev	0-127	Adjusts the level settings for the Low frequency ranges. Adjusting this level for certain frequencies allows you to lend emphasis to specific elements within a sound. (This is effective only for stereo source.)
AntiPhase Mid Sw	OFF, ON	Settings of the Anti-Phase function for the Middle frequency ranges The parameters are the same as for the Low frequency ranges.
AntiPhase Mid Lev	0-127	
Filter Switch	OFF, ON	Turns the filter on/off.
Filter Type	LPF, BPF, HPF, NOTCH	Type of filter LPF: Passes frequencies below the Cutoff. BPF: Passes frequencies near the Cutoff. HPF: Passes frequencies above the Cutoff. NOTCH: Passes frequencies other than those near the Cutoff.
Cutoff Freq	0-127	Basic frequency of the filter The closer to zero this is set, the lower the cutoff frequency becomes; set it closer to 127, and the cutoff frequency becomes higher.
Resonance	0-127	Resonance level of the filter Raising the setting increases the resonance volume near the cutoff frequency.
Filter Slope	-12, -24 dB	Filter's attenuation slope -24 dB per octave: steep -12 dB per octave: gentle
Filter Gain	0-24 dB	Compensates for volume reductions in selected frequency ranges caused by some filters. The level of compensation increases as the value is increased, thus raising the volume.
Low Boost Sw	OFF, ON	Turns Low Booster on/off. This emphasizes the bottom frequencies to create a heavy bass sound.
Low Boost Level	0-127	Increasing this value gives you a heavier low end. * Depending on the Isolator and filter settings, this effect may be hard to hear.
Level	0-127	Output level

88: ST SPECTRUM (Stereo Spectrum)

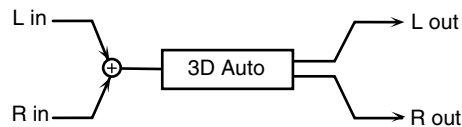
This is a stereo spectrum. Spectrum is a type of filter that modifies the timbre by boosting or cutting the levels of specific frequency ranges.



Parameter	Value	Description
250Hz Gain	-15-+15 dB	Gain of each frequency band
500Hz Gain		
1000Hz Gain		
1250Hz Gain		
2000Hz Gain		
3150Hz Gain		
4000Hz Gain		
8000Hz Gain		
Band Width Q	0.5, 1.0, 2.0, 4.0, 8.0	Simultaneously adjusts the width of all the frequency bands.
Level #	0-127	Output level

89: 3D AUTO SPIN

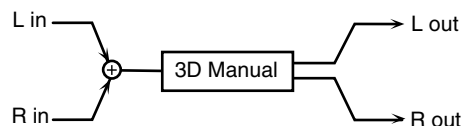
Spins the sound across the stereo field.



Parameter	Value	Description
Azimuth	L180-R180	Sets the location at which the sound stops when rotation ends. A setting of "0" positions the sound in the center.
Speed #	0.05-10.00 Hz, note *2	Speed of rotation
Clockwise	-, +	Direction of rotation -: counterclockwise rotation +: clockwise rotation
Turn #	OFF, ON	Stops or starts the rotation. ON: The sound rotates. OFF: Rotation stops at the location specified by Azimuth.
Output Mode	SPEAKER, PHONES	Selects the method by which the effect is sent to the OUTPUT jacks. The optimal 3D effect is achieved if you select SPEAKER when using speakers, or PHONES when using headphones.
Level	0-127	Output level

90: 3D MANUAL

Places the 3D effect at a desired location.



Parameter	Value	Description
Azimuth #	L180-R180	Specifies the location. A setting of "0" positions the sound in the center.
Output Mode	SPEAKER, PHONES	Selects the method by which the effect is sent to the OUTPUT jacks. The optimal 3D effect is achieved if you select SPEAKER when using speakers, or PHONES when using headphones.
Level	0-127	Output level

Chapter 4 Using the XV-5050 Effects

When Using 3D Effects

The following 3D effects utilize RSS (Roland Sound Space) technology to create a spaciousness that cannot be produced by delay, reverb, chorus, etc.

48: 3D DELAY

60: 3D CHORUS

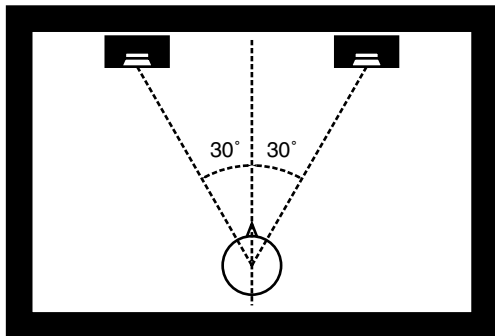
61: 3D FLANGER

70: 3D DELAY 2

89: 3D AUTO SPIN

90: 3D MANUAL

When using these effects, we recommend that you place your speakers as follows. Also, make sure that the speakers are at a sufficient distance from the walls on either side.



If the left and right speakers are too far apart, or if there is too much reverberation, the full 3D effect may not be realized.

Each of these effects has an "Output Mode" parameter. If the sound from the OUTPUT jacks is to be heard through speakers, set this parameter to "SPEAKER." If the sound is to be heard through headphones, set it to "PHONES." This ensures that the optimal 3D effect is achieved. If this parameter is not set correctly, the full 3D effect may not be realized.

note *1:

♪ (Sixteenth note), ♪ (Eighth-note triplet), ♪ (Dotted sixteenth note), ♪ (Eighth note),
 ♪ (Half-note triplet), ♪ (Dotted eighth note), ♪ (Quarter note), ♪ (Half-note triplet),
 ♪ (Dotted quarter note), ♪ (Half note),

note *2:

♪ (Sixty-fourth-note triplet), ♪ (Sixty-fourth note), ♪ (Thirty-second-note triplet),
 ♪ (Thirty-second note), ♪ (Sixteenth-note triplet), ♪ (Dotted thirty-second note),
 ♪ (Sixteenth note), ♪ (Eighth-note triplet), ♪ (Dotted sixteenth note),
 ♪ (Eighth note), ♪ (Quarter-note triplet), ♪ (Dotted eighth note),
 ♪ (Quarter note), ♪ (Half-note triplet), ♪ (Dotted quarter note), ♪ (Half note),
 ♪ (Whole-note triplet), ♪ (Dotted half note), ♪ (Whole note),
 ♪ (Double-note triplet), ♪ (Dotted whole note), ♪ (Double note)

Chorus Parameters

The XV-5050's Chorus effect unit can also be used as a stereo delay unit.

These settings allow you to select chorus or delay, and the characteristics of the selected effect type.

Parameter	Value	Description
Type	0 (OFF), 1 (CHORUS), 2 (DELAY), 3 (GM2 CHORUS)	Selects either Chorus or Delay. 0 (OFF): Neither Chorus or Delay is used. 1 (CHORUS): Chorus is used. 2 (DELAY): Delay is used. 3 (GM2 CHORUS): GM2 Chorus is used.
Type: 1 (CHORUS)		
Cho Rate	0.05-10.00 Hz	Frequency of modulation
Cho Depth	0-127	Depth of modulation
Cho PreDly	0.0-100.0 ms	Adjusts the time until the chorus is heard.
Chorus Feedback	0-127	Adjusts the amount of the chorus sound that's fed back into the effect.
Cho Filter Type	OFF, LPF, HPF	Type of filter OFF: no filter is used LPF: cuts the frequency range above the Cutoff Freq HPF: cuts the frequency range below the Cutoff Freq
Cho Cutoff	200-8000 Hz	Basic frequency of the filter
Cho Phase	0-180 deg	Spatial spread of the sound
Type: 2 (DELAY)		
Delay L	0-1000 ms, note	Adjusts the time until the delay is heard.
Delay R		
Delay C		
Dly Feedback	-98-+98 %	Adjusts the amount of the delay sound that's fed back into the effect. Negative (-) settings invert the phase.
Dly HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which sound fed back to the effect is filtered out. If you don't want to filter out any high frequencies, set this parameter to BYPASS.
Dly L Level	0-127	Volume of each delay
Dly R Level		
Dly C Level		
Type: 3 (GM2 CHORUS)		
Chorus Level	0-127	Volume of the chorus sound
Chorus Feedback	0-127	Adjusts the amount of the chorus sound that's fed back into the effect.
Chorus Pre-LPF	0-7	Cuts the high frequency range of the sound coming into the chorus. Higher values cut more high frequencies.
Chorus Delay	0-127	Adjusts the time until the chorus is heard.
Chorus Rate	0-127	Frequency of modulation
Chorus Depth	0-127	Depth of modulation
Chorus Send to Rev	0-127	Adjusts the amount of chorus sound sent to the reverb.

note:

♪ (Sixty-fourth-note triplet), ♪ (Sixty-fourth note), ♪ (Thirty-second-note triplet),
 ♪ (Thirty-second note), ♪ (Sixteenth-note triplet), ♪ (Dotted thirty-second note),
 ♪ (Sixteenth note), ♪ (Eighth-note triplet), ♪ (Dotted sixteenth note),
 ♪ (Eighth note), ♪ (Quarter-note triplet), ♪ (Dotted eighth note),
 ♪ (Quarter note), ♪ (Half-note triplet), ♪ (Dotted quarter note), ♪ (Half note),
 ♪ (Whole-note triplet), ♪ (Dotted half note), ♪ (Whole note),
 ♪ (Double-note triplet), ♪ (Dotted whole note), ♪ (Double note)

Reverb Parameters

These settings allow you to select the desired type of reverb and its characteristics.

Parameter	Value	Description
Type	0 (OFF), 1 (REVERB), 2 (SRV ROOM), 3 (SRV HALL), 4 (SRV PLATE), 5 (GM2 RE-VERB)	Type of reverb 0 (OFF): Reverb is not used. 1 (REVERB): Normal reverb 2 (SRV ROOM): This simulates typical room acoustic reflections. 3 (SRV HALL): This simulates typical concert hall acoustic reflections. 4 (SRV PLATE): This simulates a reverb plate, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate. 5 (GM2 REVERB): GM2 Reverb
Type: 1 (REVERB)		
Reverb Type	ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DELAY	Type of reverb/delay ROOM1: short reverb with high density ROOM2: short reverb with low density STAGE1: reverb with greater late reverberation STAGE2: reverb with strong early reflections HALL1: very clear-sounding reverb HALL2: rich reverb DELAY: conventional delay effect PAN-DELAY: delay effect with echoes that pan left and right
Reverb Time	0-127	Time length of reverberation (Type: ROOM1-HALL2) Delay time (Type: DELAY, PAN-DELAY)
Rev HF Damp	200-8000 Hz, BYPASS	Adjusts the frequency above which the high-frequency content of the reverb sound is cut, or “damped.” If you don’t want to damp the high frequencies, set this parameter to BYPASS.
Reverb Feedback	0-127	Adjusts the amount of delay feedback when the Type setting is DELAY or PAN-DELAY.
Type: 2 (SRV ROOM) / 3 (SRV HALL) / 4 (SRV PLATE)		
Pre Delay	0.0-100.0 ms	Adjusts the time until the reverb is heard.
Time	0-127	Duration of reverb
Size	1-8	Size of the simulated room or hall
High Cut	160 Hz-12.5 kHz, BYPASS	Adjusts the frequency above which the high-frequency content of the reverb is filtered out. If you don’t want to reduce the reverb’s high frequencies, set this parameter to BYPASS.
Density	0-127	Density of reverb
Diffusion	0-127	Adjusts the change in the density of the reverb over time. The higher the value, the more the density increases with time. (The effect of this setting is most pronounced with long reverb times.)
LF Damp	50-4000 Hz, BYPASS	Adjusts the frequency below which the low-frequency content of the reverb sound is reduced, or “damped.” If you don’t want to damp the high frequencies, set this parameter to BYPASS.
LF Damp Gain	-36-0 dB	Adjusts the amount of damping applied to the frequency range selected with LF Damp. With a setting of “0,” there’s no reduction of the reverb’s low-frequency content.
HF Damp	4000 Hz-12.5 kHz, BYPASS	Adjusts the frequency above which the high-frequency content of the reverb sound is reduced, or “damped.” If you don’t want to damp the high frequencies, set this parameter to BYPASS.
HF Damp Gain	-36-0 dB	Adjusts the amount of damping applied to the frequency range selected with HF Damp. With a setting of “0,” there’s no reduction of the reverb’s high-frequency content.
Type: 5 (GM2 REVERB)		
Level	0-127	Output level of reverberation
Character	0-7	Type of reverb 0-5: reverb 6, 7: delay
Pre-LPF	0-7	Cuts the high frequency range of the sound coming into the reverb. Higher values cut more high frequencies.
Time	0-127	Duration of reverb
Delay Feedback	0-127	Adjusts the amount of the delay sound that’s fed back into the effect when the Reverb Character setting is 6 or 7.

Copying Effect Settings

You can copy the effect settings from any Patch, Performance, or Rhythm Set into the currently selected Patch, Performance, or Rhythm Set. This can save a great deal of time and effort when setting up effects.

1. Make sure that the Performance, Patch or Rhythm Set you wish to copy is selected.
2. Press [UTILITY] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the parameter group at the upper line of the display.
4. Turn [VALUE] to choose “COPY EFFECT.”
5. USE [◀ CURSOR]/[CURSOR ▶] and [VALUE] to choose the desired settings.
6. Press [ENTER] to execute the Copy.

* To cancel, press [EXIT].

7. Press [EXIT] to return to the appropriate PLAY screen.

A “*” symbol will appear at the left of the Patch/Performance/Rhythm Set name, indicating that the Copy has been executed.

Parameter	Value	Description
Source	PERFORM, PATCH, RHYTHM	Selects the source containing the settings you wish to copy.
(Performance/Patch/Rhythm Set name)		
Type	MFX, CHORUS, RE-VERB	Selects the effect type of the source.
From	MFX-A-C	Selects the Multi-effects to copy the settings from. * This can be set only when “PERFORM” is selected for Source and “MFX” is selected for Type.
To	MFX-A-C	Selects the Multi-effects to which you want to copy the settings. * This can be set only when “PERFORM” is selected for Source and “MFX” is selected for Type.

Chapter 5 Saving a Sound You Create

Saving Edits to the XV-5050's Internal Memory (WRITE)

If you turn the power off or select another Patch, Rhythm Set, or Performance after you have modified a Patch, Rhythm Set or Performance, the changes you have made will be lost. If you wish to preserve the data, store it into the XV-5050's USER memory.

Internal Write Protect

The Internal Write Protect setting is provided to help prevent the accidental overwriting of data in the USER memory. When saving new data to the USER memory, you must turn off Internal Write Protect. If you attempt to write data when it is on, the following display will appear.

```
WRITE PROTECT
Internal:      ON
```

Change the displayed ON to OFF and press [ENTER] to turn Internal Write Protect off. Press [ENTER] once again, and the data will be written into the USER memory.

Once you disable Internal Write Protect, it will remain disabled until the XV-5050's power is turned off.

Saving a Patch (PATCH WRITE)

1. Make sure that the Patch you wish to save is selected.
2. Press [UTILITY] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the upper left of the display.
4. Turn [VALUE] to select "WRITE PATCH."

```
WRITE PATCH    [ENT]
US:001(Xtremities )
```

5. Press [CURSOR ▶] to move the cursor to the lower right of the display.
6. Turn [VALUE] to select the number of the memory location in which you wish to save the Patch (USER area).
7. Press [ENTER] to save the Patch.
* To cancel the procedure, press [EXIT].
8. Press [EXIT] to return to the PATCH PLAY screen.

HINT

By holding down [SHIFT] and pressing [UTILITY], you can move directly to the PATCH WRITE screen.

Saving a Rhythm Set

1. Make sure that the Rhythm Set you wish to save is selected.
2. Press [UTILITY] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the upper left of the display.
4. Turn [VALUE] to select "WRITE RHYTHM."

```
WRITE RHYTHM  [ENT]
US:001(XU WayHiFKit)
```
5. Press [CURSOR ▶] to move the cursor to the lower right of the display.
6. Turn [VALUE] to select the number of the memory location in which you wish to save the Rhythm Set (USER area).
7. Press [ENTER] to save the Rhythm Set.
* To cancel the procedure, press [EXIT].
8. Press [EXIT] to return to the RHYTHM PLAY screen.

HINT

By holding down [SHIFT] and pressing [UTILITY], you can move directly to the RHYTHM WRITE screen.

Saving a Performance

1. Make sure that Performance you wish to save is selected.
2. Press [UTILITY] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the upper left of the display.
4. Turn [VALUE] to select "WRITE PERFORM."

```
WRITE PERFORM  [ENT]
US:001(Voltage Ctrl)
```

5. Press [CURSOR ▶] to move the cursor to the lower right of the display.
6. Turn [VALUE] to select the number of the memory location in which you wish to save the Performance (USER area).
7. Press [ENTER] to save the Performance.
* To cancel the procedure, press [EXIT].
8. Press [EXIT] to return to the PERFORM PLAY screen.

HINT

By holding down [SHIFT] and pressing [UTILITY], you can move directly to the PERFORM WRITE screen.

If you change a Patch's/Rhythm Set's settings without having saved the Patch/Rhythm Set, and then attempt to save the Performance, the following message appears in the display.

```
Edited Patch/Rhythm
Exists. OK? [ENTER]
```

When you press [ENTER], the settings of the Performance alone are saved; changes in the settings of Patches/Rhythm Sets will not be saved. If you do want to save the settings of Patches/Rhythm Sets, press [EXIT], save the Patch or Rhythm Set with its changed settings first, and then save the Performance.

Initializing a Sound (INIT)

This feature resets all of the parameters in the current Patch, Performance, Rhythm Set or Rhythm Tone to their standard or factory default settings (INITIALIZE).

* When you play a Patch, Performance, Rhythm Set or Rhythm Tone, you're actually playing it from the XV-5050's Temporary memory — the Patch, Performance, Rhythm Set or Rhythm Tone is instantly copied into the Temporary memory when you select it. During initialization, only the copy is affected, not the version saved in memory. If you wish to restore all of the XV-5050's settings to their factory values, perform a Factory Reset. (p. 15)

1. Select the Performance, Patch or Rhythm Set you wish to initialize.
2. Press [UTILITY] to make its indicator light.
3. Press [◀ CURSOR] a few times to move the cursor to the upper left of the display.
4. Turn [VALUE] to select "INIT PATCH (RHYTHM, PERFORM)."

```
INIT PATCH      [ENT]
Mode:           DEFAULT
```

5. Press [CURSOR ▶] to move the cursor to the lower right of the display.
6. Turn [VALUE] to select the Initialize mode.
7. Press [ENTER].
When the initialization is finished, "Complete" appears momentarily in the display.
8. Press [EXIT] to return to the previous screen.

Parameter	Value	Description
Mode	Initialize Mode	DEFAULT, PRESET
		DEFAULT: This resets the data currently in the Temporary memory to the standard values called "initial data": INIT PATCH, INIT PERFORM or INIT SET. Use this setting when you wish to create a sound from scratch. PRESET: This copies the factory settings of the memory location in which the Patch, Performance, Rhythm Set or Rhythm Tone is stored into the Temporary memory.

The Rhythm Set Initialize operation can also be used to initialize the settings of only an individual percussion instrument sound (key) that you specify. In this case, move the cursor to the lower left of the display, and turn [VALUE] to select the percussion instrument sound that you wish to initialize.

```
INIT RHYTHM    [ENT]
Type:          ALL
```

Parameter	Value	Description
Type	ALL, ONE KEY	ALL: The Rhythm Set will be initialized. ONE KEY: A Rhythm Tone (key) will be initialized.
Key	A0-C8	When Type is set to "ONE KEY," this selects the Rhythm Tone (key) that will be initialized. * This will not appear when Type is set to "ALL."

Protecting the Internal Memory (PROTECT)

This feature helps prevent the accidental overwriting of USER memory to ensure that Patch, Performance or Rhythm Set data is not accidentally erased.

1. Press [UTILITY] to make its indicator light.
 2. Press [◀ CURSOR] a few times to move the cursor to the upper left of the display.
 3. Turn [VALUE] to select "WRITE PROTECT."
- ```
WRITE PROTECT
Internal ON
```
4. Press [CURSOR ▶] to move the cursor to the lower left of the display.
  5. Turn [VALUE] to select the parameter you wish to set.
  6. Press [CURSOR ▶] to move the cursor to the lower right of the display.
  7. Turn [VALUE] to select ON or OFF.
  8. Press [EXIT] to return to the previous screen.

| Parameter | Value                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Internal  | Internal Write Protect | OFF, ON                                                                                                                                                                                                                                                                                                                                                                                                                         |
|           |                        | Prevents the Write operation from accidentally overwriting USER memory locations. When this is set ON, the data cannot be written. Data can be only written when Internal Write Protect is off. When the XV-5050's power is turned on, this setting is automatically turned on, — you will need to turn it off before writing data to the USER memory. It is also possible to turn this setting off during the Write procedure. |
| Exclusive | Exclusive Protect      | OFF, ON                                                                                                                                                                                                                                                                                                                                                                                                                         |
|           |                        | Prevents System Exclusive messages received from an external MIDI device from re-writing USER memory settings. When this feature is on, the data cannot be rewritten by System Exclusive messages. When it is off, data can be rewritten, even if the Internal Write Protect setting is set to ON.                                                                                                                              |

## Transmitting Sound Settings (XFER)

You can transmit sound generator or System settings that are in the XV-5050's memory to an external MIDI device or to the XV-5050's USER memory.

### Transmitting to an External MIDI Device

The act of transmitting Patch, Performance, Rhythm Set or System data to an external MIDI device is called a "Bulk Dump." You can perform a bulk dump when two XV-5050s are connected to each other, or when you wish to store Patch, Performance, Rhythm Set or System data on an external MIDI device as a safety backup of your XV-5050 data.

1. Press [UTILITY] to make its indicator light.
2. Press [◀ CURSOR] a few times to move the cursor to the upper left of the display.
3. Turn [VALUE] to select "XFER TO MIDI."

```
XFER TO MIDI [ENT]
Type: ALL
```

4. Use [◀ CURSOR]/[CURSOR ▶] and [VALUE] to select the data to be transmitted.
5. Press [ENTER] to execute the data transmission.  
\* To interrupt the transmission of data, press [EXIT].
6. Press [EXIT] to return to the previous screen.

| Parameter | Value        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type      | Data Type    | ALL, PERFORM, PATCH, RHYTHM, SETUP, SYSTEM<br>Specifies the type of data to be transmitted.<br><b>ALL:</b> Performance, Patch, and Rhythm Set<br><b>PERFORM:</b> Performance<br><b>PATCH:</b> Patch<br><b>RHYTHM:</b> Rhythm Set<br><b>SETUP:</b> Setup<br><b>SYSTEM:</b> System                                                                                                                                                                                          |
| Block     | Source Block | USER, TEMP, CTRL<br>Specifies the source of the data to be transmitted.<br><b>USER:</b> Data from USER memory will be transmitted.<br><b>TEMP:</b> Data in Temporary memory will be transmitted.<br><b>CTRL:</b> The status of Performances, including Performance Bank Selects and Program Changes, are not sent as Exclusive messages, but rather as MIDI Channel messages. For more on the transmitted MIDI channel messages, refer to "MIDI Implementation." (p. 154) |

Select the data to be transmitted by choosing one of the combinations shown below.

For example, if you wish to transmit the USER group Patches 001–020, you would specify "Type: PATCH, Block: USER, From: 1, To: 20."

| Type    | Block           | From/To |
|---------|-----------------|---------|
| ALL     | USER            |         |
|         | TEMP            |         |
| PERFORM | USER            | 1–64    |
|         | TEMP (*1)       |         |
|         | TEMP+PATCH (*2) |         |
|         | CTRL            |         |
| PATCH   | USER            | 1–128   |
|         | TEMP            |         |
| RHYTHM  | USER            | 1–4     |
|         | TEMP            |         |
| SETUP   | USER            |         |
| SYSTEM  | USER            |         |

\*1: The current Performance

\*2: The current Performance and the Patch or Rhythm Set assigned to each Part of the Performance

### Transmitting to User Memory

You can transmit Patch, Performance or Rhythm Set settings to the USER memory.

1. Press [UTILITY] to make its indicator light.
2. Press [◀ CURSOR] a few times to move the cursor to the upper left of the display.
3. Turn [VALUE] to select "XFER TO USER."

```
XFER TO USER [ENT]
Type: ALL
```

4. Use [◀ CURSOR]/[CURSOR ▶] and [VALUE] to select the data to be transmitted.
5. Press [ENTER] to execute the data transmission.  
\* To interrupt the transmission of data, press [EXIT].
6. Press [EXIT] to return to the previous screen.

| Parameter   | Value        | Description                                                                                                                                                                                                                                                                                                                                                    |
|-------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type        | Data Type    | ALL, PERFORM, PATCH, RHYTHM<br>Specifies the type of data to be transmitted.<br><b>ALL:</b> Performance, Patch, and Rhythm Set<br><b>PERFORM:</b> Performance<br><b>PATCH:</b> Patch<br><b>RHYTHM:</b> Rhythm Set                                                                                                                                              |
| Block       | Source Block | USER, PR-A–H, XP-A/B<br>Specifies the source of the data to be transmitted.<br><b>USER:</b> Data from USER memory will be transmitted.<br><b>PR-A–H:</b> Preset A–H data will be transmitted.<br><b>XP-A/B:</b> Data from a Wave Expansion Board will be transmitted.<br>* XP-A/F can be selected only if the corresponding Wave Expansion Board is installed. |
| Destination |              | 1–***<br>Sets the transmission destination to USER. If the Type parameter has been set to PERFORM, PATCH, or RHYTHM, you must specify the first memory location number of the transmission destination.                                                                                                                                                        |

You can specify the data to be transmitted by selecting the appropriate combination shown below.

For example, if you wish to transmit only the PR-A group Patch 001, specify "Type: PATCH, Block: PR-A, From: 1, To: 1."

If the selected data is too large to 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)

Type: PATCH, Block: PR-A, From: 1, To: 5, Destination: 127

If data is transmitted with the above settings, only the two PR-A group Patches 01 and 02 will be successfully transmitted — to USER group Patches 127 and 128 — since you will have attempted to send five Patches to the last two USER memory locations: 127 and 128. Had you selected 124 as a destination, memory locations 124–128 would have accommodated all five Patches.

| Type    | Block        | From/To |
|---------|--------------|---------|
| ALL     | PR-A, B (*1) |         |
| PERFORM | USER (*2)    | 1–64    |
|         | PR-A, B      | 1–32    |
| PATCH   | USER (*2)    | 1–128   |
|         | PR-A–H       | 1–128   |
|         | XP-A, B (*3) |         |
| RHYTHM  | USER (*2)    | 1–4     |
|         | PR-A–H       | 1–2     |
|         | XP-A, B      | (*3)    |

\*1: Since there are no others, Performances other than PR-A/B cannot be selected.

\*2: Move data within the User Memory in block units. The Move destination Patch is overwritten.

\*3: Depends on the Wave Expansion Board installed

\* If the number sent exceeds the capacity of the User memory, then transmission of the data stops the moment the memory is filled.

# Chapter 6 Other Settings/Status Checks

## Setting Procedure:

1. Press [SYSTEM] to make its indicator light.
2. Press [ ◀ CURSOR] a few times to move the cursor to the parameter group in the upper line of the display.

SYSTEM: GENERAL  
LCD Contrast: 5

3. Turn [VALUE] to choose the parameter group containing the parameter you wish to set up.
4. Press [CURSOR ▶] to move the cursor to the parameter name in the lower-left corner of the screen.
5. Turn [VALUE] to choose the parameter you wish to set.
6. Press [CURSOR ▶] to move the cursor to the selected parameter's value.
7. Turn [VALUE] to choose the desired value.
8. Press [EXIT] to return to the previous screen.

## Making Overall Settings

| Parameter      |                         | Value                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------|-------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>GENERAL</b> |                         |                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| LCD Contrast   |                         | 1–10                      | This adjusts the contrast/brightness of the display. Higher values will make the characters darker.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| PowerUp Mode   |                         | LAST-ST,<br>DEFAULT       | Sets the condition of the XV-5050 when its power is turned on.<br><b>LAST-ST:</b> The XV-5050 will power up exactly as it was when it was turned off.<br><b>DEFAULT:</b> The XV-5050 will be ready to play Patch “US:001.”                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Master Level   |                         | 0–127                     | Adjusts the volume of the entire XV-5050.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Clock Source   | System Clock<br>Source  | INT, MIDI,<br>USB         | Specifies the tempo clock of the system.<br><b>INT:</b> The internal clock<br><b>MIDI:</b> An external clock received via MIDI IN connector<br><b>USB:</b> An external clock received via USB connector                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| System Tempo   |                         | 20–250                    | Sets the system tempo. * When Clock Source is set to “MIDI” or “USB,” the tempo will synchronize to the clock messages received from an external device, so the tempo value will be ignored.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Mix/Parallel   | Output Mix/<br>Parallel | MIX,<br>PARALEL           | <b>MIX:</b> Signals that are set to be output from jacks other than the A (MIX) OUTPUT jacks are mixed and output from the A (MIX) OUTPUT jacks.<br>This setting allows you to quickly route everything through headphones when you are creating sounds, or to combine all of your sounds into two outputs when sending the XV-5050's signal to a mixer that has only two channels. When MIX is selected, sound routed to the INDIVIDUAL OUTPUT 3 jack is sent to the left A (MIX) OUTPUT jack, and sound routed to the INDIVIDUAL OUTPUT 4 jack are sent to the right A (MIX) OUTPUT jack.<br><b>PARALEL:</b> Sounds are routed to output jacks according to their output settings. |
| Patch Remain   | Patch Remain<br>Switch  | OFF, ON                   | This specifies whether you want the notes that are sounding to remain (ON) or turn off (OFF) when you select a new Patch or Rhythm Set in Patch mode. In addition, when “ON” is selected, the Volume and Pan data, and the Key Mode and other settings received via MIDI (CC 5, 7, 10, 65, 68, 71–74, RPN 0, 1, 2, MONO ON, POLY ON) are passed on.                                                                                                                                                                                                                                                                                                                                  |
| Rhy EditKey    | Rhythm Edit<br>Key      | PANEL,<br>PNL&MIDI        | You can set whether you'll be able to select percussion instruments for editing only by pressing the XV-5050's front-panel buttons or also by pressing keys on a connected MIDI keyboard.<br><b>PANEL:</b> Percussion instrument sounds can be selected only by using the XV-5050's TONE SELECT [1]–[4].<br><b>PNL&amp;MIDI:</b> Percussion instrument sounds can be selected using the XV-5050's TONE SELECT [1]–[4] and by pressing a key on a connected MIDI keyboard.                                                                                                                                                                                                            |
| Output Gain    |                         | -12, -6, 0, +6,<br>+12 dB | This adjusts the output gain from the XV-5050'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.                                                                                                                                                                                                                                                                                                                                                                                                                           |

### HINT

By holding down [SHIFT] and pressing [SYSTEM], you can move directly to the LCD Contrast screen.

## Selecting Common Controllers

These settings allow you to choose four MIDI controllers for global use when controlling the parameters of any Patch or Performance. The settings in each Patch or Performance will determine whether the two controllers you choose here will actually be used. In each Patch or Performance, you will also need to specify the parameters to be controlled.

| Parameter       |                              | Value                            | Description                                                                                                                                          |
|-----------------|------------------------------|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONTROL</b>  |                              |                                  |                                                                                                                                                      |
| Sys Ctrl Src1–4 | System Control<br>Source 1–4 | OFF, CC01–31, 33–95, BEND, AFTER | <b>OFF:</b> No controller is used.<br><b>CC01–95:</b> Controller numbers 1–95 (except for 32)<br><b>BEND:</b> Pitch Bend<br><b>AFTER:</b> Aftertouch |

# Establishing the MIDI and USB Settings

## Setting the MIDI Channel

The XV-5050 produces sound, and can change its internal settings in response to MIDI messages that it receives from other devices. In order for this to occur, the MIDI transmission channels of the external device must match the MIDI reception channels of the XV-5050.

| Parameter           | Value                            | Description |
|---------------------|----------------------------------|-------------|
| <b>MIDI&amp;USB</b> |                                  |             |
| Control Channel     | Performance Control Channel      | 1–16, OFF   |
| Patch Rx Channel    | Patch/Rhythm Set Receive Channel | 1–16        |

## Making Global Settings

| Parameter           | Value                             | Description |
|---------------------|-----------------------------------|-------------|
| <b>MIDI&amp;USB</b> |                                   |             |
| Rx Prog Change      | Receive Program Change Switch     | OFF, ON     |
| Rx Bank Select      | Receive Bank Select Switch        | OFF, ON     |
| Rx GM1 System On    | Receive GM-ON Exclusive Switch    | OFF, ON     |
| Rx GM2 System On    | Receive GM2-ON Exclusive Switch   | OFF, ON     |
| Rx GS Reset         | Receive GS Reset Exclusive Switch | OFF, ON     |
| Device ID           | Device ID Number                  | 17–32       |
| Rx Exclusive        | Receive System Exclusive Switch   | OFF, ON     |
| Tx Edit Data        | Transmit Edit Data Switch         | OFF, ON     |

## Specifying the Reception Status for Each Tone

You can enable or disable the response to received MIDI messages for each Part of a Performance, each Tone of a Patch, and each Rhythm Tone of a Rhythm Set.

For more information about setting the MIDI response of Parts in a Performance, check out “Establishing a Part’s MIDI Settings (p. 67).”

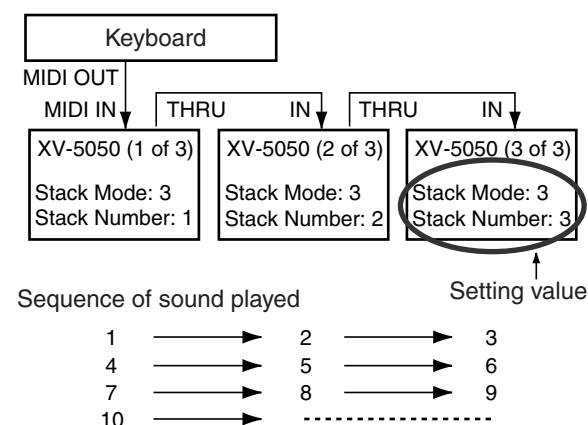
For more information about the settings for a Patch, refer to “Using Controllers to Change How Sounds Are Played (CONTROL)/CTRL Rx MIDI (Tone control receive MIDI)” (p. 51).

For more about setting the MIDI response of Rhythm Tones in a Rhythm Set, refer to “Other Settings (CONTROL)/Rx MIDI (Receive MIDI)” (p. 61).

## Connecting Two or More XV-5050s to Increase Polyphony

The Stack feature allows you to combine two or more XV-5050 units to increase the number of voices that can be played simultaneously. You can connect and use up to eight XV-5050s.

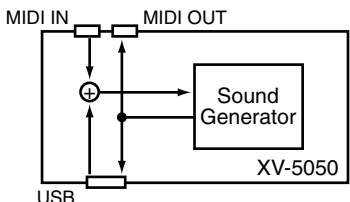
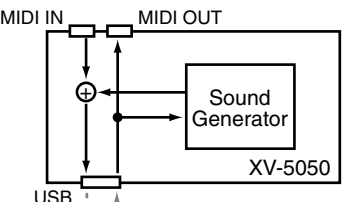
Usage with Three Connected Units



| Parameter           | Value    | Description                                                                                                                                                                                                                                                                 |
|---------------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MIDI&amp;USB</b> |          |                                                                                                                                                                                                                                                                             |
| Stack Mode          | OFF, 2–8 | When using more than one XV-5050, set this parameter to 2–8. When not using the Stack feature, set the parameter to OFF. If Stack mode is turned off, the Stack feature will not operate, and each XV-5050 will attempt to sound all of the note messages that it receives. |
| Stack Number        | 1–8      | When the Stack feature is enabled, this parameter selects the XV-5050 that is to function as the primary /first unit—this is the XV-5050 that will sound the first 64 voices.                                                                                               |

\* The Stack feature will not operate when using Patches in which Key Mode Asgn is set to “MONO” or whose Portamento Switch is “ON” (p. 51), or for Rhythm Sets. Patches for which the Key Mode Asgn is “MONO” or whose Portamento Switch is “ON” will be sounded by the first XV-5050, and Rhythm Sets will be sounded by the second XV-5050.

## Making USB-Related Settings

| Parameter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Value          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MIDI&amp;USB</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| MIDI-USB Thru                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | OFF, ON        | <p><b>OFF:</b> MIDI messages arriving at the MIDI IN and the USB connectors are all sent to the sound generator.</p> <p><b>ON:</b> MIDI messages arriving at the MIDI IN connector are output as is from the USB connector, while the MIDI messages that arrive at the USB connector are output through the MIDI OUT connector.</p> <p>* When this parameter is set to “ON,” the sound generator receives MIDI messages only from the USB connector. For the sound generator to receive MIDI messages from the MIDI IN connector, the MIDI Thru function on your computer must be set to “ON.”</p> |
| <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p><b>MIDI-USB Thru = OFF</b></p>  <p>XV-5050</p> </div> <div style="text-align: center;"> <p><b>MIDI-USB Thru = ON</b></p>  <p>XV-5050</p> <p>Computer<br/>MIDI Thru: ON</p> <p>* MIDI messages received at MIDI IN are routed through the computer to the sound generator.</p> </div> </div> |                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| USB Descript                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | USB Descriptor | <p><b>VENDER:</b> Select this when using the supplied driver with a USB connection.</p> <p><b>GENERIC:</b> Select this when using a generic USB driver included with the OS with a USB connection.</p>                                                                                                                                                                                                                                                                                                                                                                                             |

\* Changes in the settings for these parameters won't take effect until you've saved the changes (p. 110), and then switched off the power and turned it on again.

## Setting the Way In Which Sounds Are Previewed

You can preview (p. 18) a Patch in any of three ways: “PHRASE” (the Patch plays a phrase), “CHORD” (the Patch plays a chord), or “SINGLE” (the Patch plays a series of notes).

| Parameter         | Value                     | Description           |
|-------------------|---------------------------|-----------------------|
| <b>PREVIEW</b>    |                           |                       |
| Mode              | Preview Mode              | SINGLE, CHORD, PHRASE |
| Key Note 1–4      | Preview Key Note 1–4      | C-1–G9                |
| Velocity Note 1–4 | Preview Velocity Note 1–4 | 0–127                 |

## Making the Equalizer Settings

You can set the equalization for each of the output jacks.

ON and OFF are applied to all of the equalizers as a group. (p. 69)

| Parameter      | Value                        | Description         |
|----------------|------------------------------|---------------------|
| <b>EQ</b>      |                              |                     |
| EQ1–4 Low Freq | Equalizer 1–4 Low Frequency  | 200, 400 Hz         |
| EQ1–4 Low Gain | Equalizer 1–4 Low Gain       | -15– +15 dB         |
| EQ1–4 Hi Freq  | Equalizer 1–4 High Frequency | 2000, 4000, 8000 Hz |
| EQ1–4 Hi Gain  | Equalizer 1–4 High Gain      | -15– +15 dB         |

# Adjusting the Overall Tuning of the XV-5050

## Master Tune and Master Key Shift

The Master Tune and Master Key Shift settings are common to all Patches, Performances, Rhythm Sets, and the GM Mode.

| Parameter        | Value          | Description                                                                                                |
|------------------|----------------|------------------------------------------------------------------------------------------------------------|
| <b>TUNE</b>      |                |                                                                                                            |
| Master Tune      | 415.3–466.2 Hz | Adjusts the overall tuning of the XV-5050. The setting is expressed as the frequency played by the A4 key. |
| Master Key Shift | -24– +24       | Shifts the overall pitch of the XV-5050 in semitone steps.                                                 |

## Scale Tune

The XV-5050 allows you to use temperaments other than equal temperament.

One set of Scale Tune settings can be created in Patch mode. In Performance mode, each Part can have its own Scale Tune settings.

\* The selected scale applies to MIDI messages received from an external MIDI device as well as to local sound generation.

| Parameter     | Value             | Description                                                                                                    |
|---------------|-------------------|----------------------------------------------------------------------------------------------------------------|
| <b>TUNE</b>   |                   |                                                                                                                |
| Scale Tune    | Scale Tune Switch | OFF, ON                                                                                                        |
| Key C–B Scale | Key Scale C–B     | -64– +63                                                                                                       |
|               |                   | Turn this on when you wish to use a tuning scale other than equal temperament.                                 |
|               |                   | Adjusts the pitch of each note in one-cent steps (1/100th of a semitone) relative to its equal-tempered pitch. |

### <Equal Temperament>

This scale divides an octave into 12 equal parts using the tuning system that is most widely used in Western music.

### <Pure Temperament>

With this tuning, the three fundamental chords sound richer compared to equal temperament. This effect only applies to one key, and transposition can produce less-pleasing results.

### <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 XV-5050, you can use Arabian temperament in the three keys of G, C and F.

Example: Tonic C

| Note name | Equal temperament | Pure temperament | Arabian scale temperament |
|-----------|-------------------|------------------|---------------------------|
| 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                       |

## Confirming the Current Status

On this display, you can view the names of the installed Wave Expansion Boards and check the version of the XV-5050's system program.

| Parameter       | Description                                                                                                                   |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>INFO</b>     |                                                                                                                               |
| XA, XB          | Expansion Board A, B                                                                                                          |
|                 | Shows the names of Wave Expansion Boards installed in slots EXP A/B. Slots without any boards installed are shown as "-----". |
| Program Version | Shows the version of the XV-5050's system program.                                                                            |

## Saving the System Settings

1. While [SYSTEM]'s indicator lights, press [UTILITY] to make its indicator light.

2. Press [ENTER] to save the current settings.

If the following display appears, turn [VALUE] to change the displayed ON to OFF.

After pressing [ENTER] to turn off the protect, press [ENTER] again to save the settings.

```
WRITE PROTECT
Internal: ON
```

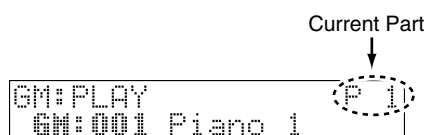
\* For more details on WRITE PROTECT, refer to page 105.

# Chapter 7 Using the XV-5050 as a General MIDI Sound Module

The XV-5050 features a GM mode—a convenient way to play back or create GM score data (music files for General MIDI sound module). You're able to play back commercial GM score data releases and even modify various parameter settings for enhanced musical expression.

## Entering GM Mode

Basically GM mode is similar to a special kind of Performance in which a General MIDI System Rhythm Set is assigned to Part 10, and General MIDI System Patches are assigned to other Parts. But however, you can't store GM mode settings in user memory.



The GM PLAY page shows a Patch or Rhythm Set assigned to each Part.

Each time you enter GM mode, the GM Drum Set is assigned to Part 10, and Piano 1 is assigned to other Parts. You can also select other GM Patches and GM Drum Sets for each Part to match the performance.

1. While holding down [SHIFT], press [PERFORM] to blink its indicator.  
GM PLAY page appears.
2. To change the current Part, press [◀ PART] or [PART ▶].
3. To change the GM Patch or GM Rhythm Set assigned to the Part, perform the same procedure as you do when you select a Patch or Rhythm Set.

## Initializing the Sound Generator for General MIDI System Basic Settings

To play back a GM score correctly, the sound generator must first be initialized to basic GM system settings. The XV-5050's sound generator is initialized in the following situations:

- When the XV-5050 is switched to GM mode
- When it receives a GM System On message from an external MIDI device
- When a GM System On message is encountered in the song data being played back
- When the XV-5050's power is turned on
- When you execute the GM Initialize function

### GM/GM2 System On Message

The GM/GM2 System On messages put the unit in a state that conforms to the General MIDI System and initializes a General MIDI-compatible sound generator.

If the Rx GM On/Rx GM2 On parameter (SYSTEM/MIDI/ SYSTEM MIDI) is set OFF, General MIDI/General MIDI 2 System On messages cannot be received.

## Playing Back a GM Score

When the XV-5050 is in GM mode, it plays back GM scores correctly. But beyond this, the XV-5050 provides many extended features not defined in GM System specifications, and if you create music files using these extended features, your song may not play back correctly on other GM-compatible sound modules.

### NOTE

The beginning of a GM score normally contains a GM System On message. So if you play back a GM score starting in the top of a song, XV-5050 will switch itself to GM mode. But if you play back a GM score starting in the middle of a song, XV-5050 may not switch itself to GM mode, and the GM score may not play back correctly. So to be safe, it's recommended to manually set the XV-5050 to GM mode before playing back a GM score.

### MEMO

although the XV-5050 can also be compatible with the GS format by receiving a GS Reset MIDI message, Roland's Sound Canvas Series (including the SC-8850 and SC-8820) features a different sound module system and extended tone map, you may be unable to get MIDI data (GS music data) created especially for use only with the Sound Canvas series of devices to play back properly.

## Muting a Specific Part

When you switch over to GM mode, all Parts will be set to receive MIDI messages. To turn off a specific Part so that it will not sound, set the Receive Switch to OFF for the Part. (p. 113)

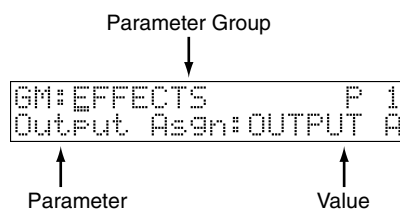
## Modifying GM Mode Settings

GM mode also offers parameters that you can modify for each Part. You can modify settings like effects, pan and level to customize a GM score playback to your preference.

### NOTE

You cannot store GM mode settings in internal memory (User Memory).

1. While holding down [SHIFT], press [PERFORM] to enter GM mode.
2. Press [EDIT] to light its indicator.
3. Press [◀ CURSOR] a few times to move the cursor to the parameter group in the upper line of the display.



4. Turn [VALUE] to choose the parameter group containing the parameter you wish to set up.
5. Press [CURSOR ▶] to move the cursor to the parameter name in the lower-left corner of the screen.
6. Turn [VALUE] to choose the parameter you wish to set.
7. Press [CURSOR ▶] to move the cursor to the selected parameter's value.
8. Turn [VALUE] to choose the desired value.
9. Press [EXIT] to return to the GM PLAY screen.

### Making Effects Settings in GM Mode (EFFECTS)

In GM mode, a GM-exclusive Chorus and Reverb can be used. Chorus and Reverb can be set independently.

**Chorus:** Adds depth and spaciousness to the sound.

**Reverb:** Adds the reverberation characteristics of halls or auditoriums.



In GM mode, you cannot use Multi-effects.



The XV-5050's onboard effects can be turned on/off as a whole. For details, refer to "Turning Effects On/Off" (p. 69).

### Basic Process of Making Effects Settings

When applying effects in GM mode, the following procedure is used to make the settings.

#### 1. Setting the Output Method of the Direct Sound (Output Assign)

The settings made here determine for each Part whether or not the jack used to output the sound, and the type of output (stereo

or mono).

#### 2. Setting the Amount of Each Effect Applied (Send Level)

Sets the level (volume) of each effect signal to be sent for each Part.

#### 3. Making Chorus Settings

Select the Chorus type to be used, and set each of the parameters for the selected Chorus.

#### 4. Setting the Output Destination for the Sounds Passing Through the Chorus

Select the output jack from which the sounds passing through the Chorus will be output. You can also apply Reverb to the sound that passes through Chorus.

#### 5. Making Reverb Settings

Select the Reverb type to be used, and set each of the parameters for the selected Reverb.

#### 6. Setting the Output Destination for the Sounds Passing Through the Reverb

Select the output jack from which the sounds passing through the Reverb will be output.

## OUTPUT

| Parameter      |                   | Value      | Description                                                                                                                                                                        |
|----------------|-------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EFFECTS</b> |                   |            |                                                                                                                                                                                    |
| Output Asgn    | Output assign     | OUTPUT A/B | Sets the direct sound's output method for each Part.<br><b>OUTPUT A:</b> Output to the OUTPUT A (MIX) jacks in stereo.<br><b>OUTPUT B:</b> Output to the OUTPUT B jacks in stereo. |
| Output Level   | Output level      | 0-127      | Sets the direct sound's volume for each Part.                                                                                                                                      |
| Chorus Send    | Chorus send level | 0-127      | Adjusts the amount of Chorus for each Part. If you don't want to add the Chorus effect, set it to 0.                                                                               |
| Reverb Send    | Reverb send level | 0-127      | Adjusts the amount of Reverb for each Part. If you don't want to add the Reverb effect, set it to 0.                                                                               |



If the Mix/Parallel parameter (p. 107) is set to MIX, all sounds are output from the OUTPUT A (MIX) jacks in stereo.



Chorus and Reverb are output in mono at all times.

## GM CHORUS

| Parameter          |                          | Value                                                           | Description                                                                                                                                                                                      |
|--------------------|--------------------------|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EFFECTS</b>     |                          |                                                                 |                                                                                                                                                                                                  |
| Cho Type           | Chorus type              | CHORUS 1-4,<br>FB CHORUS,<br>FLANGER,<br>SHORT DLY,<br>SHORT FB | Selects the type of Chorus.<br><b>CHORUS 1-4:</b> Chorus 1-4<br><b>FB CHORUS:</b> Feedback chorus<br><b>FLANGER:</b> Flanger<br><b>SHORT DLY:</b> Short delay<br><b>SHORT FB:</b> Short feedback |
| Chorus Rate        | Chorus rate              | 0-127                                                           | Specifies the modulation frequency of the Chorus sound.                                                                                                                                          |
| Chorus Depth       | Chorus depth             | 0-127                                                           | Sets the depth of the modulations of the Chorus sound.                                                                                                                                           |
| Chorus Feedback    | Chorus feedback level    | 0-127                                                           | Adjusts the amount of Chorus sound that is returned (fed back) to the Chorus. Higher settings will create a more complex Chorus effect.                                                          |
| Chorus Rev Send    | Chorus reverb send level | 0-127                                                           | Adjusts the amount of Reverb to be applied to the sound routed through Chorus. If you don't want to add the Reverb effect, set it to 0.                                                          |
| Chorus Output Asgn | Chorus output assign     | A, B                                                            | Specifies how the sound routed through Chorus will be output.<br><b>A:</b> Output to the OUTPUT A (MIX) jacks in stereo.<br><b>B:</b> Output to the OUTPUT B jacks in stereo.                    |



If the Mix/Parallel parameter (p. 107) is set to MIX, all sounds are output from the OUTPUT A (MIX) jacks in stereo.

## GM REVERB

| Parameter          | Value                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EFFECTS</b>     |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Rev Type           | Reverb type          | SMALL ROOM, MEDIUM ROOM, LARGE ROOM, MEDIUM HALL, LARGE HALL, PLATE, DELAY, PAN DELAY<br>Selects the type of Reverb.<br><b>SMALL ROOM:</b> Reverb resembling that obtained in a small room.<br><b>MEDIUM ROOM:</b> Reverb resembling that obtained in a somewhat larger room.<br><b>LARGE ROOM:</b> Reverb resembling that obtained in a large room.<br><b>MEDIUM HALL:</b> Reverb resembling that obtained in a medium-sized concert hall.<br><b>LARGE HALL:</b> Reverb resembling that obtained in a large concert hall.<br><b>PLATE:</b> Plate-type reverb effect.<br><b>DELAY:</b> Conventional delay effect<br><b>PAN DELAY:</b> Delay effect with echoes that pan left and right |
| Reverb Time        | Reverb time          | 0–127<br>Adjusts the length of the Reverb time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Reverb Output Asgn | Reverb output assign | A, B<br>Specifies how the sound routed through Reverb will be output.<br><b>A:</b> Output to the OUTPUT A (MIX) jacks in stereo.<br><b>B:</b> Output to the OUTPUT B jacks in stereo.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Rev Output Level   | Reverb output level  | 0–127<br>Output level of reverberation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

### MEMO

If the Mix/Parallel parameter (p. 107) is set to MIX, all sounds are output from the OUTPUT A (MIX) jacks in stereo.

## Making Settings for Receiving MIDI (MIDI)

These parameters determine how each Part will transmit and receive MIDI messages.

| Parameter   | Value                | Description                                                                                                                                                                                                                                                         |
|-------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MIDI</b> |                      |                                                                                                                                                                                                                                                                     |
| Rx Channel  | MIDI receive channel | 1–16, OFF<br>Sets the MIDI receive channel for each Part.                                                                                                                                                                                                           |
| Rx Switch   | Receive switch       | OFF, ON<br>Specifies whether each Part will receive Note messages (ON), or not (OFF).                                                                                                                                                                               |
| Mute Switch | Mute switch          | OFF, MUTE<br>Mute Sw temporarily mutes (ON) or releases the mute (OFF) for the performance of each Part.<br>* The Mute Sw parameter does not turn the Part off, but rather mutes the sound by setting the volume to 0. Therefore, MIDI messages are still received. |

## Making Settings for Each Part (PART)

Here you can select the GM Patch/Rhythm Set assigned to each Part, and set the volume, pan, and pitch of each Part.

| Parameter        | Value                    | Description                                                                                                                                                                                                                                                     |
|------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PART</b>      |                          |                                                                                                                                                                                                                                                                 |
| Part Type        | Part type                | PATCH, RHYTHM<br>Sets the assignment of a GM Patch (PATCH) or GM Rhythm Set (RHYTHM) to each of the Parts.                                                                                                                                                      |
| Num              | Number                   | 001–256 / 001–009<br>Selects the desired GM Patch or Rhythm Set by its number.<br>* In GM mode, Patches or Rhythm Sets other than the GM Patches and Rhythm Sets in PR-H cannot be selected. Furthermore, GM Patches and Rhythm Sets cannot be edited.          |
| Level            | Level                    | 0–127<br>Adjusts the volume of an individual Part. This setting's main purpose is to adjust the volume balance between Parts.                                                                                                                                   |
| Pan              | Pan                      | RND, L63–63R<br>Adjusts the pan of each Part. L64 is far left, 0 is center, and 63R is far right.                                                                                                                                                               |
| Coarse Tune      | Coarse tune              | -48– +48<br>Adjusts the pitch of the Part's sound up or down in semitone steps (+/-4 octaves).                                                                                                                                                                  |
| Fine Tune        | Fine tune                | -50– +50<br>Adjusts the pitch of the Part's sound up or down in 1-cent steps (+/-50 cents).                                                                                                                                                                     |
| Cutoff Offset    | Part cutoff offset       | -6– +63<br>Adjusts the cutoff frequency for the GM Patch or Rhythm Set assigned to a Part.                                                                                                                                                                      |
| Resonance Offset | Part resonance offset    | -64– +63<br>Adjusts the Resonance for the GM Patch or Rhythm Set assigned to a Part.                                                                                                                                                                            |
| Attack Offset    | Part attack time offset  | -64– +63<br>Adjusts the TVA Envelope Attack Time for the GM Patch or Rhythm Set assigned to a Part.                                                                                                                                                             |
| Release Offset   | Part release time offset | -64– +63<br>Adjusts the TVA Envelope Release Time for the GM Patch or Rhythm Set assigned to a Part.                                                                                                                                                            |
| Bend Range       | Pitch bend range         | 0–24<br>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.                                 |
| Mono/Poly        | Part mono/poly           | MONO, POLY<br>Set Mono/Poly to MONO when the GM Patch assigned to the Part is to be played monophonically, or to MONO when the GM Patch is to be played polyphonically.<br>* For the Part to which the GM Rhythm Set is assigned, this setting will be ignored. |
| Portamento Sw    | Part portamento switch   | OFF, ON<br>Determines whether the Portamento effect will be applied (ON) or not (OFF). Turn this parameter ON when you want to apply Portamento and OFF when you don't.                                                                                         |
| Portamento Time  | Part portamento time     | 0–127<br>Adjusts the time over which the pitch will change. Higher settings will cause the pitch change to the next note to take more time.                                                                                                                     |

### What is Portamento?

Portamento is an effect which smoothly changes the pitch from the first-played key to the next-played key. With the Mono/Poly parameter set to MONO, portamento is especially effective when simulating playing techniques such as a violin glissandos. Portamento can also be applied when this parameter is polyphonic.

# Chapter 8 Examples of Applications Using the XV-5050

## Controlling the XV-5050 in Realtime Using an External MIDI Device

External MIDI controllers — modulation lever, foot switch, expression pedal, etc. — can be used to modify Multi-Effects settings or Tone settings in realtime.

### Changing Multi-Effects Settings From an External MIDI Device

The parameters that can be changed via MIDI are determined by the selected Multi-Effects (MFX) Type.

This applies to the MFX Type parameters described in pages \*\* to \*\* that have an appended “#” mark.

1. Choose the Patch or Performance you wish to use.
2. Press [EDIT] to make its indicator light.
3. Press [ ◀ CURSOR] a few times to move the cursor to the parameter group at the upper line of the display.
4. Turn [VALUE] to choose “EFFECTS.”
5. Press [CURSOR ▶] and turn [VALUE] to choose “Type” (MFX Type) for the parameter.
6. Press [CURSOR ▶] and turn [VALUE] to choose the MFX type you wish to use.
7. Press [ ◀ CURSOR]/[CURSOR ▶] to move the cursor to the parameter/value that you wish to adjust.
8. Turn [VALUE] to select the desired setting.

### PATCH MFX CTRL (Patch MFX Control)

\* You cannot choose these parameters when the MFX Type is set to “00 THROUGH.”

#### Ctrl Src 1-4 (MFX Control Source 1-4)

|         |                                         |
|---------|-----------------------------------------|
| OFF     | No controller is used.                  |
| CC01-95 | Controller numbers 1-95 (except for 32) |
| BEND    | Pitch Bend                              |
| AFTER   | Aftertouch                              |
| SYS1-4  | System Control 1-4                      |

#### Ctrl Dest 1-4 (MFX Control Destination 1-4)

This chooses the Multi-Effects parameter to be controlled using the MFX Control Source 1-4.

#### Ctrl Sens 1-4 (MFX Control Sens 1-4)

If you wish to change the selected parameter in a positive (+) direction — i.e., a higher value, toward the right, or faster, etc. — from its current setting, choose a positive (+) value. If you wish to change the selected parameter in a negative (-) direction — i.e., a lower value, toward the left, or slower, etc. — from its current setting, choose a negative (-) value. Higher numbers produce a greater amount of change.

## Changing Tone Settings

You can use the Matrix Control parameter to manipulate Tone settings in realtime.

### Choosing the MIDI Messages Used for Control and the Parameters to Be Changed

1. Choose the Patch you wish to use.
2. Press [EDIT] to make its indicator light.
3. Press [ ◀ CURSOR] a few times to move the cursor to the parameter group at the upper line of the display.
4. Turn [VALUE] to choose “CONTROL.”
5. Press [CURSOR ▶] and turn [VALUE] to select “Ctrl 1 Src”–“Ctrl 4 Src” for the parameter.
6. Press [CURSOR ▶] and turn [VALUE] to select the control source.
7. Press [ ◀ CURSOR]/[CURSOR ▶] to move the cursor to the parameter/value that you wish to adjust.
8. Turn [VALUE] to select the parameter to be controlled (Dest), the control sensitivity (Sens) and the desired Tone (Switch).

### Matrix Control

Select the controllers you want to use to control a specific Tone parameter. Four control sources are assigned to each Patch.

#### Ctrl 1-4 Src (Matrix Control 1-4 Source)

Assign one of the following controllers to Control Source 1-4. If you wish to use a controller that applies to all Patches, or a controller that cannot be directly specified here, choose SYS-CTRL1-4, and then choose the controller using the Control Source 1-4 parameters (SYS CTRL ASSIGN page).

|           |                                         |
|-----------|-----------------------------------------|
| OFF       | No controller is used.                  |
| CC01-95   | Controller numbers 1-95 (except for 32) |
| BEND      | Pitch Bend                              |
| AFTER     | Aftertouch                              |
| SYS1-4    | System Control 1-4                      |
| VELOCITY  |                                         |
| KEYFOLLOW |                                         |
| TEMPO     |                                         |
| LFO1(2)   |                                         |
| PIT-ENV   | Pitch Envelope                          |
| TVF-ENV   | TVF Envelope                            |
| TVA-ENV   | TVA Envelope                            |

## MATRIX CTR1-4 (Matrix control 1-4)

This select the parameters to be controlled in the Matrix Control 1-4 Source and the Sens settings, as well as the Tone to which they're applied. Up to four parameters can be specified for each controller and controlled simultaneously.

### Ctl1-4 Dest1-4 (Matrix Control 1-4 Destination 1-4)

This chooses the parameters to be controlled.

|              |                             |                            |
|--------------|-----------------------------|----------------------------|
| OFF          | No control                  |                            |
| PCH          | Pitch                       | PITCH parameters (p. 45)   |
| CUT          | Cutoff Frequency            | TVF parameters (p. 46)     |
| RES          | Resonance                   |                            |
| LEV          | Level                       | TVA parameters (p. 48)     |
| PAN          |                             |                            |
| DRY          | Dry Level                   | EFFECTS parameters (p. 74) |
| CHO          | Chorus Send                 |                            |
| REV          | Reverb Send                 |                            |
| PIT-LFO1(2)  | LFO1(2) Pitch Depth         | LFO parameters (p. 50)     |
| TVF-LFO1(2)  | LFO1(2) TVF Depth           |                            |
| TVA-LFO1(2)  | LFO1(2) TVA Depth           |                            |
| PAN-LFO1(2)  | LFO1(2) Pan Depth           |                            |
| LFO1(2)-RATE | LFO1(2) Rate                |                            |
| PIT-ATK      | Pitch Envelope Attack Time  | PITCH parameters (p. 45)   |
| PIT-DCY      | Pitch Envelope Decay Time   |                            |
| PIT-REL      | Pitch Envelope Release Time |                            |
| TVF-ATK      | TVF Envelope Attack Time    | TVF parameters (p. 46)     |
| TVF-DCY      | TVF Envelope Decay Time     |                            |
| TVF-REL      | TVF Envelope Release Time   |                            |
| TVA-ATK      | TVA Envelope Attack Time    | TVA parameters (p. 48)     |
| TVA-DCY      | TVA Envelope Decay Time     |                            |
| TVA-REL      | TVA Envelope Release Time   |                            |
| TMT          |                             | COMMON parameters (p. 41)  |
| FXM          | Wave FXM Depth              | WAVE parameter (p. 44)     |
| MF1-4        | MF1 CTRL1-4                 | EFFECTS parameters (p. 74) |

### Ctl1-4 Sens1-4 (Matrix Control 1-4 Sens 1-4)

This adjusts the amount of change that occurs in response to controller movements. Negative (-) values invert the change. For example, with LFO Depth, the phase is reversed when a negative Sens value is chosen. With LFO Rate, setting Sens to a negative value increases the cycle length, slowing down the LFO, while setting it to positive value shortens the cycle, speeding it up.

### Ctl1-4 Switch1-4 (Matrix Control 1-4 Tone Control Switch 1-4)

This selects the Tone to be controlled using the two previous parameter settings. "ON" activates the control of a Tone, "OFF" de-activates it, and "REVERSE" reverses the (+) or (-) nature of the change being applied.

## Applications for Patches

### Syncing the LFO Cycle to the System Tempo

1. Choose the Patch you wish to synchronize on the PATCH PLAY screen.
2. Set the Patch Clock Source parameter (PATCH:COMMON screen) to SYSTEM.
3. Set the beat length of the RATE (PATCH:LFO screen) of each Tone to match the System Tempo.
4. Set the System Clock Source parameter (SYSTEM:GENERAL screen) to INT.
  - \* When the System Clock Source parameter is set to MIDI or USB, you can synchronize the LFO cycle to an external device.
5. If the System Tempo (SYSTEM:GENERAL screen) changes, the LFO Rate changes along with it.
6. Set the modulation depth as desired using LFO Depth (PATCH:LFO screen) for each Tone.

### Synchronizing Multi-Effects to the System Tempo

You can change Multi-Effects parameter values in time with the System Tempo when you've selected the following values for the Type MFX parameter.

| Type             | MFX Parameter                           |
|------------------|-----------------------------------------|
| 16: STEP FLANGER | Step Rate                               |
| 19: 3 TAP DELAY  | Delay C/L/R                             |
| 20: 4 TAP DELAY  | Delay 1-4                               |
| 41: St PHASER    | Rate, Step Rate                         |
| 42: KEYSYNC FLG  | LFO Rate, Step Rate                     |
| 43: FORMANT FLTR | Rate                                    |
| 45: MLT TAP DLY  | Delay 1-4                               |
| 46: REVERSE DLY  | Delay 1-4                               |
| 47: SHUFFLE DLY  | Delay                                   |
| 48: 3D DELAY     | Delay C/L/R                             |
| 58: SLICER       | Rate                                    |
| 60: 3D CHORUS    | LFO Rate                                |
| 61: 3D FLANGER   | LFO Rate, Step Rate                     |
| 62: TREMOLO      | Rate                                    |
| 63: AUTO PAN     | Rate                                    |
| 64: St PHASER 2  | Rate, Step Rate                         |
| 65: St AUTO WAH  | Rate                                    |
| 66: St FORMN FLT | Rate                                    |
| 67: MLT TAP DLY2 | Delay 1-4                               |
| 68: REVERSE DLY2 | Delay 1-4                               |
| 69: SHUFFLE DLY2 | Delay                                   |
| 70: 3D DELAY 2   | Delay C/L/R                             |
| 71: ROTARY 2     | Low Slow/Fast, High Slow/Fast           |
| 72: ROTARY MULTI | Low Freq Slow/Fast, High Freq Slow/Fast |
| 73: KEYBD MULTI  | Phaser Rate, Delay Time L/R             |
| 74: RHODES MULTI | Phaser Rate, Cho/Flg Rate, Tre/Pan Rate |
| 81: GTR MULTI A  | Delay Time L/R, Cho/Flg Rate            |
| 82: GTR MULTI B  | Cho/Flg Rate                            |
| 83: GTR MULTI C  | Wah Rate, Delay Time L/R, Cho/Flg Rate  |
| 84: CL GTR MLT A | Delay Time L/R, Cho/Flg Rate            |
| 85: CL GTR MLT B | Wah Rate, Delay Time L/R, Cho/Flg Rate  |
| 86: BASS MULTI   | Cho/Flg Rate                            |
| 89: 3D AUTO SPIN | Speed                                   |

Here's an example in which STEP FLANGER is used for the Multi-Effects.

1. Choose a Patch on the PATCH PLAY screen.
2. Set its Patch Clock Source (PATCH:COMMON screen) to SYSTEM.
3. Make sure that MFX Type (PATCH:EFFECTS screen) is set to STEP FLANGER.  
If not, reset it so that it is.
4. Make sure that Step Rate (PATCH:EFFECTS screen) is set to a note — not a numerical — value. If necessary, reset it so that it is.
5. Set System Clock Source (SYSTEM:GENERAL screen) to INT.  
*\* When System Clock Source is set to MIDI, you can synchronize the Multi-Effect to the tempo of an external MIDI device.*
6. When the System Tempo (SYSTEM:GENERAL screen) changes, the STEP FLANGER's Step Rate changes along with it.

### Making a Tone's Delay Time Match the System Tempo

1. Choose a Patch on the PATCH PLAY screen.
2. Set its Patch Clock Source (PATCH:COMMON screen) to SYSTEM.
3. Set Tone Delay Time (PATCH:WAVE screen) to a note length — not a numerical value — in relation to the synchronization tempo.
4. Set System Clock Source (SYSTEM:GENERAL screen) to INT.  
*\* When System Clock Source is set to MIDI, you can synchronize the Tone's delay to the tempo of an external MIDI device.*
5. When System Tempo (SYSTEM:GENERAL screen) changes, the Tone's delay time changes along with it.

### Using a Pedal Switch to Change the Rotary Speed of the Rotary Effect

1. Connect a pedal switch (DP-2, DP-6, etc.) to your external MIDI controller (MIDI keyboard, etc.).
2. Set the pedal switch of the external MIDI controller to generate FOOT TYPE (CC04) control-change messages.  
*\* To learn how to set up the pedal switch, refer to the external MIDI controller's owner's manual.*
3. Choose "PA:050 Perky B" on the PATCH PLAY screen.  
This Patch uses ROTARY as its Multi-Effect.
4. Set Ctrl Src 1 (PATCH:EFFECTS screen) to CC04.
5. Set Ctrl Dest 1 to SPEED, and Ctrl Sens 1 to +63.
6. When you wish to speed up the rotary effect, press the pedal switch. Release the pedal switch to slow down the rotary effect.

### Playing Phrase Loops at a System's Tempo

An optional Wave Expansion Board can contain Patches based on waveforms that are timed — in BPM — phrase loops. You can play these phrase loops in sync with the System Tempo.

1. On the PATCH PLAY screen, choose a Patch that uses a phrase loop.
2. Set Patch Clock Source (PATCH:COMMON screen) to SYSTEM.
3. On the PATCH:WAVE screen, view the Wave Number (L/R).  
Press TONE SEL [1]–[4] to find a Tone that uses phrase-loop waveforms.  
The waveform name appears at the right side of the display.  
Waveform names that have a BPM number in the first part of the name (such as "132:WAVE NAME") are phrase loop waveforms.
4. Set Tone Delay Time to 0.  
If you choose a value other than 0, a delay will be applied, and you will not be able to play the Patch normally.
5. Set System Clock Source (SYSTEM:GENERAL screen) to INT.  
*\* When System Clock Source is set to MIDI, you can synchronize the phrase loop to the tempo of an external MIDI device.*
6. When the System Tempo (SYSTEM:GENERAL screen) changes, the speed of the phrase loop changes along with it.  
*\* The phrase loop sounds at the system's tempo regardless of which key you press. The settings for pitch and FXM are ignored.*

## Changing Part Settings from an External MIDI Device

By sending Control Change messages for different Part settings, including volume, panning, and pitch, you can change these settings remotely from an external MIDI device connected to the XV-5050. This lets you control fade-ins and fade-outs, open and close filters, and exercise other controls in realtime from the external MIDI device.

The parameters that can be used for changing the settings, and the Control Change messages that can be used to change the values, are shown below.

\* For more detailed information about Control Change messages, please refer to “MIDI Implementation” p. 154).

\* To change multi-effects, reverb, or chorus effects from an external MIDI device, send a “System Exclusive message” (p. 157).

### Remotely Controlling Volume (p. 154)

- Volume: Controller number 7

### Remotely Controlling Stereo Positioning (p. 154)

- Panpot: Controller number 10

### Remotely Applying Portamento (p. 154, p. 155)

- Portament: Controller number 65 (Portamento switch),  
Controller number 5 (Portamento time)

### Remotely Changing Sounds’ Attack and Release Time (p. 155)

- Release Time: Controller number 72
- Attack Time: Controller number 73

### Remotely Changing the Cutoff Frequency (p. 155)

- Cutoff: Controller number 74

### Remotely Changing Resonance (p. 155)

- Resonance: Controller number 71

### Remotely Changing the Amount of Internal Chorus/Reverb (p. 156)

- Effect 3 (Chorus Send Level): Controller number 93
- Effect 1 (Reverb Send Level): Controller number 91

### Remotely Changing Pitch (p. 158)

- Coarse: Controller number 100 (value is 0), Controller number 101 (value is 2), Controller number 6 (value is 16–112)
- Fine: Controller number 100 (value is 0), Controller number 101 (value is 1), Controller number 6 (value is 32–96), Controller number 38 (value is 0–127)

\* When changing the Coarse parameter, set the amount of change in pitch using Control Number 6 (Data Entry MSB) value. There is no change in pitch when the value is set to “64.” The pitch is raised as the value increases from 64, and is lowered as the value decreases below 64.

\* When changing the Fine parameter, set the amount of change in pitch using Control Number 6 (Data Entry MSB) and Control Number 38 (Data Entry LSB) settings. There is no change in pitch when Data Entry MSB is set to “64” and Data Entry LSB to “0.” The pitch is raised as the respective values increase, and lowered as the respective values decrease.

### Remotely Specifying the Range of Pitch Bend (p. 156)

- Bend Range: Controller number 100 (value is 0), Controller number 101 (value is 0), Controller number 6 (value is 0–12)

#### Procedure

#### 1. Enable the external MIDI device to send a Control Change message.

For example, if you want to change the volume level, set the external MIDI device to send Control Number 7 (Volume message). In this case, the MIDI channel is matched to the MIDI channel of the Part whose volume you want to change.

\* For information on how to set up your external MIDI controller, refer to its owner’s manual.

#### 2. Operate the external MIDI device — adjust its controls, play its sequencer, etc. — to send the desired MIDI messages.

\* As sound changes occur, displayed parameter values reflect the changes you make.

#### About RPN

“RPN” (Registered Parameter Number) is an extended MIDI message activated by a previous Control Change message.

Use an RPN when you want to remotely change the XV-5050’s Pitch or Pitch Bend range settings. An RPN has an superior part (RPN MSB) and a subordinate part (RPN LSB). The RPN MSB (Control Number 101) informs the XV-5050 that an RPN setting is to follow, and the RPN LSB (Control Number 100) value tells the XV-5050 which parameter is to be set. Finally, a Data Entry (Control Change 6) message sets the desired value.

Once the XV-5050 has received an RPN parameter, all further Data Entry messages on that MIDI channel are applied to that parameter. In order to prevent accidental changes, once the desired setting has been made for the parameter, we recommend that RPN be set to “Null.”

For example, to raise the pitch of a certain Part by one half-step (semitone) send the following Control Change message from the external MIDI device.

- Controller number 100: value “0”
- Controller number 101: value “2”
- Controller number 6: value “65”
- Controller number 100: value “127” <- RPN null
- Controller number 101: value “127” <- RPN null

\* For more detailed information about RPN messages, please refer to “MIDI Implementation” (p. 154).

## Applications for Matrix Control

### Controlling the TMT with the LFO and Changing the Tone's Timing

When TMT (Tone Mix Table) is selected as the Matrix Control destination, you can use the Control Source controller to change the time at which Tones in a Patch are played.

Here is an example of a Patch using LFO1 as a Control Source. The time at which the Tone plays is based on LFO1's amplitude value.

1. Select "PE:043 Morph Pad" on the PATCH PLAY screen.
2. Set TMT V-Rng Lower and Upper (PATCH:COMMON screen, p. 41) for Tones 1 and 2 as follows.

|          | L  | : | U   |
|----------|----|---|-----|
| tone = 1 | 1  | : | 64  |
| tone = 2 | 65 | : | 127 |

3. Set TMT V-Rng L.Fade and U.Fade to 10 for Tones 1 and 2.

This makes the Tones fade in and out smoothly outside their velocity ranges.

4. Set TMT Vel Control to OFF.

This setting disables the V-Rng settings made in Step 2 and causes the two Tones to sound simultaneously, regardless of the velocity — the force with which keys are played — received from your MIDI keyboard or sequencer.

5. Set TMT Control Sw (PATCH:CONTROL screen, p. 52) to ON.

This setting allows the TMT to be controlled by the Matrix Control Controller. The following chart shows all the relationships between the TMT Velocity Control and TMT Ctrl Sw.

|                 | (1) | (2) | (3) | (4) |
|-----------------|-----|-----|-----|-----|
| TMT Vel Control | ON  | OFF | ON  | OFF |
| TMT Control Sw  | OFF | OFF | ON  | ON  |

(1)(3): The Velocity Control settings are enabled, and the two Tones are switched on or off according to the velocity data received from the MIDI keyboard or sequencer.

(2): The Velocity Control settings and TMT control via Matrix Control are disabled, and the two Tones play simultaneously, regardless of the velocity data received from the MIDI keyboard or sequencer.

(4): TMT Matrix Control is enabled, and the timing of the Tones changes according to the Control Source controller data.

*\* The TMT Vel Control settings are given priority when both TMT Vel Control and TMT Control Sw are set to ON.*

6. Choose LFO1 as the Ctrl 1 Src (PATCH:CONTROL screen, p. 52).
7. Set Ctl1 Dest1 to TMT, Ctl1 Sens1 to +63, and Ctl1 Switch1 for TONE 1 and 2 to ON.
8. Set the LFO1 Form and Rate (PATCH:LFO screen) for each of the Tones as shown below.

|       | TONE 1 | TONE 2 |
|-------|--------|--------|
| Form: | SIN    | SIN    |
| Rate: | 64     | 127    |

9. Choose the Number for Tones 1 and 2 (PATCH:WAVE screen, p. 44).

10. Press [EXIT] to return to the PATCH PLAY screen.

Other possible applications include synchronizing the Control Source LFO rate to the tempo, assigning Modulation and other parameters to the Control Source, and changing the Tone in realtime from a MIDI keyboard or other such device.

# Appendices

# Installing the Wave Expansion Board

The XV-5050 can be further expanded with the installation of up to two optional wave expansion boards (SRX Series). Wave data is stored in these wave expansion boards. Also stored are Patches and Rhythm Sets that use the Wave data from the wave expansion boards, allowing these to be called up directly for use.

## Cautions When Installing an Wave Expansion Board

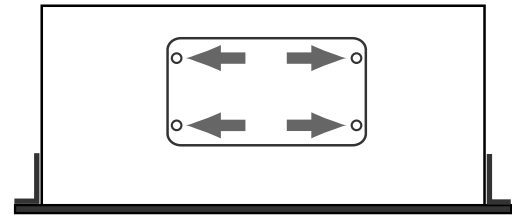
- To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the board.
  - Before you touch the board, always first grasp a metal object (such as a water pipe), so you are sure that any static electricity you 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 a screw, rotate the screwdriver clockwise.



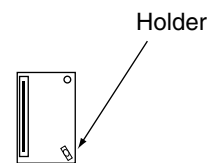
- When installing Wave Expansion Boards, remove only the specified screws.
- Be careful that the screws you remove do not drop into the interior of the XV-5050.
- Do not leave the cover in a detached state. Be sure to reattach it after the Wave Expansion Boards have been installed.
- Do not touch any of the printed circuit pathways or connection terminals.
- Be careful not to cut your hand on the edge of the installation bay.
- Never use excessive force when installing a circuit board. If it doesn't fit properly on the first attempt, remove the board and try again.
- When circuit board installation is complete, double-check your work.
- Always turn the unit off and unplug the power cord before attempting installation of the circuit board (SRX series; p. 14).
- Install only the specified circuit board(s) (SRX series). Remove only the specified screws (p. 120).

## How to Install a Wave Expansion Board

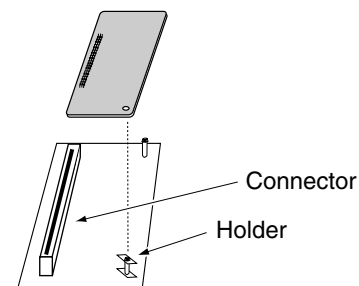
1. Before installing the wave expansion board, turn off the power to the XV-5050 and to any device connected to the XV-5050.
2. Remove only the top panel screws specified in the following figure.



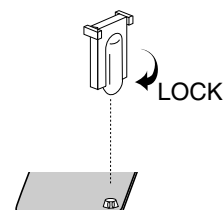
3. Remove the cover.
4. Orient the board holder as shown in the figure.



5. Slots are provided inside the XV-5050 for SRX Series boards. Referring to the diagram below, plug the wave expansion board's connector into the connector in the wave expansion board slot, and simultaneously insert the board holder into the hole in the Wave expansion board.



6. Use the locking hardware included with the wave expansion board to rotate the board holder to the LOCK position and fasten the wave expansion board.



7. Using the screws removed in Step 2, refasten the cover in its original position.

This completes the installation of the wave expansion board.

**Next, check to make sure the board has been installed properly.**

1. Use the procedure in "Turning On the Power" (p. 14) to turn the power on.
2. Press [SYSTEM] to make its indicator light.
3. Press [ ◀ CURSOR] a few times to move the cursor to the parameter group in the upper line of the display.
4. Turn [VALUE] to choose "INFO."
5. Press [CURSOR ▶ ] to move the cursor to the parameter at the lower left of the display.
6. Turn [VALUE] to choose "XA (XB)." Verify that the name of the Wave Expansion Board is displayed next to the slot name.
7. Press [EXIT] to return to the PLAY screen.

If no board has been installed, or if the wave expansion board is not being recognized properly, "-----" appears in the display.

### NOTE

If "-----" appears next to the name of the slot in which the board was installed, it may be that the wave expansion board is not being recognized properly. Use the procedure in "Turning Off the Power" (p. 14) to turn the power off, then reinstall the wave expansion board correctly.

# Installation de la carte d'extension Wave

(French language for Canadian Safety Standard)

French language  
for Canadian Safety Standard

Les cartes d'extension Wave contiennent des données Wave, aussi bien que des morceaux musicaux et des ensembles rythmiques utilisant ces données, auxquelles on peut directement accéder dans la zone temporaire et les faire jouer.

## Précautions à prendre lors de l'installation d'une carte d'expansion Wave

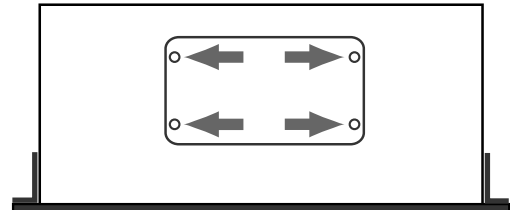
- Veuillez suivre attentivement les instructions suivantes quand vous manipulez la carte afin d'éviter tout risque d'endommagement des pièces internes par l'électricité statique.
  - Toujours toucher un objet métallique relié à la terre (comme un tuyau par exemple) avant de manipuler la carte pour vous 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.
- Utiliser un tournevis cruciforme correspondant à la taille de la vis (un tournevis numéro 2). En cas d'utilisation d'un tournevis inapproprié, la tête de la vis pourrait être endommagée.
- Pour enlever les vis, tourner le tournevis dans le sens contraire des aiguilles d'une montre. Pour resserrer, tourner dans le sens des aiguilles d'une montre.



- Lors de l'insertion de la carte d'extension Wave, enlevez seulement les vis indiquées dans les instructions.
- Veillez à ne pas laisser tomber de vis dans le châssis du XV-5050.
- Ne pas laisser le panneau de protection avant détaché. S'assurer de l'avoir rattacher après avoir installé le disque dur.
- Ne pas toucher aux circuits imprimés ou aux connecteurs.
- Veillez à ne pas vous couper les doigts sur le bord de l'ouverture d'installation.
- Ne jamais forcer lors de l'installation de la carte de circuits imprimés. Si la carte s'ajuste mal au premier essai, enlevez la carte et recommencez l'installation.
- Quand l'installation de la carte de circuits imprimés est terminée, revérifiez si tout est bien installé.
- Toujours éteindre et débrancher l'appareil avant de commencer l'installation de la carte. (SRX series; p. 14).
- N'installez que les cartes de circuits imprimés spécifiées (SRX series). Enlevez seulement les vis indiquées (p. 122).

## Installation d'une carte d'expansion Wave

1. Avant d'installer la carte d'extension, éteindre le XV-5050 et tous les appareils qui y sont reliés.
2. N'enlever que les vis spécifiées sur le schéma suivant.

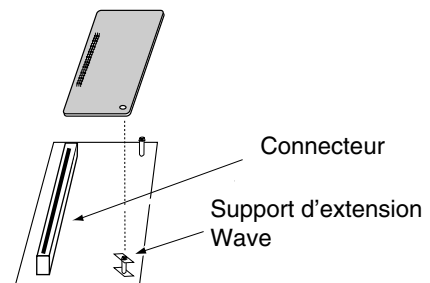


3. Enlever la plaque protectrice.
4. Orienter le support à carte tel qu'indiqué sur le schéma.

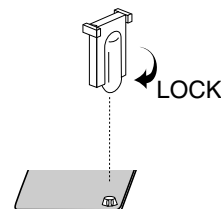
Support d'extension Wave



5. Dans l'appareil, vous trouverez des emplacements pour carte à extension de série SRX. En vous référant au schéma ci-dessous, insérer le connecteur de la carte d'extension à l'emplacement correspondant tout en enfonçant simultanément le support à carte dans les trous de celle-ci.



6. À l'aide de l'outil fourni à cet effet avec la carte, faire tourner en position "LOCK" le support à carte afin de bien la fixer.



7. Remettre la plaque à sa place et la fixer à l'aide des vis enlevées à l'étape 2.

Ceci complète l'installation de la carte d'extension.

**Les manipulations suivantes vous permettront de vérifier si votre carte a été correctement installée.**

1. Allumer votre appareil en suivant les instructions de la p.14.
2. Appuyer sur [SYSTEM] pour allumer le voyant lumineux.
3. Appuyer sur [ ◀ CURSOR] quelques fois pour déplacer le curseur jusqu'au groupe de paramètres sur la première ligne affichée.
4. Tourner le bouton [VALUE] afin de sélectionner " INFO ".
5. Appuyer sur [CURSOR ▶ ] pour déplacer le curseur jusqu'au paramètre dans le coin inférieur gauche de l'affichage.
6. Tourner le bouton [VALUE] pour sélectionner " XA (XB) ".  
S'assurer que le nom de la carte d'expansion Wave est affiché en regard du nom de la fente.
7. Appuyer sur [EXIT] pour revenir à l'écran PLAY.

L'affichage suivant apparaîtra. S'il n'y a aucune carte installée ou si la carte est incorrectement installée, l'affichage [-----] apparaîtra.

\* Si l'affichage [-----] apparaît à côté du nom de l'emplacement dans lequel vous avez installé la carte, il est possible que la carte d'extension ait été mal installée. Éteindre l'appareil en suivant les instructions à cet effet à la p.14 et réinstaller la carte.

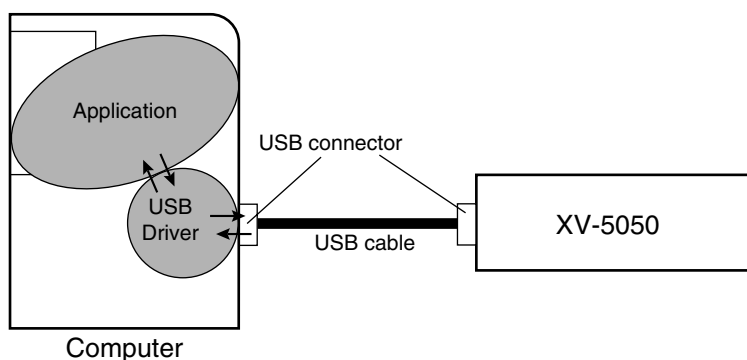
# Installing & Setup the Driver

In order to use the XV-5050 with your computer, you must first install the USB MIDI Driver. The USB MIDI Driver is included in the "XV-5050 Driver CD-ROM."

## What is the USB MIDI Driver?

The USB MIDI Driver is a software which passes data between the XV-5050 and the application (sequencer software, etc.) that is running on the USB-connected computer.

The USB MIDI Driver sends data from the application to the XV-5050, and passes data from the XV-5050 to the application.



The explanation about installing and setup the driver is organized according to the computer and MIDI driver that you are using. Please proceed to the following pages.

Windows 98 / Me Users → p. 125

Windows 2000 Users → p. 128

Using OMS on the Macintosh → p. 132

Using FreeMIDI on the Macintosh → p. 134



### NOTE

The XV-5050 cannot be used with Windows 95 or Windows NT.

## Windows 98 / Me Users

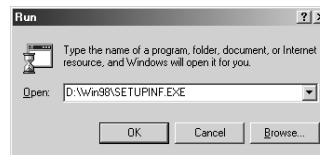
Use the following procedure to install the XV-5050 Driver.

\* *Disconnect the XV-5050 from your computer before starting up Windows.*

1. With all USB cables disconnected, start up Windows. (except the keyboard and mouse)
2. Exit all applications before you begin installing the driver.
3. Insert the XV-5050 Driver CD-ROM into the CD-ROM drive.
4. From the Windows Start menu, select "Run."



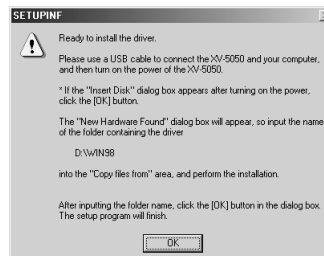
5. In the "Open" field of the dialog box that appears, enter "D:\Win98\Setupinf.exe" and click "OK."



\* *Enter the drive name **D:** appropriate for the drive name of your CD-ROM drive.*

6. The SETUPINF dialog box appears, and the display indicates "Ready to install the driver.---"

\* *Don't click "OK" here.*



### NOTE

If the XV-5050 is already connected to your computer and a message of "Add New Hardware Wizard" is displayed, go to the **XV-5050 Driver CD-ROM** folder named **Win98**, open the file **README\_E.HTM**, and read the "Troubleshooting" section entitled "You attempted to install using the above procedure, but were not able to."

### NOTE

If you wish to use the XV-5050 at the same time as another USB device connected to your computer, disconnect the other USB device from the USB connector before installing the XV-5050 driver. If another USB device is connected to your computer when you install the XV-5050 driver, the XV-5050 driver may not be installed correctly.

### NOTE

The "Win98\Setupinf.exe" file cannot be used on Windows 2000.

### NOTE

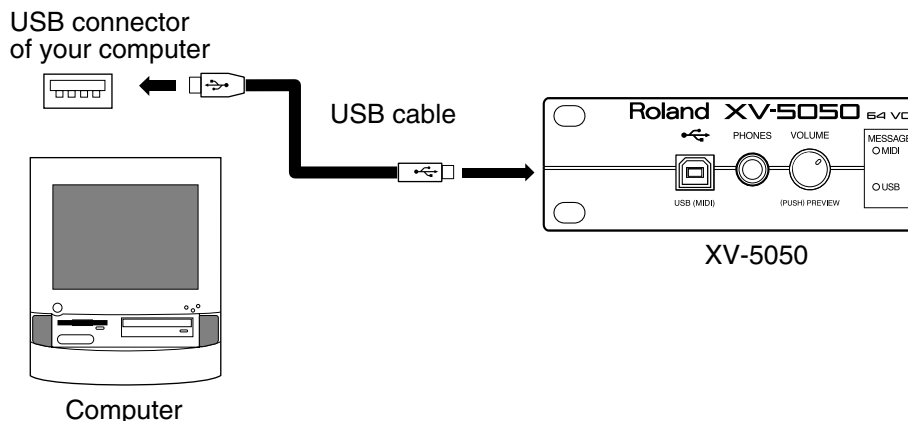
To check the drive name of your CD-ROM drive, double-click the **My Computer** icon.

### NOTE

If the "Ready to install the driver.---" dialog box does not appear, go to the **XV-5050 Driver CD-ROM** folder named **Win98**, open the **README\_E.HTM** file, and read the section entitled "Installation."

## Installing & Setup the Driver

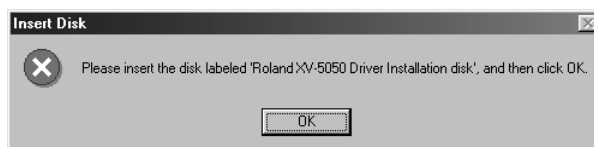
### 7. Use the USB cable to connect the XV-5050 and your computer.



### NOTE

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

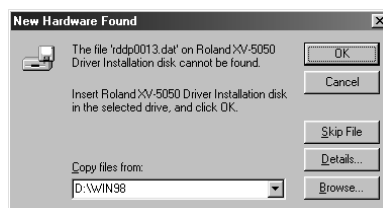
### 8. In some cases, the “Insert Disk” dialog box may appear. Click “OK.”



### 9. The “New Hardware Found” dialog box will appear.

In the “Copy files from” area, input “D:\Win98” and click the “OK” button. Installation will be completed.

\* Change the drive name D: to match the drive name of your CD-ROM drive. For example if your CD-ROM drive is named Q:, you would input “Q:\Win98”.



### 10. Click “OK” button in the “SETUPINF” dialog box.

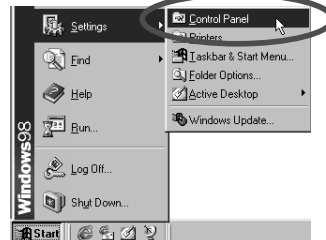
Then refer to **Specifying the Output Destination for MIDI Data** (the section that follows), and make settings for the XV-5050 to be used from your computer. The XV-5050 cannot be used unless you make these settings.

## Specifying the Output Destination for MIDI Data

Here you can make settings for using the USB MIDI driver with applications such as the “Media Player” that is included with Windows.

### Windows 98 users

1. Click the Windows [Start] button, select [Settings] from the menu that appears, and select [Control Panel].

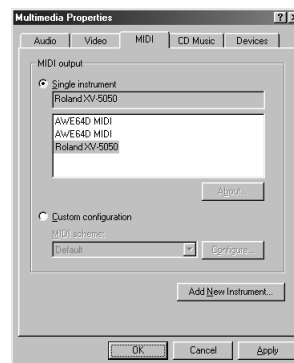


2. In the Control Panel, double-click the [Multimedia] icon.



3. In Multimedia Properties, click the [MIDI] tab.

In the “MIDI Output” field select [Roland XV-5050].



4. Click [OK].

5. Start up Windows Media Player or Media Player, select a MIDI file, and play back.

### Windows Me users

1. Click the Windows [Start] button, select [Settings] from the menu that appears, and select [Control Panel].

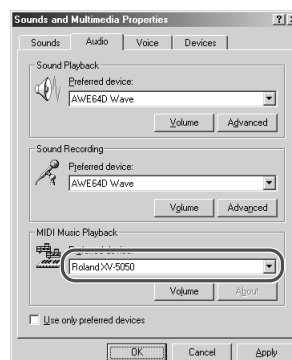


2. In the Control Panel, double-click the [Sounds and Multimedia] icon.



3. In Sounds and Multimedia Properties, click the [Audio] tab.

In the “MIDI Music Playback” field, select [Roland XV-5050].



4. Click [OK].

5. Start up Windows Media Player or Media Player, select a MIDI file, and play back.

### NOTE

If you are using the XV-5050 with a sequencer, do not disconnect the MIDI cable connected to the XV-5050 while a song is playing back.

### MEMO

Windows Media Player is located in **Start menu -> Programs-Accessories-Entertainment-Windows Media Player**.

### MEMO

Depending on your settings, “**Sounds and Multimedia**” may not appear in the “**Control Panel**.” In this case, click “**View all Control Panel options**.”

### MEMO

Windows Media Player is located in **Start menu -> Programs-Accessories-Entertainment-Windows Media Player**.

### Windows 2000 Users

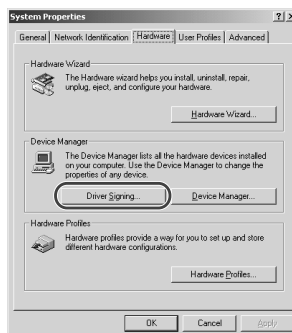
Use the following procedure to install the XV-5050 driver.

- \* *Disconnect the XV-5050 from your computer before starting up Windows.*
- \* *To install the driver, you must log on to Windows as the **Administrator** or other user with the privileges of the Administrators group. For more information regarding this, consult your computer system administrator.*

1. With all USB cables disconnected, start up Windows. (except the keyboard and mouse)
2. Log onto Windows as an Administrator, or other user that is a member of the Administrators group.
3. Exit all applications before performing the installation.
4. Make “Driver Signing” settings.

Open the “Control Panel,” and double-click “System.”

Click the “Hardware” tab, and then click the “Driver Signing” button. The “Driver Signing Options” dialog box appears.



5. Make sure that “File signature verification” is set to “Ignore.”

If it is set to “Ignore,” click “OK.” If not, make a note of the current setting; then change it to “Ignore” and click the “OK” button.



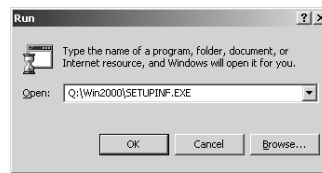
6. Click the “OK” button to close “System Properties.”
7. Insert the XV-5050 Driver CD-ROM into the CD-ROM drive.
8. From the Windows Start menu, select “Run.”



#### NOTE

If the XV-5050 is already connected to your computer and a message of “**Found New Hardware Wizard**” is displayed, go to the **XV-5050 Driver CD-ROM** folder named **Win2000**, open the file **README\_E.HTM**, and read the “**Troubleshooting**” section entitled “**You attempted to install using the above procedure, but were not able to.**”

- 9.** In the “Open” field of the dialog box that appears, enter “D:\Win2000\Setupinf.exe” and click [OK].

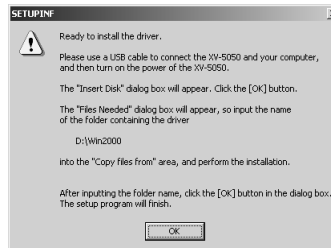


## NOTE

The “Win2000\Setupinf.exe” file cannot be used on Windows 98/Me.

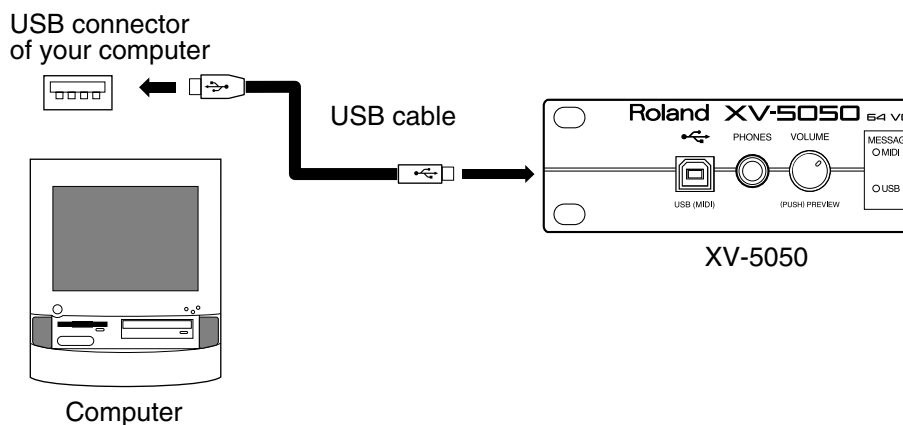
\* Enter the drive name D: appropriate for the drive name of your CD-ROM drive.

- 10.** The SETUPINF dialog box appears, and the display indicates “Ready to install the driver.”



\* Don't click “OK” here.

- 11.** Use the USB cable to connect the XV-5050 and your computer.

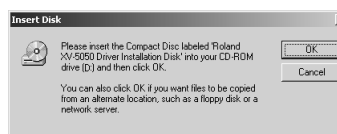


## NOTE

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

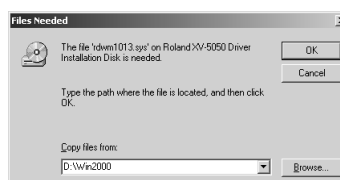
- 12.** The “Insert Disk” dialog box appears.

Click the “OK” button.



- 13.** The “Files Needed” dialog box appears.

In the “Copy files from” area, input “D:\Win2000” and click the “OK” button. Installation will be completed.

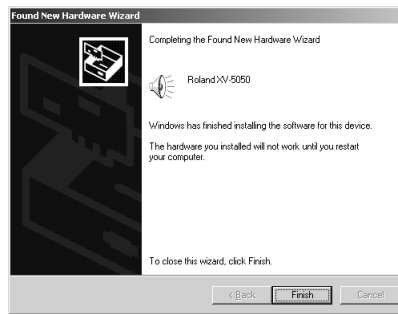


\* Change the drive name D: to match the drive name of your CD-ROM drive. For example if your CD-ROM drive is named Q:, you would input “Q:\Win2000”.

## Installing & Setup the Driver

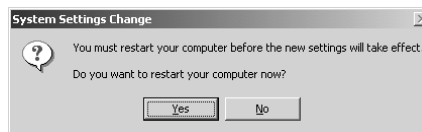
### 14. The “Found New Hardware Wizard” will appear.

Make sure that “**Roland XV-5050**” is displayed, and click the “**Finish**” button.



### 15. The “System Settings Change” dialog box will appear.

Click the “**Yes**” button and restart Windows.



### 16. If you changed the setting for “Verify file signature” in step 5, set it back to the previous setting.

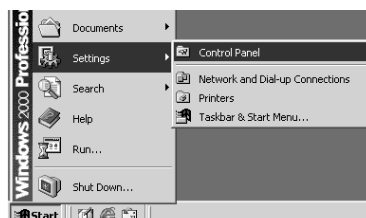
(To restore the setting, the Administrator or user belonging to the Administrators group must log on to Windows.)

Then refer to “**Specifying the Output Destination for MIDI Data**” (the section that follows), and make settings for the XV-5050 to be used from your computer. The XV-5050 cannot be used unless you make these settings.

## Specifying the Output Destination for MIDI Data

Here you can make settings for using the XV-5050 driver with applications such as the “Media Player” that is included with Windows.

1. Click the Windows [Start] button, select [Settings] from the menu that appears, and select [Control Panel].



2. In the Control Panel, double-click the [Sounds and Multimedia] icon.



3. Click the “Audio” tab, and in “MIDI Music Playback,” select “Roland XV-5050.”



4. Click [OK].

5. Start up Windows Media Player or Media Player, select a MIDI file, and play back.

### NOTE

If you are using the XV-5050 with a sequencer, do not disconnect the MIDI cable connected to the XV-5050 while a song is playing back.

### MEMO

Windows Media Player is located in Start menu -> Programs-Accessories-Entertainment-Windows Media Player.

## Deleting the USB MIDI Driver

If you were not able to install the XV-5050 driver according to the procedure, or if you are unable to use the XV-5050 even after installing the driver, you must delete the driver.

After deleting the driver, use the procedure described in “Installing & Setup the Driver” (p. 124) to re-install the driver.

For details on how to delete the driver, refer to the explanation provided in the on-line manual within the XV-5050 Driver CD-ROM.

### Windows 98 / Me users

In the XV-5050 Driver CD-ROM folder Win98, open the README\_E.HTM file and read “To uninstall.”

### Windows 2000 users

In the XV-5050 Driver CD-ROM folder Win2000, open the README\_E.HTM file and read “To uninstall.”

# Using OMS on the Macintosh

## Installing the XV-5050 Driver

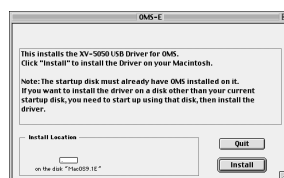
Use the following procedure to install the XV-5050 driver.

- \* Disconnect the XV-5050 from your Macintosh before installing the driver.
- \* Exit all applications before you begin installing the driver.
- \* The **XV-5050 OMS Driver** included on the disc is provided as an additional module that allows the XV-5050 to be used with OMS. In order to use it, OMS must already be installed on the start-up hard disk.

1. In the “XV Driver E” folder of the CD-ROM, double-click the “OMS-E” icon.



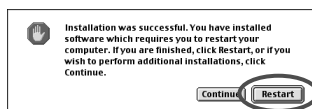
2. Make sure that OMS is already installed in the location where the driver will be installed, and click [Install].



3. If the following message appears, click [Continue] and all other currently-running applications will be exited, and installation will continue.



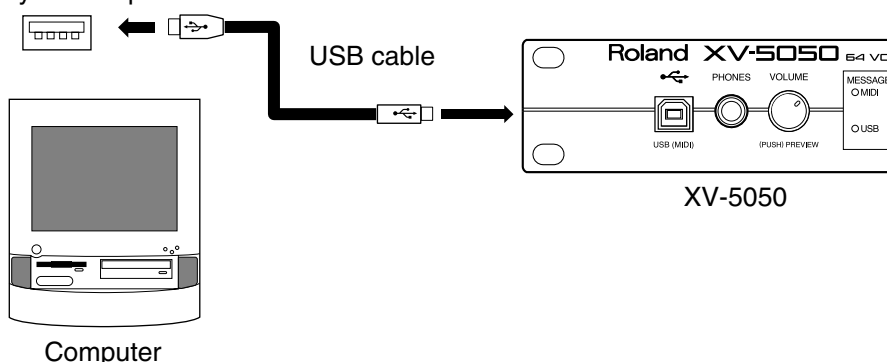
4. When installation is completed, the following dialog box appears. Click [Restart] to restart your Macintosh.



## OMS settings

1. Use the USB cable to connect the XV-5050 and your Macintosh.

USB connector  
of your computer



2. Double-click the “OMS Setup” icon.



### MEMO

You can download OMS from the Web site of Opcode System, Inc.

### MEMO

About detailed information for OMS, refer to the Owner's Manual of OMS.

### NOTE

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

### NOTE

If you are using the XV-5050 with a sequencer, do not disconnect the MIDI cable connected to the XV-5050 while a song is playing back.

3. If the “Apple Talk” dialog box appears, click [Turn It Off].

Then, in the dialog box that appears next, click [OK].



4. The “Create a New Studio setup” dialog box appears.

Click [OK].

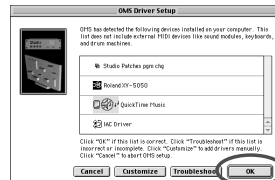


5. The “OMS Driver Search” dialog box appears.

Click [Search].



6. After the search has been completed, make sure that “Roland XV-5050” is listed in the “OMS Driver Setup” dialog box, and click [OK].



7. After making sure that the XV-5050 is listed in the “OMS MIDI Device Setup” dialog box, click the check box for XV-5050, and click [OK].



8. Change the name of the keyboard icon to "Port 1" or any other names except "XV-5050."



9. The “Save” dialog box appears.

Input the desired file name, and click [Save].



10. Select [Test Studio] in the [Studio Menu] and check it in order to verify whether sound is produced.



11. In the “My Studio Setup Window,” click the keyboard icon.

When you move the mouse pointer near the keyboard icon, the pointer will change to the shape of an eighth note. Verify that you can hear sound from your XV-5050.

12. After you have finished the above check, exit OMS Setup.

This completes driver settings.

## MEMO

If the “Create a New Studio setup” dialog box does not appear, click [New Studio setup] in the [File] menu.

## NOTE

The following step will cause a relatively loud sound to be produced by the XV-5050, so turn down the volume of your XV-5050 before continuing.

# Using FreeMIDI on the Macintosh

## Installing the XV-5050 Driver

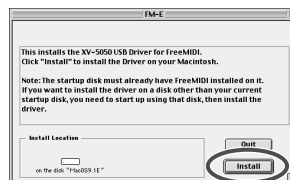
Use the following procedure to install the XV-5050 driver.

- \* *Disconnect the XV-5050 from your Macintosh before installing the driver.*
- \* *Exit all applications before you begin installing the driver.*
- \* *The **XV-5050 FreeMIDI Driver** included on the disc is provided as an additional module that allows the XV-5050 to be used with FreeMIDI. In order to use it, FreeMIDI must already be installed on the start-up hard disk.*

1. In the “XV-5050 Driver E” folder of the CD-ROM, double-click the “FM-E” icon.



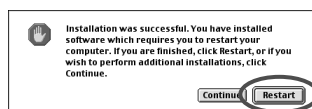
2. Make sure that FreeMIDI is already installed in the location where the driver will be installed, and click [Install].



3. When installation is completed, click [Restart] to restart your Macintosh.

This completes installation of the XV-5050 Driver.

Next you will make FreeMIDI settings.



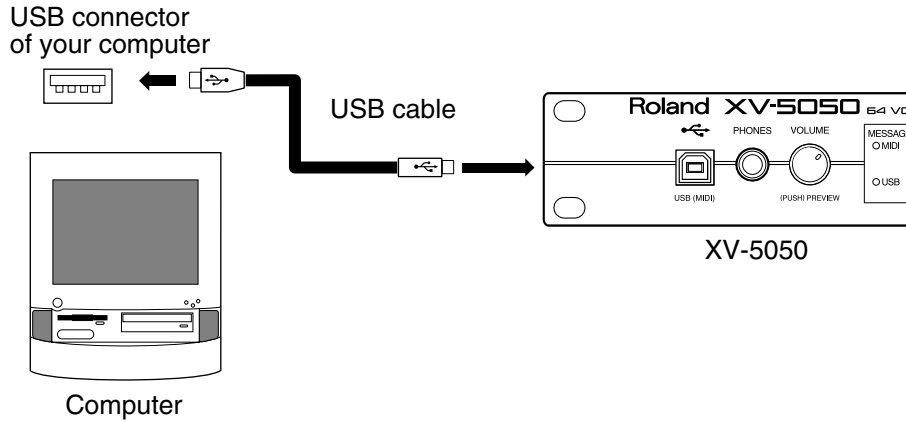
You can download FreeMIDI from the Web site of Mark of the Unicorn, Inc.



About detailed information for FreeMIDI, refer to the owner's manual of FreeMIDI.

## FreeMIDI settings

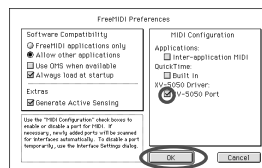
1. Use the USB cable to connect the XV-5050 and your Macintosh.



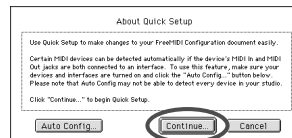
2. Open the “FreeMIDI Applications” folder, and double-click the “FreeMIDI Setup” icon.
3. The first time FreeMIDI is started up, a “Welcome to FreeMIDI!” dialog box will appear. Click [Continue].

If this is the second or later time, select “FreeMIDI Preferences” from the File menu.

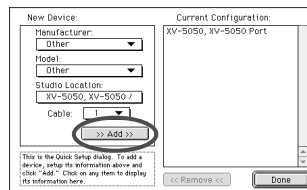
4. In the “FreeMIDI Preferences” dialog box, check “XV-5050 Port” which is located below XV-5050 Driver in MIDI Configuration, and click [OK].



5. The About Quick Setup dialog box appears. Click [Continue].

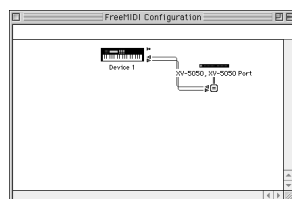


6. In the dialog box that appears, select the “XV-5050” in “Studio Location,” and click [Add].



7. When settings are complete, click [Done].

A setting window like the following appears.



8. From the File menu, select [Save], and save your settings.



This completes driver settings.

### NOTE

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

### NOTE

If you are using the XV-5050 with a sequencer, do not disconnect the MIDI cable connected to the XV-5050 while a song is playing back.

### MEMO

There will be a version number following “FreeMIDI Setup” as the actual icon name.

### NOTE

If the dialog box does not show “XV-5050 Driver,” check whether the XV-5050 is connected correctly, and start up FreeMIDI Setup once again.

### NOTE

If the “About Quick Setup” dialog box is not displayed, select “Quick Setup...” from the “Configuration” menu.

### NOTE

This is one example of a setting window. The window that appears will depend on your setup.

# Troubleshooting

If no sound can be heard, or if the unit does not perform as you expect, check the following points first. If this does not resolve the problem, contact your dealer or a nearby Roland service station.

\* If a message appears during operation, consult the following section **Error Messages** (p. 137).

| Problem                                         | Cause                                                                                        | Action                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>No sound</b>                                 | Is the VOLUME lowered?                                                                       | Check the VOLUME knob, and the volume settings on the connected amp/mixer, etc.                                                                                                                                                                                                                                                |
|                                                 | Have connections been made correctly?                                                        | If there is sound in the headphones, it is possible that the connection cables are broken, or that the amp or mixer is malfunctioning. Check the connection cables and other devices once again.                                                                                                                               |
|                                                 | Is the MIDI receive channel correct?                                                         | Make sure that the MIDI transmit channel of the connected device matches the receive channel of the XV-5050 (p. 19).                                                                                                                                                                                                           |
|                                                 | Are the Tone, Patch and Part level settings excessively low?                                 | Check the level settings of each Tone, Patch and each Part. (Tone p. 48, Patch p. 40, Part p. 65)                                                                                                                                                                                                                              |
|                                                 | Are Tones or Parts turned off?                                                               | Check the on/off settings of each Tone and each Part. (Tone p. 39, Part p. 63)                                                                                                                                                                                                                                                 |
|                                                 | Are the key range settings correct?                                                          | Check the key range settings of each Tone and each Part. (Tone p. 41, Part p. 64)                                                                                                                                                                                                                                              |
|                                                 | Has the volume been lowered by volume/expressions messages received from an external device? | The volume will return to normal when the power is turned on once again. When a Performance is selected, the reception status for each type of message can be viewed in the [INFO] screen (p. 67).                                                                                                                             |
|                                                 | Are the effect settings correct?                                                             | Check settings such as Effect On/Off (p. 69), and Effect Balance and Level (pp. 75–103).                                                                                                                                                                                                                                       |
|                                                 | Are the output destination settings correct?                                                 | Check the Output Assign and MFX Output Assign settings. (p. 74)                                                                                                                                                                                                                                                                |
|                                                 | Is MIDI-USB Thru turned on?                                                                  | Turn the MIDI-USB Thru parameter off, or turn on the MIDI Thru parameter in the connected computer (p. 109).                                                                                                                                                                                                                   |
| <b>Pitch is wrong</b>                           | Is the Master Tune setting correct?                                                          | Check the setting. (p. 110)                                                                                                                                                                                                                                                                                                    |
|                                                 | Is Scale Tune selected?                                                                      | Check the setting. (p. 110)                                                                                                                                                                                                                                                                                                    |
|                                                 | Are the pitch settings for each Tone and each Part correct?                                  | Check each setting. (Tone p. 45, Part p. 66)                                                                                                                                                                                                                                                                                   |
|                                                 | Have pitch bend messages received from an external device caused the pitch to “stick”?       | The pitch will return to normal when the power is turned on. If a Performance is selected, the [INFO] screen (p. 67) allows you to check the reception status of each type of messages.                                                                                                                                        |
| <b>Effects do not apply</b>                     | Are MFX, CHORUS, and REVERB turned off?                                                      | Hold down [SHIFT] and press [PATCH FINDER] to check each setting. (p. 69)                                                                                                                                                                                                                                                      |
|                                                 | Are the various effect settings correct?                                                     | If the send levels to each effect are at 0, effects will not apply. Check each setting. (p. 74)                                                                                                                                                                                                                                |
|                                                 |                                                                                              | Even if the send level to each effect is above 0, effects will not apply if the MFX Output Level, Chorus Level, and Reverb Level are set to 0. Check each setting. (p. 74)                                                                                                                                                     |
|                                                 |                                                                                              | If Output Assign is set to PATCH for each Part of the Performance, the sound will be output according to the Output Assign settings of the Patch (for each Tone) which is assigned to those Parts. This means that if the Output Assign of (each Tone in) the Patch is set to PATCH, the MFX sound will not be output. (p. 40) |
| <b>MIDI messages are not received correctly</b> | Are the receive channel and receive switch settings correct?                                 | Check the settings for the MIDI receive channel (p. 108) and the various switches for reception of MIDI messages (p. 108).                                                                                                                                                                                                     |
|                                                 | Are the exclusive receive settings correct?                                                  | In order for system exclusive messages to be received, the Device ID Number must match that of the transmitting device, and the System Exclusive receive switch must be on. (p. 108) Also, if you wish to rewrite data in the USER group, the System Exclusive message Protect Switch must be turned off as well. (p. 105)     |
|                                                 | Is the DEMO PLAY screen displayed?                                                           | When the DEMOPLAY screen is displayed, MIDI messages received from an external device will be ignored.                                                                                                                                                                                                                         |
| <b>Song data does not playback correctly</b>    | Are you playing back from the middle of the song?                                            | The beginning of a General MIDI score song contains a GM System On message. In some cases, a General MIDI Score cannot be played back correctly unless this message is received.                                                                                                                                               |
|                                                 | Are you playing back GS format song data?                                                    | Since the XV-5050 is a General MIDI system compatible sound source, there may be cases in which GS format song data will not playback correctly.                                                                                                                                                                               |
|                                                 | Is the Patch mode selected?                                                                  | When song data is played back in the Patch mode, only the sound of a single Part is played. Change to the Performance mode, then play the song data.                                                                                                                                                                           |

# Error Messages

If there has been a mistake in operation, or if the XV-5050 is unable to continue processing as you directed, an error message will appear in the display. Take the appropriate action for the displayed error message.

\* This section gives the error messages in alphabetical order.

| Message                            | Situation                                                                                                           | Action                                                                                                                                  |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>MIDI Buffer Full</b>            | Due to an inordinate volume of MIDI messages received, the XV-5050 has failed to process them properly.             | Reduce the amount of MIDI messages to be transmitted.                                                                                   |
| <b>MIDI Communication Error</b>    | It is possible that the power has been turned off for the MIDI device connected to the XV-5050's MIDI IN connector. | Check the power of the connected MIDI device.                                                                                           |
|                                    | It is possible that a MIDI cable has been pulled out or has a short.                                                | Check the MIDI cable.                                                                                                                   |
| <b>Receive Data Error</b>          | A MIDI message was received incorrectly.                                                                            | If the same error message is displayed repeatedly, there is a problem with the MIDI messages that are being transmitted to the XV-5050. |
| <b>USB Off Line</b>                | It is possible that the power has been turned off for the computer connected to the XV-5050's USB connector.        | Check the power of the connected computer.                                                                                              |
|                                    | It is possible that a USB cable has been pulled out or has a short.                                                 | Check the USB cable.                                                                                                                    |
| <b>User Memory Damaged</b>         | The data in user memory has been lost.                                                                              | Use the Factory Reset function (p. 15) to initialize the memory to the factory settings.                                                |
| <b>User Memory Write Protected</b> | The Internal parameter (PROTECT; p. 105) is turned ON.                                                              | Turn the Internal parameter OFF.                                                                                                        |
|                                    | The Exclusive parameter (PROTECT; p. 105) is turned ON, and Exclusive messages cannot be received.                  | Turn the Exclusive parameter OFF.                                                                                                       |

# Waveform List

| No. | Wave Name    | No. | Wave Name    | No. | Wave Name    | No. | Wave Name    | No. | Wave Name    |
|-----|--------------|-----|--------------|-----|--------------|-----|--------------|-----|--------------|
| 1   | StGrand pA L | 76  | Clav 3A      | 151 | Jazz Gtr B   | 226 | Koto A       | 301 | Oboe mf A    |
| 2   | StGrand pA R | 77  | Clav 3B      | 152 | Jazz Gtr C   | 227 | Koto B       | 302 | Oboe mf B    |
| 3   | StGrand pB L | 78  | Clav 3C      | 153 | LP Rear A    | 228 | Koto C       | 303 | Oboe mf C    |
| 4   | StGrand pB R | 79  | Clav 4A      | 154 | LP Rear B    | 229 | Taishokoto A | 304 | Oboe f A     |
| 5   | StGrand pC L | 80  | Clav 4B      | 155 | LP Rear C    | 230 | Taishokoto B | 305 | Oboe f B     |
| 6   | StGrand pC R | 81  | Clav 4C      | 156 | Rock lead 1  | 231 | Taishokoto C | 306 | Oboe f C     |
| 7   | StGrand fA L | 82  | Clav Wave    | 157 | Rock lead 2  | 232 | Pick Bass A  | 307 | E.Horn A     |
| 8   | StGrand fA R | 83  | MIDI Clav    | 158 | Comp Gtr A   | 233 | Pick Bass B  | 308 | E.Horn B     |
| 9   | StGrand fB L | 84  | HarpsiWave A | 159 | Comp Gtr B   | 234 | Pick Bass C  | 309 | E.Horn C     |
| 10  | StGrand fB R | 85  | HarpsiWave B | 160 | Comp Gtr C   | 235 | Fingerd Bs A | 310 | Bassoon A    |
| 11  | StGrand fC L | 86  | HarpsiWave C | 161 | Comp Gtr A+  | 236 | Fingerd Bs B | 311 | Bassoon B    |
| 12  | StGrand fC R | 87  | Jazz Organ 1 | 162 | Mute Gtr 1   | 237 | Fingerd Bs C | 312 | Bassoon C    |
| 13  | Ac Piano2 pA | 88  | Jazz Organ 2 | 163 | Mute Gtr 2A  | 238 | E.Bass       | 313 | T_Recorder A |
| 14  | Ac Piano2 pB | 89  | Organ 1      | 164 | Mute Gtr 2B  | 239 | P.Bass 1     | 314 | T_Recorder B |
| 15  | Ac Piano2 pC | 90  | Organ 2      | 165 | Mute Gtr 2C  | 240 | P.Bass 2     | 315 | T_Recorder C |
| 16  | Ac Piano2 fA | 91  | Organ 3      | 166 | Muters       | 241 | Stick        | 316 | Sop.Sax A    |
| 17  | Ac Piano2 fB | 92  | Organ 4      | 167 | Pop Strat A  | 242 | Fretless A   | 317 | Sop.Sax B    |
| 18  | Ac Piano2 fC | 93  | 60's Organ1  | 168 | Pop Strat B  | 243 | Fretless B   | 318 | Sop.Sax C    |
| 19  | Ac Piano1 A  | 94  | 60's Organ2  | 169 | Pop Strat C  | 244 | Fretless C   | 319 | Sop.Sax mf A |
| 20  | Ac Piano1 B  | 95  | 60's Organ3  | 170 | JC Strat A   | 245 | Fretless 2A  | 320 | Sop.Sax mf B |
| 21  | Ac Piano1 C  | 96  | 60's Organ4  | 171 | JC Strat B   | 246 | Fretless 2B  | 321 | Sop.Sax mf C |
| 22  | Piano Thump  | 97  | Full Organ   | 172 | JC Strat C   | 247 | Fretless 2C  | 322 | Alto mp A    |
| 23  | Piano Up TH  | 98  | Full Draw    | 173 | JC Strat A+  | 248 | UprightBs 1  | 323 | Alto mp B    |
| 24  | Piano Atk    | 99  | Rock Organ   | 174 | JC Strat B+  | 249 | UprightBs 2A | 324 | Alto mp C    |
| 25  | MKS-20 P3 A  | 100 | RockOrg1 A L | 175 | JC Strat C+  | 250 | UprightBs 2B | 325 | Alto Sax 1A  |
| 26  | MKS-20 P3 B  | 101 | RockOrg1 A R | 176 | Clean Gtr A  | 251 | UprightBs 2C | 326 | Alto Sax 1B  |
| 27  | MKS-20 P3 C  | 102 | RockOrg1 B L | 177 | Clean Gtr B  | 252 | Ac.Bass A    | 327 | Alto Sax 1C  |
| 28  | SA Rhodes 1A | 103 | RockOrg1 B R | 178 | Clean Gtr C  | 253 | Ac.Bass B    | 328 | T.Breathy A  |
| 29  | SA Rhodes 1B | 104 | RockOrg1 C L | 179 | Stratus A    | 254 | Ac.Bass C    | 329 | T.Breathy B  |
| 30  | SA Rhodes 1C | 105 | RockOrg1 C R | 180 | Stratus B    | 255 | Slap Bass 1  | 330 | T.Breathy C  |
| 31  | SA Rhodes 2A | 106 | RockOrg2 A L | 181 | Stratus C    | 256 | Slap & Pop   | 331 | SoloSax A    |
| 32  | SA Rhodes 2B | 107 | RockOrg2 A R | 182 | Scrape Gut   | 257 | Slap Bass 2  | 332 | SoloSax B    |
| 33  | SA Rhodes 2C | 108 | RockOrg2 B L | 183 | Strat Sust   | 258 | Slap Bass 3  | 333 | SoloSax C    |
| 34  | Dyn Rhd mp A | 109 | RockOrg2 B R | 184 | Strat Atk    | 259 | Jz.Bs Thumb  | 334 | Tenor Sax A  |
| 35  | Dyn Rhd mp B | 110 | RockOrg2 C L | 185 | OD Gtr A     | 260 | Jz.Bs Slap 1 | 335 | Tenor Sax B  |
| 36  | Dyn Rhd mp C | 111 | RockOrg2 C R | 186 | OD Gtr B     | 261 | Jz.Bs Slap 2 | 336 | Tenor Sax C  |
| 37  | Dyn Rhd mf A | 112 | RockOrg3 A L | 187 | OD Gtr C     | 262 | Jz.Bs Slap 3 | 337 | T.Sax mf A   |
| 38  | Dyn Rhd mf B | 113 | RockOrg3 A R | 188 | OD Gtr A+    | 263 | Jz.Bs Pop    | 338 | T.Sax mf B   |
| 39  | Dyn Rhd mf C | 114 | RockOrg3 B L | 189 | Heavy Gtr A  | 264 | Funk Bass1   | 339 | T.Sax mf C   |
| 40  | Dyn Rhd ff A | 115 | RockOrg3 B R | 190 | Heavy Gtr B  | 265 | Funk Bass2   | 340 | Bari.Sax f A |
| 41  | Dyn Rhd ff B | 116 | RockOrg3 C L | 191 | Heavy Gtr C  | 266 | Syn Bass A   | 341 | Bari.Sax f B |
| 42  | Dyn Rhd ff C | 117 | RockOrg3 C R | 192 | Heavy Gtr A+ | 267 | Syn Bass C   | 342 | Bari.Sax f C |
| 43  | Wurly soft A | 118 | Dist. Organ  | 193 | Heavy Gtr B+ | 268 | Syn Bass     | 343 | Bari.Sax A   |
| 44  | Wurly soft B | 119 | Rot.Org Slw  | 194 | Heavy Gtr C+ | 269 | Syn Bass 2 A | 344 | Bari.Sax B   |
| 45  | Wurly soft C | 120 | Rot.Org Fst  | 195 | PowerChord A | 270 | Syn Bass 2 B | 345 | Bari.Sax C   |
| 46  | Wurly hard A | 121 | Pipe Organ   | 196 | PowerChord B | 271 | Syn Bass 2 C | 346 | Syn Sax      |
| 47  | Wurly hard B | 122 | Soft Nylon A | 197 | PowerChord C | 272 | Mini Bs 1A   | 347 | Chanter      |
| 48  | Wurly hard C | 123 | Soft Nylon B | 198 | EG Harm      | 273 | Mini Bs 1B   | 348 | Harmonica A  |
| 49  | E.Piano 1A   | 124 | Soft Nylon C | 199 | Gt.FretNoise | 274 | Mini Bs 1C   | 349 | Harmonica B  |
| 50  | E.Piano 1B   | 125 | Nylon Gtr A  | 200 | Syn Gtr A    | 275 | Mini Bs 2    | 350 | Harmonica C  |
| 51  | E.Piano 1C   | 126 | Nylon Gtr B  | 201 | Syn Gtr B    | 276 | Mini Bs 2+   | 351 | OrcUnisonA L |
| 52  | E.Piano 2A   | 127 | Nylon Gtr C  | 202 | Syn Gtr C    | 277 | MC-202 Bs A  | 352 | OrcUnisonA R |
| 53  | E.Piano 2B   | 128 | Nylon Str    | 203 | Harp 1A      | 278 | MC-202 Bs B  | 353 | OrcUnisonB L |
| 54  | E.Piano 2C   | 129 | 6-Str Gtr A  | 204 | Harp 1B      | 279 | MC-202 Bs C  | 354 | OrcUnisonB R |
| 55  | E.Piano 3A   | 130 | 6-Str Gtr B  | 205 | Harp 1C      | 280 | Hollow Bs    | 355 | OrcUnisonC L |
| 56  | E.Piano 3B   | 131 | 6-Str Gtr C  | 206 | Harp Harm    | 281 | Flute 1A     | 356 | OrcUnisonC R |
| 57  | E.Piano 3C   | 132 | StlGtr mp A  | 207 | Pluck Harp   | 282 | Flute 1B     | 357 | BrassSectA L |
| 58  | MK-80 EP A   | 133 | StlGtr mp B  | 208 | Banjo A      | 283 | Flute 1C     | 358 | BrassSectA R |
| 59  | MK-80 EP B   | 134 | StlGtr mp C  | 209 | Banjo B      | 284 | Jazz Flute A | 359 | BrassSectB L |
| 60  | MK-80 EP C   | 135 | StlGtr mf A  | 210 | Banjo C      | 285 | Jazz Flute B | 360 | BrassSectB R |
| 61  | EP Hard      | 136 | StlGtr mf B  | 211 | Sitar A      | 286 | Jazz Flute C | 361 | BrassSectC L |
| 62  | EP Distone   | 137 | StlGtr mf C  | 212 | Sitar B      | 287 | Flute Tone   | 362 | BrassSectC R |
| 63  | Clear Keys   | 138 | StlGtr ff A  | 213 | Sitar C      | 288 | Piccolo A    | 363 | Tpt Sect. A  |
| 64  | D-50 EP A    | 139 | StlGtr ff B  | 214 | E.Sitar A    | 289 | Piccolo B    | 364 | Tpt Sect. B  |
| 65  | D-50 EP B    | 140 | StlGtr ff C  | 215 | E.Sitar B    | 290 | Piccolo C    | 365 | Tpt Sect. C  |
| 66  | D-50 EP C    | 141 | StlGtr sld A | 216 | E.Sitar C    | 291 | Blow Pipe    | 366 | Tb Sect A    |
| 67  | Celesta      | 142 | StlGtr sld B | 217 | Santur A     | 292 | Pan Pipe     | 367 | Tb Sect B    |
| 68  | Music Box    | 143 | StlGtr sld C | 218 | Santur B     | 293 | BottleBlow   | 368 | Tb Sect C    |
| 69  | Music Box 2  | 144 | StlGtr Hrm A | 219 | Santur C     | 294 | Rad Hose     | 369 | T.Sax Sect A |
| 70  | Clav 1A      | 145 | StlGtr Hrm B | 220 | Dulcimer A   | 295 | Shakuhachi   | 370 | T.Sax Sect B |
| 71  | Clav 1B      | 146 | StlGtr Hrm C | 221 | Dulcimer B   | 296 | Shaku Atk    | 371 | T.Sax Sect C |
| 72  | Clav 1C      | 147 | Gtr Harm A   | 222 | Dulcimer C   | 297 | Flute Push   | 372 | Flugel A     |
| 73  | Clav 2A      | 148 | Gtr Harm B   | 223 | Shamisen A   | 298 | Clarinet A   | 373 | Flugel B     |
| 74  | Clav 2B      | 149 | Gtr Harm C   | 224 | Shamisen B   | 299 | Clarinet B   | 374 | Flugel C     |
| 75  | Clav 2C      | 150 | Jazz Gtr A   | 225 | Shamisen C   | 300 | Clarinet C   | 375 | FlugelWave   |

| No. | Wave Name    | No. | Wave Name    | No. | Wave Name    | No. | Wave Name    | No. | Wave Name    |
|-----|--------------|-----|--------------|-----|--------------|-----|--------------|-----|--------------|
| 376 | Trumpet 1A   | 451 | Voice Aahs B | 526 | MMM VOX      | 601 | TVF_Trig     | 676 | Rock SN f R  |
| 377 | Trumpet 1B   | 452 | Voice Aahs C | 527 | Lead Wave    | 602 | Org Click    | 677 | Rock Rim p L |
| 378 | Trumpet 1C   | 453 | Voice Oohs1A | 528 | Synth Reed   | 603 | Cut Noiz     | 678 | Rock Rim p R |
| 379 | Trumpet 2A   | 454 | Voice Oohs1B | 529 | Synth Saw 1  | 604 | Bass Body    | 679 | Rock Rim mfL |
| 380 | Trumpet 2B   | 455 | Voice Oohs1C | 530 | Synth Saw 2  | 605 | Flute Click  | 680 | Rock Rim mfR |
| 381 | Trumpet 2C   | 456 | Voice Oohs2A | 531 | Syn Saw 2Inv | 606 | Gt&BsNz MENU | 681 | Rock Rim f L |
| 382 | HarmonMute1A | 457 | Voice Oohs2B | 532 | Synth Saw 3  | 607 | Ac.BassNz 1  | 682 | Rock Rim f R |
| 383 | HarmonMute1B | 458 | Voice Oohs2C | 533 | JD Syn Saw 2 | 608 | Ac.BassNz 2  | 683 | Rock Gst L   |
| 384 | HarmonMute1C | 459 | Choir 1A     | 534 | FAT Saw      | 609 | El.BassNz 1  | 684 | Rock Gst R   |
| 385 | Trombone 1   | 460 | Choir 1B     | 535 | JP-8 Saw A   | 610 | El.BassNz 2  | 685 | Snare Ghost  |
| 386 | Trombone 2 A | 461 | Choir 1C     | 536 | JP-8 Saw B   | 611 | DistGtrNz 1  | 686 | Jazz SN p L  |
| 387 | Trombone 2 B | 462 | Oohs Chord L | 537 | JP-8 Saw C   | 612 | DistGtrNz 2  | 687 | Jazz SN p R  |
| 388 | Trombone 2 C | 463 | Oohs Chord R | 538 | P5 Saw A     | 613 | DistGtrNz 3  | 688 | Jazz SN mf L |
| 389 | Tuba A       | 464 | Male Ooh A   | 539 | P5 Saw B     | 614 | DistGtrNz 4  | 689 | Jazz SN mf R |
| 390 | Tuba B       | 465 | Male Ooh B   | 540 | P5 Saw C     | 615 | SteelGtrNz 1 | 690 | Jazz SN f L  |
| 391 | Tuba C       | 466 | Male Ooh C   | 541 | P5 Saw2 A    | 616 | SteelGtrNz 2 | 691 | Jazz SN f R  |
| 392 | French 1A    | 467 | Org Vox A    | 542 | P5 Saw2 B    | 617 | SteelGtrNz 3 | 692 | Jazz SN ff L |
| 393 | French 1C    | 468 | Org Vox B    | 543 | P5 Saw2 C    | 618 | SteelGtrNz 4 | 693 | Jazz SN ff R |
| 394 | F.Horns A    | 469 | Org Vox C    | 544 | D-50 Saw A   | 619 | SteelGtrNz 5 | 694 | Jazz Rim p L |
| 395 | F.Horns B    | 470 | Org Vox      | 545 | D-50 Saw B   | 620 | SteelGtrNz 6 | 695 | Jazz Rim p R |
| 396 | F.Horns C    | 471 | ZZZ Vox      | 546 | D-50 Saw C   | 621 | SteelGtrNz 7 | 696 | Jazz Rim mfL |
| 397 | Violin A     | 472 | Bell VOX     | 547 | Synth Square | 622 | Sea          | 697 | Jazz Rim mfR |
| 398 | Violin B     | 473 | Kalimba      | 548 | JP-8 SquareA | 623 | Thunder      | 698 | Jazz Rim f L |
| 399 | Violin C     | 474 | JD Kalimba   | 549 | JP-8 SquareB | 624 | Windy        | 699 | Jazz Rim f R |
| 400 | Violin 2 A   | 475 | Kimba Atk    | 550 | JP-8 SquareC | 625 | Stream       | 700 | Jazz Rim ffL |
| 401 | Violin 2 B   | 476 | Wood Crak    | 551 | DualSquare A | 626 | Bubble       | 701 | Jazz Rim ffR |
| 402 | Violin 2 C   | 477 | Block        | 552 | DualSquare C | 627 | Bird         | 702 | Brush Slap   |
| 403 | Cello A      | 478 | Gamelan 1    | 553 | DualSquareA+ | 628 | Dog Bark     | 703 | Brush Swish  |
| 404 | Cello B      | 479 | Gamelan 2    | 554 | JD SynPulse1 | 629 | Horse        | 704 | Jazz Swish p |
| 405 | Cello C      | 480 | Gamelan 3    | 555 | JD SynPulse2 | 630 | Telephone 1  | 705 | Jazz Swish f |
| 406 | Cello 2 A    | 481 | Log Drum     | 556 | JD SynPulse3 | 631 | Telephone 2  | 706 | 909 SN 1     |
| 407 | Cello 2 B    | 482 | Hooky        | 557 | JD SynPulse4 | 632 | Creak        | 707 | 909 SN 2     |
| 408 | Cello 2 C    | 483 | Tabla        | 558 | Synth Pulse1 | 633 | Door Slam    | 708 | 808 SN       |
| 409 | Cello Wave   | 484 | Marimba Wave | 559 | Synth Pulse2 | 634 | Engine       | 709 | Rock Roll L  |
| 410 | Pizz         | 485 | Xylo         | 560 | JD SynPulse5 | 635 | Car Stop     | 710 | Rock Roll R  |
| 411 | STR Attack A | 486 | Xylophone    | 561 | Sync Sweep   | 636 | Car Pass     | 711 | Jazz Roll    |
| 412 | STR Attack B | 487 | Vibes        | 562 | Triangle     | 637 | Crash        | 712 | Brush Roll   |
| 413 | STR Attack C | 488 | Bottle Hit   | 563 | JD Triangle  | 638 | Gun Shot     | 713 | Dry Stick    |
| 414 | DolceStr.A L | 489 | Glockenspiel | 564 | Sine         | 639 | Siren        | 714 | Dry Stick 2  |
| 415 | DolceStr.A R | 490 | Tubular      | 565 | Metal Wind   | 640 | Train        | 715 | Side Stick   |
| 416 | DolceStr.B L | 491 | Steel Drums  | 566 | Wind Agogo   | 641 | Jetplane     | 716 | Woody Stick  |
| 417 | DolceStr.B R | 492 | Pole Ip      | 567 | Feedbackwave | 642 | Starship     | 717 | RockStick pL |
| 418 | DolceStr.C L | 493 | Fanta Bell A | 568 | Spectrum     | 643 | Breath       | 718 | RockStick pR |
| 419 | DolceStr.C R | 494 | Fanta Bell B | 569 | CrunchWind   | 644 | Laugh        | 719 | RockStick fL |
| 420 | JV Strings L | 495 | Fanta Bell C | 570 | ThroatWind   | 645 | Scream       | 720 | RockStick fR |
| 421 | JV Strings R | 496 | FantaBell A+ | 571 | Pitch Wind   | 646 | Punch        | 721 | Dry Kick     |
| 422 | JV Strings A | 497 | Org Bell     | 572 | JD Vox Noise | 647 | Heart        | 722 | Maple Kick   |
| 423 | JV Strings C | 498 | AgogoBells   | 573 | Vox Noise    | 648 | Steps        | 723 | Rock Kick p  |
| 424 | JP Strings1A | 499 | FingerBell   | 574 | BreathNoise  | 649 | Machine Gun  | 724 | Rock Kick mf |
| 425 | JP Strings1B | 500 | DIGI Bell 1  | 575 | Voice Breath | 650 | Laser        | 725 | Rock Kick f  |
| 426 | JP Strings1C | 501 | DIGI Bell 1+ | 576 | White Noise  | 651 | Thunder 2    | 726 | Jazz Kick p  |
| 427 | JP Strings2A | 502 | JD Cowbell   | 577 | Pink Noise   | 652 | AmbientSN pL | 727 | Jazz Kick mf |
| 428 | JP Strings2B | 503 | Bell Wave    | 578 | Rattles      | 653 | AmbientSN pR | 728 | Jazz Kick f  |
| 429 | JP Strings2C | 504 | Chime        | 579 | Ice Rain     | 654 | AmbientSN fL | 729 | Jazz Kick    |
| 430 | PWM          | 505 | Crystal      | 580 | Tin Wave     | 655 | AmbientSN fR | 730 | Pillow Kick  |
| 431 | Pulse Mod    | 506 | 2.2 Bellwave | 581 | Anklungs     | 656 | Wet SN p L   | 731 | JazzDry Kick |
| 432 | Soft Pad A   | 507 | 2.2 Vibwave  | 582 | Wind Chimes  | 657 | Wet SN p R   | 732 | Lite Kick    |
| 433 | Soft Pad B   | 508 | Digiwave     | 583 | Orch. Hit    | 658 | Wet SN f L   | 733 | Old Kick     |
| 434 | Soft Pad C   | 509 | DIGI Chime   | 584 | Tekno Hit    | 659 | Wet SN f R   | 734 | Hybrid Kick  |
| 435 | Fantasynth A | 510 | JD DIGIChime | 585 | Back Hit     | 660 | Dry SN p     | 735 | Hybrid Kick2 |
| 436 | Fantasynth B | 511 | BrightDigi   | 586 | Philly Hit   | 661 | Dry SN f     | 736 | Verb Kick    |
| 437 | Fantasynth C | 512 | Can Wave 1   | 587 | Scratch 1    | 662 | Sharp SN     | 737 | Round Kick   |
| 438 | D-50 HeavenA | 513 | Can Wave 2   | 588 | Scratch 2    | 663 | Piccolo SN   | 738 | MpLmtr Kick  |
| 439 | D-50 HeavenB | 514 | Vocal Wave   | 589 | Scratch 3    | 664 | Maple SN     | 739 | 70s Kick 1   |
| 440 | D-50 HeavenC | 515 | Wally Wave   | 590 | Shami        | 665 | Old Fill SN  | 740 | 70s Kick 2   |
| 441 | Fine Wine    | 516 | Brusky Ip    | 591 | Org Atk 1    | 666 | 70s SN       | 741 | Dance Kick   |
| 442 | D-50 Brass A | 517 | Wave Scan    | 592 | Org Atk 2    | 667 | SN Roll      | 742 | 808 Kick     |
| 443 | D-50 Brass B | 518 | Wire String  | 593 | Sm Metal     | 668 | Natural SN1  | 743 | 909 Kick 1   |
| 444 | D-50 Brass C | 519 | Nasty        | 594 | StrikePole   | 669 | Natural SN2  | 744 | 909 Kick 2   |
| 445 | D-50 BrassA+ | 520 | Wave Table   | 595 | Thrill       | 670 | Ballad SN    | 745 | Rock TomL1 p |
| 446 | Doo          | 521 | Klack Wave   | 596 | Switch       | 671 | Rock SN p L  | 746 | Rock TomL2 p |
| 447 | Pop Voice    | 522 | Spark VOX    | 597 | Tuba Slap    | 672 | Rock SN p R  | 747 | Rock Tom M p |
| 448 | Syn Vox 1    | 523 | JD Spark VOX | 598 | Plink        | 673 | Rock SN mf L | 748 | Rock Tom H p |
| 449 | Syn Vox 2    | 524 | Cutters      | 599 | Plunk        | 674 | Rock SN mf R | 749 | Rock TomL1 f |
| 450 | Voice Aahs A | 525 | EML 5th      | 600 | EP Atk       | 675 | Rock SN f L  | 750 | Rock TomL2 f |

## Waveform List

| No. | Wave Name    | No. | Wave Name    | No. | Wave Name    | No.  | Wave Name    | No.  | Wave Name    |
|-----|--------------|-----|--------------|-----|--------------|------|--------------|------|--------------|
| 751 | Rock Tom M f | 826 | Ride 2       | 901 | REV Wet SNfR | 976  | REV 70s K 1  | 1051 | REV RkRCym2p |
| 752 | Rock Tom H f | 827 | Ride Bell    | 902 | REV Dry SN   | 977  | REV 70s K 2  | 1052 | REV RkRCym2f |
| 753 | Rock Flm L1  | 828 | Rock CrCym1p | 903 | REV PiccloSN | 978  | REV Dance K  | 1053 | REV JzRCym p |
| 754 | Rock Flm L2  | 829 | Rock CrCym1f | 904 | REV Maple SN | 979  | REV 909 K 2  | 1054 | REV JzRCymmf |
| 755 | Rock Flm M   | 830 | Rock CrCym2p | 905 | REV OldFilSN | 980  | REV RkTomL1p | 1055 | REV JzRCym f |
| 756 | Rock Flm H   | 831 | Rock CrCym2f | 906 | REV 70s SN   | 981  | REV RkTomL2p | 1056 | REV Ride 1   |
| 757 | Jazz Tom L p | 832 | Rock Splash  | 907 | REV SN Roll  | 982  | REV RkTomM p | 1057 | REV Ride 2   |
| 758 | Jazz Tom M p | 833 | Jazz CrCym p | 908 | REV NatrlSN1 | 983  | REV RkTomH p | 1058 | REV RideBell |
| 759 | Jazz Tom H p | 834 | Jazz CrCym f | 909 | REV NatrlSN2 | 984  | REV RkTomL1f | 1059 | REV RkCCym1p |
| 760 | Jazz Tom L f | 835 | Crash Cymbal | 910 | REV BalladSN | 985  | REV RkTomL2f | 1060 | REV RkCCym1f |
| 761 | Jazz Tom M f | 836 | Crash 1      | 911 | REV RkSNpL   | 986  | REV RkTomM f | 1061 | REV RkCCym2p |
| 762 | Jazz Tom H f | 837 | Rock China   | 912 | REV RkSNpR   | 987  | REV RkTomH f | 1062 | REV RkCCym2f |
| 763 | Jazz Flm L   | 838 | China Cym    | 913 | REV RkSNmfL  | 988  | REV RkFlmL1  | 1063 | REV RkSplash |
| 764 | Jazz Flm M   | 839 | Cowbell      | 914 | REV RkSNmfR  | 989  | REV RkFlmL2  | 1064 | REV JzCCym p |
| 765 | Jazz Flm H   | 840 | Wood Block   | 915 | REV RkSNfL   | 990  | REV RkFlm M  | 1065 | REV JzCCym f |
| 766 | Maple Tom 1  | 841 | Claves       | 916 | REV RkSNfR   | 991  | REV RkFlm H  | 1066 | REV CrashCym |
| 767 | Maple Tom 2  | 842 | Bongo Hi     | 917 | REV RkRimpL  | 992  | REV JzTomL p | 1067 | REV Crash 1  |
| 768 | Maple Tom 3  | 843 | Bongo Lo     | 918 | REV RkRimpR  | 993  | REV JzTomM p | 1068 | REV RkChina  |
| 769 | Maple Tom 4  | 844 | Cga Open Hi  | 919 | REV RkRimmfL | 994  | REV JzTomH f | 1069 | REV China    |
| 770 | 808 Tom      | 845 | Cga Open Lo  | 920 | REV RkRimmfR | 995  | REV JzTomL p | 1070 | REV Cowbell  |
| 771 | Verb Tom Hi  | 846 | Cga Mute Hi  | 921 | REV RkRimfL  | 996  | REV JzTomM f | 1071 | REV WoodBlck |
| 772 | Verb Tom Lo  | 847 | Cga Mute Lo  | 922 | REV RkRimfR  | 997  | REV JzTomH f | 1072 | REV Claves   |
| 773 | Dry Tom Hi   | 848 | Cga Slap     | 923 | REV RkGstL   | 998  | REV JzFlm L  | 1073 | REV Conga    |
| 774 | Dry Tom Lo   | 849 | Timbale      | 924 | REV RkGstR   | 999  | REV JzFlm M  | 1074 | REV Timbale  |
| 775 | Rock ClHH1 p | 850 | Cabasa Up    | 925 | REV SnareGst | 1000 | REV JzFlm H  | 1075 | REV Maracas  |
| 776 | Rock ClHH1mf | 851 | Cabasa Down  | 926 | REV JzSNpL   | 1001 | REV MplTom2  | 1076 | REV Guiro    |
| 777 | Rock ClHH1 f | 852 | Cabasa Cut   | 927 | REV JzSNpR   | 1002 | REV MplTom4  | 1077 | REV Tamb 1   |
| 778 | Rock ClHH2 p | 853 | Maracas      | 928 | REV JzSNmfL  | 1003 | REV 808Tom   | 1078 | REV Tamb 2   |
| 779 | Rock ClHH2mf | 854 | Long Guiro   | 929 | REV JzSNmfR  | 1004 | REV VerbTomH | 1079 | REV Cuica    |
| 780 | Rock ClHH2 f | 855 | Tambourine 1 | 930 | REV JzSNfL   | 1005 | REV VerbTomL | 1080 | REV Timpani  |
| 781 | Jazz ClHH1 p | 856 | Tambourine 2 | 931 | REV JzSNfR   | 1006 | REV DryTom H | 1081 | REV Timp3 pp |
| 782 | Jazz ClHH1mf | 857 | Open Triangl | 932 | REV JzSNffL  | 1007 | REV DryTom M | 1082 | REV Timp3 mp |
| 783 | Jazz ClHH1 f | 858 | Cuica        | 933 | REV JzSNffR  | 1008 | REV RkClH1 p | 1083 | REV Metro    |
| 784 | Jazz ClHH2 p | 859 | Vibraslap    | 934 | REV JzRimpL  | 1009 | REV RkClH1mf |      |              |
| 785 | Jazz ClHH2mf | 860 | Timpani      | 935 | REV JzRimpR  | 1010 | REV RkClH1 f |      |              |
| 786 | Jazz ClHH2 f | 861 | Timp3 pp     | 936 | REV JzRimmfL | 1011 | REV RkClH2 p |      |              |
| 787 | Cl HiHat 1   | 862 | Timp3 mp     | 937 | REV JzRimmfR | 1012 | REV RkClH2mf |      |              |
| 788 | Cl HiHat 2   | 863 | Applause     | 938 | REV JzRimfL  | 1013 | REV RkClH2 f |      |              |
| 789 | Cl HiHat 3   | 864 | Syn FX Loop  | 939 | REV JzRimfR  | 1014 | REV JzClH1 p |      |              |
| 790 | Cl HiHat 4   | 865 | Loop 1       | 940 | REV JzRimffL | 1015 | REV JzClH1mf |      |              |
| 791 | Cl HiHat 5   | 866 | Loop 2       | 941 | REV JzRimffR | 1016 | REV JzClH1 f |      |              |
| 792 | Rock OpHH p  | 867 | Loop 3       | 942 | REV Brush 1  | 1017 | REV JzClH2 p |      |              |
| 793 | Rock OpHH f  | 868 | Loop 4       | 943 | REV Brush 2  | 1018 | REV JzClH2mf |      |              |
| 794 | Jazz OpHH p  | 869 | Loop 5       | 944 | REV Brush 3  | 1019 | REV JzClH2 f |      |              |
| 795 | Jazz OpHH mf | 870 | Loop 6       | 945 | REV JzSwish1 | 1020 | REV Cl HH 1  |      |              |
| 796 | Jazz OpHH f  | 871 | Loop 7       | 946 | REV JzSwish2 | 1021 | REV Cl HH 2  |      |              |
| 797 | Op HiHat     | 872 | R8 Click     | 947 | REV 909 SN 1 | 1022 | REV Cl HH 3  |      |              |
| 798 | Op HiHat 2   | 873 | Metronome 1  | 948 | REV 909 SN 2 | 1023 | REV Cl HH 4  |      |              |
| 799 | Rock PdHH p  | 874 | Metronome 2  | 949 | REV RkRoll L | 1024 | REV Cl HH 5  |      |              |
| 800 | Rock PdHH f  | 875 | MC500 Beep 1 | 950 | REV RkRoll R | 1025 | REV RkOpHH p |      |              |
| 801 | Jazz PdHH p  | 876 | MC500 Beep 2 | 951 | REV JzRoll   | 1026 | REV RkOpHH f |      |              |
| 802 | Jazz PdHH f  | 877 | Low Saw      | 952 | REV Dry Stk  | 1027 | REV JzOpHH p |      |              |
| 803 | Pedal HiHat  | 878 | Low Saw inv  | 953 | REV DrySick  | 1028 | REV JzOpHHmf |      |              |
| 804 | Pedal HiHat2 | 879 | Low P5 Saw   | 954 | REV Side Stk | 1029 | REV JzOpHH f |      |              |
| 805 | Dance Cl HH  | 880 | Low Pulse 1  | 955 | REV Wdy Stk  | 1030 | REV Op HiHat |      |              |
| 806 | 909 NZ HiHat | 881 | Low Pulse 2  | 956 | REV RkStk1L  | 1031 | REV OpHiHat2 |      |              |
| 807 | 70s Cl HiHat | 882 | Low Square   | 957 | REV RkStk1R  | 1032 | REV RkPdHH p |      |              |
| 808 | 70s Op HiHat | 883 | Low Sine     | 958 | REV RkStk2L  | 1033 | REV RkPdHH f |      |              |
| 809 | 606 Cl HiHat | 884 | Low Triangle | 959 | REV RkStk2R  | 1034 | REV JzPdHH p |      |              |
| 810 | 606 Op HiHat | 885 | Low White NZ | 960 | REV Thrill   | 1035 | REV JzPdHH f |      |              |
| 811 | 909 Cl HiHat | 886 | Low Pink NZ  | 961 | REV Dry Kick | 1036 | REV PedalHH  |      |              |
| 812 | 909 Op HiHat | 887 | DC           | 962 | REV Mpl Kick | 1037 | REV PedalHH2 |      |              |
| 813 | 808 Claps    | 888 | REV Orch.Hit | 963 | REV RkKik p  | 1038 | REV Dance HH |      |              |
| 814 | HumanClapsEQ | 889 | REV TeknoHit | 964 | REV RkKik mf | 1039 | REV 70s ClHH |      |              |
| 815 | Tight Claps  | 890 | REV Back Hit | 965 | REV RkKik f  | 1040 | REV 70s OpHH |      |              |
| 816 | Hand Claps   | 891 | REV PhillHit | 966 | REV JzKik p  | 1041 | REV 606 ClHH |      |              |
| 817 | Finger Snaps | 892 | REV Steel DR | 967 | REV JzKik mf | 1042 | REV 606 OpHH |      |              |
| 818 | Rock RdCym1p | 893 | REV Tin Wave | 968 | REV JzKik f  | 1043 | REV 909 NZHH |      |              |
| 819 | Rock RdCym1f | 894 | REV AmbiSNpL | 969 | REV Jaz Kick | 1044 | REV 909 OpHH |      |              |
| 820 | Rock RdCym2p | 895 | REV AmbiSNpR | 970 | REV Pillow K | 1045 | REV HClapsEQ |      |              |
| 821 | Rock RdCym2f | 896 | REV AmbiSNfL | 971 | REV Jz Dry K | 1046 | REV TghtClps |      |              |
| 822 | Jazz RdCym p | 897 | REV AmbiSNfR | 972 | REV LiteKick | 1047 | REV FingSnap |      |              |
| 823 | Jazz RdCymmf | 898 | REV Wet SNpL | 973 | REV Old Kick | 1048 | REV RealCLP  |      |              |
| 824 | Jazz RdCym f | 899 | REV Wet SNpR | 974 | REV Hybrid K | 1049 | REV RkRCym1p |      |              |
| 825 | Ride 1       | 900 | REV Wet SNfL | 975 | REV HybridK2 | 1050 | REV RkRCym1f |      |              |

# Patch List

## US (User Group)

| No. | Name         | Voice | Key Assign | No. | Name          | Voice | Key Assign |
|-----|--------------|-------|------------|-----|---------------|-------|------------|
| 001 | Rhodes Trem  | 2     | POLY       | 065 | COSM Searing  | 3     | MONO       |
| 002 | Hydrogen     | 4     | POLY       | 066 | XV Upright    | 1     | POLY       |
| 003 | Groovedigger | 4     | POLY       | 067 | Muscle Bass   | 2     | MONO       |
| 004 | Miasma       | 1     | POLY       | 068 | Brassy Symp   | 4     | POLY       |
| 005 | Thick Steel  | 4     | POLY       | 069 | BiggieBrass2  | 5     | POLY       |
| 006 | Hold A Chord | 6     | POLY       | 070 | Peking Opera  | 7     | POLY       |
| 007 | Aftertouchin | 4     | POLY       | 071 | 5th Element   | 4     | POLY       |
| 008 | Talking Box  | 3     | MONO       | 072 | MetaXV        | 8     | POLY       |
| 009 | GenerationXV | 4     | POLY       | 073 | Traffic Pad   | 4     | POLY       |
| 010 | Ionizer      | 4     | POLY       | 074 | 5ths in 4ths  | 4     | POLY       |
| 011 | Piano+AirPad | 5     | POLY       | 075 | Trance Fair   | 8     | MONO       |
| 012 | Wurly Gum    | 2     | POLY       | 076 | Spectre       | 4     | POLY       |
| 013 | Voxfuzz Klav | 4     | POLY       | 077 | Borealis      | 4     | POLY       |
| 014 | Soaring Hrns | 6     | POLY       | 078 | Cutting X     | 4     | MONO       |
| 015 | Ambi Voices  | 8     | POLY       | 079 | Blues Harp    | 2     | POLY       |
| 016 | Solo SoprSax | 1     | MONO       | 080 | Brash Bass    | 2     | POLY       |
| 017 | Lunar Strngs | 4     | POLY       | 081 | Saw Grits     | 1     | MONO       |
| 018 | BrushingSaw1 | 8     | POLY       | 082 | LegatoJupitr  | 1     | MONO       |
| 019 | R&Ballad Mix | 6     | POLY       | 083 | Tape Orch     | 4     | POLY       |
| 020 | Xtremities   | 4     | MONO       | 084 | FatSynBrass   | 4     | POLY       |
| 021 | Fat Strings  | 3     | POLY       | 085 | UltraSmooth   | 2     | POLY       |
| 022 | ThrobulaX    | 2     | POLY       | 086 | Spread Pad    | 2     | POLY       |
| 023 | GlobalWarmup | 4     | POLY       | 087 | West End Bs   | 5     | MONO       |
| 024 | Vortex       | 4     | POLY       | 088 | Phunky DC     | 2     | MONO       |
| 025 | Sub Zero     | 4     | MONO       | 089 | Valve Job     | 4     | POLY       |
| 026 | Rhythm Sync  | 1     | POLY       | 090 | BatonStrings  | 3     | POLY       |
| 027 | OvertoneScan | 4     | POLY       | 091 | ClassicJPad   | 2     | POLY       |
| 028 | 20.000 miles | 5     | MONO       | 092 | VeloClikOrgn  | 2     | POLY       |
| 029 | Chordbender  | 4     | POLY       | 093 | Soft Nylon    | 4     | POLY       |
| 030 | Atlantis     | 5     | POLY       | 094 | Swell Strat   | 1     | POLY       |
| 031 | Buster Bass  | 2     | MONO       | 095 | Tap Bass      | 1     | POLY       |
| 032 | Two+Ensemble | 5     | POLY       | 096 | Ticker Bass   | 4     | MONO       |
| 033 | Enchanted XV | 3     | MONO       | 097 | VoyagerBrass  | 3     | POLY       |
| 034 | Double Helix | 4     | POLY       | 098 | Swingin' Bari | 3     | POLY       |
| 035 | Blue Mutes   | 2     | POLY       | 099 | Bend a Chord  | 4     | POLY       |
| 036 | Wedding Mass | 5     | POLY       | 100 | Flyin' High   | 3     | MONO       |
| 037 | Grounded Bs  | 2     | MONO       | 101 | Try this!     | 2     | MONO       |
| 038 | Vocovox Wave | 1     | MONO       | 102 | Tekno Pizz    | 1     | POLY       |
| 039 | Lead 4x Vlns | 4     | POLY       | 103 | Complex Echo  | 1     | POLY       |
| 040 | PhazeWahClav | 6     | POLY       | 104 | BadJuJu       | 7     | POLY       |
| 041 | Digibell Pad | 4     | POLY       | 105 | Silk Road     | 4     | POLY       |
| 042 | Rocker Org   | 6     | POLY       | 106 | 2.2 Strings   | 5     | POLY       |
| 043 | Pianomonics  | 4     | POLY       | 107 | Brite Vox 1   | 4     | POLY       |
| 044 | Plug n' Play | 2     | POLY       | 108 | MinorIncident | 4     | MONO       |
| 045 | Crying Solo  | 2     | POLY       | 109 | SparklePiano  | 6     | POLY       |
| 046 | Grand XV     | 4     | POLY       | 110 | Fat Rhodes    | 3     | POLY       |
| 047 | LookMaNoFret | 3     | MONO       | 111 | Verby Organ   | 2     | POLY       |
| 048 | TB Squelch   | 2     | POLY       | 112 | Prelude       | 4     | POLY       |
| 049 | Henry VIII   | 8     | POLY       | 113 | BoutiqueSine  | 1     | POLY       |
| 050 | Reel Slam    | 4     | POLY       | 114 | Froggy Bass   | 1     | MONO       |
| 051 | SwellEnsembl | 4     | POLY       | 115 | Digisquelch   | 4     | POLY       |
| 052 | Amped Wurlie | 3     | POLY       | 116 | Galactic      | 8     | POLY       |
| 053 | NewR&RBrass  | 8     | POLY       | 117 | Generator     | 4     | MONO       |
| 054 | Triumph Brs  | 3     | POLY       | 118 | Funky Tube    | 1     | POLY       |
| 055 | McThrob      | 2     | POLY       | 119 | Dream 2002    | 3     | POLY       |
| 056 | Soaring Sqr  | 4     | MONO       | 120 | 11th Space    | 7     | POLY       |
| 057 | Over the top | 2     | MONO       | 121 | Etheraaahl    | 2     | POLY       |
| 058 | Power Stack  | 3     | POLY       | 122 | Tape Q        | 4     | POLY       |
| 059 | Contemplate  | 2     | POLY       | 123 | EastrnEurope  | 3     | POLY       |
| 060 | Rholitzer    | 3     | POLY       | 124 | TempoMadness  | 4     | POLY       |
| 061 | Chime Bells  | 4     | POLY       | 125 | Phaser Dyno   | 3     | POLY       |
| 062 | IslandSpirit | 3     | POLY       | 126 | 8VCO MonoSyn  | 8     | MONO       |
| 063 | Distorted B  | 1     | POLY       | 127 | TechnoSurf 1  | 2     | POLY       |
| 064 | Double Steel | 8     | POLY       | 128 | Cold Roadz    | 4     | POLY       |

## PA (Preset A Group)

| No. | Name         | Voice | Key Assign | No. | Name         | Voice | Key Assign |
|-----|--------------|-------|------------|-----|--------------|-------|------------|
| 001 | 64voicePiano | 1     | POLY       | 065 | Dual Profs   | 3     | POLY       |
| 002 | Bright Piano | 1     | POLY       | 066 | Saw Mass     | 4     | POLY       |
| 003 | Classique    | 2     | POLY       | 067 | Poly Split   | 4     | POLY       |
| 004 | Nice Piano   | 3     | POLY       | 068 | Poly Brass   | 3     | POLY       |
| 005 | Piano Thang  | 3     | POLY       | 069 | Stackoid     | 4     | POLY       |
| 006 | Power Grand  | 3     | POLY       | 070 | Poly Rock    | 4     | POLY       |
| 007 | House Piano  | 2     | POLY       | 071 | D-50 Stack   | 4     | POLY       |
| 008 | E.Grand      | 1     | POLY       | 072 | Fantasia JV  | 4     | POLY       |
| 009 | MIDled Grand | 3     | POLY       | 073 | Jimmee Dee   | 4     | POLY       |
| 010 | Piano Blend  | 3     | POLY       | 074 | Heavenals    | 4     | POLY       |
| 011 | West Coast   | 4     | POLY       | 075 | Mallet Pad   | 4     | POLY       |
| 012 | PianoStrings | 4     | POLY       | 076 | Huff N Stuff | 3     | POLY       |
| 013 | Bs/Pno+Brs   | 4     | POLY       | 077 | Puff 1080    | 2     | POLY       |
| 014 | Waterhodes   | 2     | POLY       | 078 | BellVox 1080 | 4     | POLY       |
| 015 | S.A.E.P.     | 3     | POLY       | 079 | Fantasy Vox  | 4     | POLY       |
| 016 | SA Rhodes 1  | 4     | POLY       | 080 | Square Keys  | 2     | POLY       |
| 017 | SA Rhodes 2  | 2     | POLY       | 081 | Childlike    | 4     | POLY       |
| 018 | Stiky Rhodes | 3     | POLY       | 082 | Music Box    | 3     | POLY       |
| 019 | Dig Rhodes   | 2     | POLY       | 083 | Toy Box      | 2     | POLY       |
| 020 | Nylon EPiano | 4     | POLY       | 084 | Wave Bells   | 4     | POLY       |
| 021 | Nylon Rhodes | 4     | POLY       | 085 | Tria Bells   | 4     | POLY       |
| 022 | Rhodes Mix   | 3     | POLY       | 086 | Beauty Bells | 4     | POLY       |
| 023 | PsychoRhodes | 2     | POLY       | 087 | Music Bells  | 2     | POLY       |
| 024 | Tremo Rhodes | 4     | POLY       | 088 | Pretty Bells | 2     | POLY       |
| 025 | MK-80 Rhodes | 1     | POLY       | 089 | Pulse Key    | 3     | POLY       |
| 026 | MK-80 Phaser | 1     | POLY       | 090 | Wide Tubular | 4     | POLY       |
| 027 | Delicate EP  | 2     | POLY       | 091 | AmbienceVibe | 4     | POLY       |
| 028 | Octa Rhodes1 | 4     | POLY       | 092 | Warm Vibes   | 2     | POLY       |
| 029 | Octa Rhodes2 | 4     | POLY       | 093 | Dyna Marimba | 1     | POLY       |
| 030 | JV Rhodes+   | 4     | POLY       | 094 | Bass Marimba | 4     | POLY       |
| 031 | EP+Mod Pad   | 4     | POLY       | 095 | Nomad Perc   | 3     | POLY       |
| 032 | Mr.Mellow    | 4     | POLY       | 096 | Ethno Metals | 4     | POLY       |
| 033 | Comp Clav    | 1     | POLY       | 097 | Islands Mlt  | 4     | POLY       |
| 034 | Klavinet     | 4     | POLY       | 098 | Steelin Keys | 3     | POLY       |
| 035 | Winger Clav  | 4     | POLY       | 099 | Steel Drums  | 1     | POLY       |
| 036 | Phaze Clav 1 | 2     | POLY       | 100 | Voiccy Pizz  | 3     | POLY       |
| 037 | Phaze Clav 2 | 1     | POLY       | 101 | Sitar        | 2     | POLY       |
| 038 | Phuzz Clav   | 2     | POLY       | 102 | Drone Split  | 4     | POLY       |
| 039 | Chorus Clav  | 1     | POLY       | 103 | Ethnopluck   | 4     | POLY       |
| 040 | Claviduck    | 2     | POLY       | 104 | Jamisen      | 2     | POLY       |
| 041 | Velo-Rez Clv | 1     | POLY       | 105 | Dulcimer     | 2     | POLY       |
| 042 | Clavicembalo | 4     | POLY       | 106 | East Melody  | 2     | POLY       |
| 043 | Analog Clav1 | 1     | POLY       | 107 | MandolinTrem | 4     | POLY       |
| 044 | Analog Clav2 | 1     | POLY       | 108 | Nylon Gtr    | 1     | POLY       |
| 045 | Metal Clav   | 3     | POLY       | 109 | Gtr Strings  | 3     | POLY       |
| 046 | Full Stops   | 2     | POLY       | 110 | Steel Away   | 3     | POLY       |
| 047 | Ballad B     | 3     | POLY       | 111 | Heavenly Gtr | 4     | POLY       |
| 048 | Mellow Bars  | 4     | POLY       | 112 | 12str Gtr 1  | 2     | POLY       |
| 049 | AugerMentive | 3     | POLY       | 113 | 12str Gtr 2  | 3     | POLY       |
| 050 | Perky B      | 2     | POLY       | 114 | Jz Gtr Hall  | 1     | POLY       |
| 051 | The Big Spin | 3     | POLY       | 115 | LetterFrmPat | 4     | POLY       |
| 052 | Gospel Spin  | 3     | POLY       | 116 | Jazz Scat    | 3     | POLY       |
| 053 | Roller Spin  | 3     | POLY       | 117 | Lounge Gig   | 3     | POLY       |
| 054 | Rocker Spin  | 3     | POLY       | 118 | JC Strat     | 1     | POLY       |
| 055 | Tone Wh.Solo | 3     | POLY       | 119 | Twin Strats  | 3     | POLY       |
| 056 | Purple Spin  | 4     | POLY       | 120 | JV Strat     | 2     | POLY       |
| 057 | 60's LeadORG | 2     | POLY       | 121 | Syn Strat    | 2     | POLY       |
| 058 | Assalt Organ | 3     | POLY       | 122 | Rotary Gtr   | 2     | POLY       |
| 059 | D-50 Organ   | 2     | POLY       | 123 | Muted Gtr    | 1     | POLY       |
| 060 | Cathedral    | 4     | POLY       | 124 | SwitchOnMute | 2     | POLY       |
| 061 | Church Pipes | 4     | POLY       | 125 | Power Trip   | 2     | POLY       |
| 062 | Poly Key     | 3     | POLY       | 126 | Crunch Split | 4     | POLY       |
| 063 | Poly Saws    | 4     | POLY       | 127 | Rezodrive    | 2     | MONO       |
| 064 | Poly Pulse   | 4     | POLY       | 128 | RockYurSocks | 4     | MONO       |

Voice: number of voice

## Patch List

### PB (Preset B Group)

| No. | Name         | Voice | Key Assign | No. | Name         | Voice | Key Assign |
|-----|--------------|-------|------------|-----|--------------|-------|------------|
| 001 | Dist Gtr 1   | 3     | POLY       | 065 | Analog Seq   | 2     | POLY       |
| 002 | Dist Gtr 2   | 3     | POLY       | 066 | Impact Vox   | 4     | POLY       |
| 003 | R&R Chunk    | 4     | POLY       | 067 | TeknoSoloVox | 2     | POLY       |
| 004 | Phripphuzz   | 1     | MONO       | 068 | X-Mod Man    | 2     | POLY       |
| 005 | Grungeroni   | 3     | POLY       | 069 | Paz <==> Zap | 1     | MONO       |
| 006 | Black Widow  | 4     | POLY       | 070 | 4 Hits 4 You | 4     | POLY       |
| 007 | Velo-Wah Gtr | 1     | POLY       | 071 | Impact       | 4     | POLY       |
| 008 | Mod-Wah Gtr  | 2     | POLY       | 072 | Phase Hit    | 3     | POLY       |
| 009 | Pick Bass    | 1     | MONO       | 073 | Tekno Hit 1  | 2     | POLY       |
| 010 | Hip Bass     | 2     | POLY       | 074 | Tekno Hit 2  | 2     | POLY       |
| 011 | Perc.Bass    | 3     | MONO       | 075 | Tekno Hit 3  | 4     | POLY       |
| 012 | Homey Bass   | 2     | MONO       | 076 | Reverse Hit  | 3     | POLY       |
| 013 | Finger Bass  | 1     | MONO       | 077 | SquareLead 1 | 3     | POLY       |
| 014 | Nylon Bass   | 2     | POLY       | 078 | SquareLead 2 | 2     | POLY       |
| 015 | Ac.Upright   | 1     | MONO       | 079 | You and Luck | 2     | MONO       |
| 016 | Wet Fretls   | 1     | MONO       | 080 | Belly Lead   | 4     | POLY       |
| 017 | Fretls Dry   | 2     | POLY       | 081 | WhistlinAtom | 2     | POLY       |
| 018 | Slap Bass 1  | 2     | POLY       | 082 | Edye Boost   | 2     | MONO       |
| 019 | Slap Bass 2  | 1     | MONO       | 083 | MG Solo      | 4     | MONO       |
| 020 | Slap Bass 3  | 1     | MONO       | 084 | FXM Saw Lead | 4     | MONO       |
| 021 | Slap Bass 4  | 2     | POLY       | 085 | Sawteeth     | 3     | MONO       |
| 022 | 4 Pole Bass  | 1     | MONO       | 086 | Smoothe      | 2     | MONO       |
| 023 | Tick Bass    | 4     | MONO       | 087 | MG Lead      | 2     | MONO       |
| 024 | House Bass   | 3     | MONO       | 088 | MG Interval  | 4     | MONO       |
| 025 | Mondo Bass   | 3     | MONO       | 089 | Pulse Lead 1 | 3     | POLY       |
| 026 | Clk AnalogBs | 2     | MONO       | 090 | Pulse Lead 2 | 4     | MONO       |
| 027 | Bass In Face | 2     | POLY       | 091 | Little Devil | 4     | MONO       |
| 028 | 101 Bass     | 2     | MONO       | 092 | Loud SynLead | 4     | MONO       |
| 029 | Noiz Bass    | 2     | MONO       | 093 | Analog Lead  | 2     | MONO       |
| 030 | Super Jup Bs | 2     | POLY       | 094 | 5th Lead     | 2     | MONO       |
| 031 | Occitan Bass | 3     | POLY       | 095 | Flute        | 2     | POLY       |
| 032 | Hugo Bass    | 4     | MONO       | 096 | Piccolo      | 1     | POLY       |
| 033 | Multi Bass   | 2     | POLY       | 097 | VOX Flute    | 4     | POLY       |
| 034 | Moist Bass   | 2     | MONO       | 098 | Air Lead     | 2     | POLY       |
| 035 | BritelowBass | 4     | MONO       | 099 | Pan Pipes    | 2     | POLY       |
| 036 | Untamed Bass | 3     | MONO       | 100 | Airplaaane   | 4     | POLY       |
| 037 | Rubber Bass  | 3     | MONO       | 101 | Taj Mahal    | 1     | POLY       |
| 038 | Stereoww Bs  | 3     | MONO       | 102 | Raya Shaku   | 3     | POLY       |
| 039 | Wonder Bass  | 3     | MONO       | 103 | Oboe mf      | 1     | POLY       |
| 040 | Deep Bass    | 2     | POLY       | 104 | Oboe Express | 2     | POLY       |
| 041 | Super JX Bs  | 2     | MONO       | 105 | Clarinet mp  | 1     | POLY       |
| 042 | W<RED>-Bass  | 4     | POLY       | 106 | ClariExpress | 2     | POLY       |
| 043 | HI-Ring Bass | 3     | POLY       | 107 | Mitzva Split | 4     | POLY       |
| 044 | Euro Bass    | 2     | MONO       | 108 | ChamberWinds | 4     | POLY       |
| 045 | SinusoidRave | 1     | MONO       | 109 | ChamberWoods | 3     | POLY       |
| 046 | Alternative  | 2     | MONO       | 110 | Film Orch    | 4     | POLY       |
| 047 | Acid Line    | 1     | MONO       | 111 | Sop.Sax mf   | 2     | POLY       |
| 048 | Auto TB-303  | 3     | MONO       | 112 | Alto Sax     | 3     | POLY       |
| 049 | Hihat Tekno  | 2     | POLY       | 113 | AltoLead Sax | 3     | POLY       |
| 050 | Velo Tekno 1 | 3     | MONO       | 114 | Tenor Sax    | 3     | POLY       |
| 051 | Raggatronic  | 4     | POLY       | 115 | Baritone Sax | 3     | POLY       |
| 052 | Blade Racer  | 4     | POLY       | 116 | Take A Tenor | 4     | POLY       |
| 053 | S&H Pad      | 1     | POLY       | 117 | Sax Section  | 4     | POLY       |
| 054 | Syncrosonix  | 3     | POLY       | 118 | Bigband Sax  | 4     | POLY       |
| 055 | Fooled Again | 1     | POLY       | 119 | Harmonica    | 2     | POLY       |
| 056 | Alive        | 3     | POLY       | 120 | Harmo Blues  | 2     | POLY       |
| 057 | Velo Tekno 2 | 2     | POLY       | 121 | BluesHarp    | 1     | POLY       |
| 058 | Rezoid       | 4     | POLY       | 122 | Hillbillys   | 4     | POLY       |
| 059 | Raverborg    | 4     | POLY       | 123 | French Bags  | 4     | POLY       |
| 060 | Blow Hit     | 4     | POLY       | 124 | Majestic Tpt | 1     | MONO       |
| 061 | Hammer Bell  | 3     | POLY       | 125 | Voluntare    | 2     | POLY       |
| 062 | Seq Mallet   | 2     | POLY       | 126 | 2Trumpets    | 2     | POLY       |
| 063 | Intentions   | 3     | POLY       | 127 | Tpt Sect     | 4     | POLY       |
| 064 | Pick It      | 3     | POLY       | 128 | Mute TP mod  | 4     | POLY       |

### PC (Preset C Group)

| No. | Name         | Voice | Key Assign | No. | Name         | Voice | Key Assign |
|-----|--------------|-------|------------|-----|--------------|-------|------------|
| 001 | Harmon Mute  | 1     | POLY       | 065 | Harmonicum   | 2     | POLY       |
| 002 | Tp&Sax Sect  | 4     | POLY       | 066 | D-50 Heaven  | 2     | POLY       |
| 003 | Sax+Tp+Tb    | 3     | POLY       | 067 | Afro Horns   | 3     | POLY       |
| 004 | Brass Sect   | 4     | POLY       | 068 | Pop Pad      | 4     | POLY       |
| 005 | Trombone     | 1     | POLY       | 069 | Dreamesque   | 4     | POLY       |
| 006 | Hybrid Bones | 4     | POLY       | 070 | Square Pad   | 4     | POLY       |
| 007 | Noble Horns  | 4     | POLY       | 071 | JP-8 Hollow  | 4     | POLY       |
| 008 | Massed Horns | 3     | POLY       | 072 | JP-8Haunting | 4     | POLY       |
| 009 | Horn Swell   | 4     | POLY       | 073 | Heirborne    | 4     | POLY       |
| 010 | Brass It!    | 4     | POLY       | 074 | Hush Pad     | 4     | POLY       |
| 011 | Brass Attack | 3     | POLY       | 075 | Jet Pad 1    | 2     | POLY       |
| 012 | Archimede    | 3     | POLY       | 076 | Jet Pad 2    | 2     | POLY       |
| 013 | Rugby Horn   | 3     | POLY       | 077 | Phaze Pad    | 3     | POLY       |
| 014 | MKS-80 Brass | 2     | POLY       | 078 | Phaze Str    | 4     | POLY       |
| 015 | True ANALOG  | 2     | POLY       | 079 | Jet Str Ens  | 2     | POLY       |
| 016 | Dark Vox     | 2     | POLY       | 080 | Pivotal Pad  | 4     | POLY       |
| 017 | RandomVowels | 4     | POLY       | 081 | 3D Flanged   | 1     | POLY       |
| 018 | Angels Sing  | 2     | POLY       | 082 | Fantawine    | 4     | POLY       |
| 019 | Pvox Oooze   | 3     | POLY       | 083 | Glassy Pad   | 3     | POLY       |
| 020 | Longing...   | 3     | POLY       | 084 | Moving Glass | 1     | POLY       |
| 021 | Arasian Morn | 4     | POLY       | 085 | Glasswaves   | 3     | POLY       |
| 022 | Beauty Vox   | 3     | POLY       | 086 | Shiny Pad    | 4     | POLY       |
| 023 | Mary-AnneVox | 4     | POLY       | 087 | ShiftedGlass | 2     | POLY       |
| 024 | Belltrey Vox | 4     | POLY       | 088 | Chime Pad    | 3     | POLY       |
| 025 | Vox Panner   | 2     | POLY       | 089 | Spin Pad     | 2     | POLY       |
| 026 | Spaced Voxx  | 4     | POLY       | 090 | Rotary Pad   | 4     | POLY       |
| 027 | Glass Voices | 3     | POLY       | 091 | Dawn 2 Dusk  | 3     | POLY       |
| 028 | Tubular Vox  | 4     | POLY       | 092 | Aurora       | 4     | POLY       |
| 029 | Velo Voxx    | 2     | POLY       | 093 | Strobe Mode  | 4     | POLY       |
| 030 | Wavox        | 3     | POLY       | 094 | Albion       | 2     | POLY       |
| 031 | Doos         | 1     | POLY       | 095 | Running Pad  | 4     | POLY       |
| 032 | Synvox Comps | 4     | POLY       | 096 | Stepped Pad  | 4     | POLY       |
| 033 | Vocal Oohz   | 3     | POLY       | 097 | Random Pad   | 4     | POLY       |
| 034 | LFO Vox      | 1     | POLY       | 098 | SoundtrkDANC | 4     | POLY       |
| 035 | St.Strings   | 2     | POLY       | 099 | Flying Waltz | 4     | POLY       |
| 036 | Warm Strings | 4     | POLY       | 100 | Vanishing    | 1     | POLY       |
| 037 | Somber Str   | 4     | POLY       | 101 | 5th Sweep    | 4     | POLY       |
| 038 | Marcato      | 2     | POLY       | 102 | Phazweep     | 4     | POLY       |
| 039 | Bright Str   | 2     | POLY       | 103 | Big BPF      | 4     | POLY       |
| 040 | String Ens   | 4     | POLY       | 104 | MG Sweep     | 4     | POLY       |
| 041 | TremoloStrng | 2     | POLY       | 105 | CeremonyTimp | 3     | POLY       |
| 042 | Chambers     | 3     | POLY       | 106 | Dyno Toms    | 4     | POLY       |
| 043 | ViolinCello  | 4     | POLY       | 107 | Sands ofTime | 4     | POLY       |
| 044 | Symphonique  | 4     | POLY       | 108 | Inertia      | 4     | POLY       |
| 045 | Film Octaves | 4     | POLY       | 109 | Vektogram    | 4     | POLY       |
| 046 | Film Layers  | 4     | POLY       | 110 | Crash Pad    | 4     | POLY       |
| 047 | Bass Pizz    | 4     | POLY       | 111 | Feedback VOX | 4     | POLY       |
| 048 | Real Pizz    | 3     | POLY       | 112 | Cascade      | 1     | POLY       |
| 049 | Harp On It   | 3     | POLY       | 113 | Shattered    | 2     | POLY       |
| 050 | Harp         | 2     | POLY       | 114 | NextFrontier | 2     | POLY       |
| 051 | JP-8 Str 1   | 2     | POLY       | 115 | Pure Tibet   | 1     | POLY       |
| 052 | JP-8 Str 2   | 3     | POLY       | 116 | Chime Wash   | 4     | POLY       |
| 053 | E-Motion Pad | 4     | POLY       | 117 | Night Shade  | 4     | POLY       |
| 054 | JP-8 Str 3   | 4     | POLY       | 118 | Tortured     | 4     | POLY       |
| 055 | Vintage Orch | 4     | POLY       | 119 | Dissimilate  | 4     | POLY       |
| 056 | JUNO Strings | 3     | POLY       | 120 | Dunes        | 4     | POLY       |
| 057 | Gigantalog   | 4     | POLY       | 121 | Ocean Floor  | 1     | POLY       |
| 058 | PWM Strings  | 3     | POLY       | 122 | Cyber Space  | 3     | POLY       |
| 059 | Warmth       | 2     | POLY       | 123 | Biosphere    | 2     | POLY       |
| 060 | ORBit Pad    | 2     | POLY       | 124 | Variable Run | 4     | POLY       |
| 061 | Deep Strings | 2     | POLY       | 125 | Ice Hall     | 2     | POLY       |
| 062 | Pulsify      | 4     | POLY       | 126 | ComputerRoom | 4     | POLY       |
| 063 | Pulse Pad    | 4     | POLY       | 127 | Inverted     | 4     | POLY       |
| 064 | Greek Power  | 4     | POLY       | 128 | Terminate    | 3     | POLY       |

Voice: number of voice

## PD (Preset D Group)

| No. | Name         | Voice | Key Assign | No. | Name          | Voice | Key Assign |
|-----|--------------|-------|------------|-----|---------------|-------|------------|
| 001 | Echo Piano   | 3     | POLY       | 065 | Civilization  | 3     | POLY       |
| 002 | Upright Pno  | 3     | POLY       | 066 | Mental Chord  | 4     | MONO       |
| 003 | RD-1000      | 3     | POLY       | 067 | House Chord   | 4     | MONO       |
| 004 | Player's EP  | 2     | POLY       | 068 | Sequalog      | 4     | POLY       |
| 005 | D-50 Rhodes  | 4     | POLY       | 069 | Booster Bips  | 2     | POLY       |
| 006 | Innocent EP  | 2     | POLY       | 070 | VintagePlunk  | 4     | MONO       |
| 007 | Echo Rhodes  | 4     | POLY       | 071 | Plik-Plok     | 2     | POLY       |
| 008 | See-Thru EP  | 3     | POLY       | 072 | RingSequence  | 4     | POLY       |
| 009 | FM BellPiano | 3     | POLY       | 073 | Cyber Swing   | 4     | POLY       |
| 010 | Ring E.Piano | 4     | POLY       | 074 | Keep :-)      | 2     | POLY       |
| 011 | Soap Opera   | 1     | POLY       | 075 | Resojuice     | 2     | MONO       |
| 012 | Dirty Organ  | 3     | POLY       | 076 | B'on d'moov!  | 3     | POLY       |
| 013 | Surf's Up!   | 2     | POLY       | 077 | Dist TB-303   | 2     | MONO       |
| 014 | Organesque   | 3     | POLY       | 078 | Temple of JV  | 4     | POLY       |
| 015 | pp Harmonium | 1     | POLY       | 079 | Planet Asia   | 4     | POLY       |
| 016 | PieceOfCheez | 1     | POLY       | 080 | Afterlife     | 3     | POLY       |
| 017 | Harpsy Clav  | 2     | POLY       | 081 | Trancing Pad  | 2     | POLY       |
| 018 | Exotic Velo  | 4     | POLY       | 082 | Pulsatronic   | 3     | POLY       |
| 019 | HolidayCheer | 4     | POLY       | 083 | Cyber Dreams  | 3     | POLY       |
| 020 | Morning Lite | 2     | POLY       | 084 | Warm Pipe     | 1     | MONO       |
| 021 | Prefab Chime | 3     | POLY       | 085 | Pure Pipe     | 2     | POLY       |
| 022 | Belfry Chime | 3     | POLY       | 086 | SH-2000       | 2     | MONO       |
| 023 | Stacc.Heaven | 4     | POLY       | 087 | X...? Whistle | 3     | POLY       |
| 024 | 2.2 Bell Pad | 4     | POLY       | 088 | Jay Vee Solo  | 3     | POLY       |
| 025 | Far East     | 4     | POLY       | 089 | Progresso Ld  | 4     | MONO       |
| 026 | Wire Pad     | 3     | POLY       | 090 | Adrenaline    | 4     | POLY       |
| 027 | PhaseBlipper | 2     | POLY       | 091 | Enlighten     | 4     | POLY       |
| 028 | Sweep Clav   | 3     | POLY       | 092 | Glass Blower  | 3     | POLY       |
| 029 | Glider       | 2     | POLY       | 093 | Earth Blow    | 2     | POLY       |
| 030 | Solo Steel   | 4     | POLY       | 094 | JX SqrCarpet  | 2     | POLY       |
| 031 | DesertCrystl | 4     | POLY       | 095 | Dimensional   | 2     | POLY       |
| 032 | Clear Guitar | 3     | POLY       | 096 | Jupiterings   | 2     | POLY       |
| 033 | Solo Strat   | 3     | POLY       | 097 | Analog Drama  | 3     | POLY       |
| 034 | Feed Me!     | 4     | POLY       | 098 | Rich Dynapad  | 4     | POLY       |
| 035 | Tube Smoke   | 2     | POLY       | 099 | Silky Way     | 2     | POLY       |
| 036 | Creamy       | 2     | POLY       | 100 | Gluey Pad     | 3     | POLY       |
| 037 | Blusey OD    | 2     | POLY       | 101 | BandPass Mod  | 2     | POLY       |
| 038 | Grindstone   | 2     | POLY       | 102 | Soundtraque   | 2     | POLY       |
| 039 | OD 5ths      | 3     | POLY       | 103 | Translucence  | 4     | POLY       |
| 040 | East Europe  | 2     | POLY       | 104 | Darkshine     | 4     | POLY       |
| 041 | Dulcitar     | 4     | POLY       | 105 | D'light       | 2     | POLY       |
| 042 | Atmos Harp   | 4     | POLY       | 106 | December Sky  | 4     | POLY       |
| 043 | Pilgrimage   | 4     | POLY       | 107 | Octapad       | 3     | POLY       |
| 044 | 202 Rude Bs  | 2     | MONO       | 108 | JUNO Power!   | 4     | POLY       |
| 045 | 2pole Bass   | 2     | MONO       | 109 | Spectrum Mod  | 4     | POLY       |
| 046 | 4pole Bass   | 2     | MONO       | 110 | Stringsheen   | 3     | POLY       |
| 047 | Phaser MC    | 2     | POLY       | 111 | GR500 TmpDly  | 2     | POLY       |
| 048 | Miniphaser   | 2     | POLY       | 112 | Mod DirtyWav  | 3     | POLY       |
| 049 | Acid TB      | 1     | MONO       | 113 | Silicon Str   | 4     | POLY       |
| 050 | Full Orchest | 4     | POLY       | 114 | D50FantaPerc  | 3     | POLY       |
| 051 | Str + Winds  | 4     | POLY       | 115 | Rotodreams    | 3     | POLY       |
| 052 | Flute 2080   | 2     | POLY       | 116 | Blue Notes    | 4     | POLY       |
| 053 | Scat Flute   | 2     | POLY       | 117 | RiversOfTime  | 4     | POLY       |
| 054 | Sax Choir    | 4     | POLY       | 118 | Phobos        | 2     | POLY       |
| 055 | Ballad Trump | 4     | POLY       | 119 | 2 0 8 0       | 4     | POLY       |
| 056 | Sm.Brass Grp | 4     | POLY       | 120 | Unearthly     | 4     | POLY       |
| 057 | Royale       | 4     | POLY       | 121 | Glistening    | 4     | POLY       |
| 058 | Brass Mutes  | 2     | POLY       | 122 | Sci-Fi Str    | 3     | POLY       |
| 059 | Breathy Brs  | 3     | POLY       | 123 | Shadows       | 4     | POLY       |
| 060 | 3 Osc Brass  | 3     | POLY       | 124 | Helium Queen  | 4     | MONO       |
| 061 | P5 Polymod   | 2     | POLY       | 125 | Sci-Fi FX x4  | 1     | POLY       |
| 062 | Triumph Brs  | 3     | POLY       | 126 | Perky Noize   | 3     | POLY       |
| 063 | Techno Dream | 3     | POLY       | 127 | Droplet       | 3     | POLY       |
| 064 | Organizer    | 3     | POLY       | 128 | Rain Forest   | 4     | POLY       |

## PE (Preset E Group)

| No. | Name         | Voice | Key Assign | No. | Name          | Voice | Key Assign |
|-----|--------------|-------|------------|-----|---------------|-------|------------|
| 001 | Grand XV     | 4     | POLY       | 065 | St. Choir     | 4     | POLY       |
| 002 | Contemplate  | 2     | POLY       | 066 | SampleThe80s  | 2     | POLY       |
| 003 | Rock Piano   | 2     | POLY       | 067 | Sacred Tree   | 2     | POLY       |
| 004 | RockPiano Ch | 3     | POLY       | 068 | VP330 OctEko  | 2     | POLY       |
| 005 | Pianomonics  | 4     | POLY       | 069 | XV Strings    | 3     | POLY       |
| 006 | Piano+SftPad | 4     | POLY       | 070 | Fat Strings   | 3     | POLY       |
| 007 | WarmVoxPiano | 4     | POLY       | 071 | Dolce p/m/f   | 6     | POLY       |
| 008 | Y2K Concerto | 8     | POLY       | 072 | Sad Strings   | 6     | POLY       |
| 009 | Piano+AirPad | 5     | POLY       | 073 | Lush Strings  | 4     | POLY       |
| 010 | ChoraLeader  | 8     | POLY       | 074 | Strings4Film  | 6     | POLY       |
| 011 | SparklePiano | 6     | POLY       | 075 | Marcato Str   | 4     | POLY       |
| 012 | Retro Rhodes | 3     | POLY       | 076 | End Titles    | 4     | POLY       |
| 013 | Fat Rhodes   | 3     | POLY       | 077 | ChmbrQuartet  | 4     | POLY       |
| 014 | Rhodes Trem  | 2     | POLY       | 078 | ChamberSect.  | 4     | POLY       |
| 015 | Phaser Dyno  | 3     | POLY       | 079 | FullChmbrStr  | 6     | POLY       |
| 016 | Hit Rhodes   | 3     | POLY       | 080 | Tape Strings  | 2     | POLY       |
| 017 | Sweet Tynes  | 4     | POLY       | 081 | Henry VIII    | 8     | POLY       |
| 018 | Pluk Rhodes  | 3     | POLY       | 082 | Prelude       | 4     | POLY       |
| 019 | Rhodes Trip  | 2     | POLY       | 083 | Str&Brs Orch  | 7     | POLY       |
| 020 | AmbiRhodes   | 4     | POLY       | 084 | Hornz         | 5     | POLY       |
| 021 | Rholitzer    | 3     | POLY       | 085 | TudorFanfare  | 4     | POLY       |
| 022 | Wurlie       | 2     | POLY       | 086 | ChamberPlyrs  | 4     | POLY       |
| 023 | FM Delight   | 2     | POLY       | 087 | Flute/Clari   | 2     | POLY       |
| 024 | Cutter Clav  | 2     | POLY       | 088 | Orch Reeds    | 3     | POLY       |
| 025 | Mute Clav D6 | 3     | POLY       | 089 | Dual Flutes   | 3     | POLY       |
| 026 | PhazeWahClav | 6     | POLY       | 090 | Jazzier Flute | 2     | POLY       |
| 027 | St.Harpsichd | 4     | POLY       | 091 | LegatoBamboo  | 4     | MONO       |
| 028 | 3PartInventn | 4     | POLY       | 092 | Ambience Flt  | 4     | POLY       |
| 029 | Soft Perky   | 5     | POLY       | 093 | The Andes     | 1     | POLY       |
| 030 | Fullness     | 5     | POLY       | 094 | Deja Vlute    | 4     | MONO       |
| 031 | Paleface 1   | 2     | POLY       | 095 | Simply Brass  | 2     | POLY       |
| 032 | Paleface 2   | 4     | POLY       | 096 | FullSt Brass  | 5     | POLY       |
| 033 | Soft B       | 2     | POLY       | 097 | Dragnet       | 4     | POLY       |
| 034 | British B    | 4     | POLY       | 098 | NewR&RBrass   | 8     | POLY       |
| 035 | Rocker Org   | 6     | POLY       | 099 | Tower Trumps  | 5     | POLY       |
| 036 | Split B      | 6     | POLY       | 100 | BigBrassBand  | 5     | POLY       |
| 037 | PercInterval | 8     | POLY       | 101 | Lit'BigHornz  | 6     | POLY       |
| 038 | Happy 60s    | 2     | POLY       | 102 | VoyagerBrass  | 3     | POLY       |
| 039 | 96 Years     | 1     | POLY       | 103 | Symph Horns   | 3     | POLY       |
| 040 | Glory Us Rok | 2     | POLY       | 104 | Trombone Atm  | 3     | POLY       |
| 041 | Church Harmn | 4     | POLY       | 105 | XV Trombone   | 2     | POLY       |
| 042 | Cathdr Harmn | 5     | POLY       | 106 | XV Trumpet    | 3     | POLY       |
| 043 | Morph Pad    | 8     | POLY       | 107 | JupiterHorns  | 2     | POLY       |
| 044 | Air Pad      | 3     | POLY       | 108 | Solo SoprSax  | 1     | MONO       |
| 045 | Soft Padding | 2     | POLY       | 109 | Solo AltoSax  | 2     | MONO       |
| 046 | Warmth Pad   | 2     | POLY       | 110 | XV DynoTenor  | 3     | POLY       |
| 047 | ClassicJPpad | 2     | POLY       | 111 | Honker Bari   | 2     | POLY       |
| 048 | Jupiter Str  | 2     | POLY       | 112 | Full Saxz     | 7     | POLY       |
| 049 | Fat Pad      | 4     | POLY       | 113 | Soaring Hrns  | 6     | POLY       |
| 050 | GR700 Pad    | 3     | POLY       | 114 | Glass Orbit   | 3     | POLY       |
| 051 | Paradise     | 3     | POLY       | 115 | 5th Atm /Aft  | 2     | POLY       |
| 052 | Moonchimes   | 3     | POLY       | 116 | Lo-fi Sweep   | 2     | POLY       |
| 053 | SusPed Swap  | 4     | POLY       | 117 | Modular Life  | 4     | POLY       |
| 054 | PhasingPad   | 2     | POLY       | 118 | Oscillations  | 4     | POLY       |
| 055 | Ethereal Str | 4     | POLY       | 119 | Combing       | 2     | POLY       |
| 056 | Velcroad     | 4     | POLY       | 120 | Rolling 5ths  | 4     | POLY       |
| 057 | NothrnLights | 4     | POLY       | 121 | Analogue Str  | 4     | POLY       |
| 058 | Sun Dive     | 7     | POLY       | 122 | Lunar Strngs  | 4     | POLY       |
| 059 | Brite Vox 1  | 4     | POLY       | 123 | BPFsweep Mod  | 3     | POLY       |
| 060 | Brite Vox 2  | 4     | POLY       | 124 | Queen V       | 6     | POLY       |
| 061 | Ooh)Aah Mod  | 4     | POLY       | 125 | SkinnyBounce  | 2     | POLY       |
| 062 | Vocals: Ooh  | 4     | POLY       | 126 | SquareBounce  | 3     | POLY       |
| 063 | Vocals: Scat | 6     | POLY       | 127 | Galactic      | 8     | POLY       |
| 064 | Vocals: Boys | 6     | POLY       | 128 | Powerwiggle   | 3     | POLY       |

Voice: number of voice

## Patch List

### PF (Preset F Group)

| No. | Name         | Voice | Key  | Assign |
|-----|--------------|-------|------|--------|
| 001 | 80s Retrosyn | 2     | POLY |        |
| 002 | Power Stack  | 3     | POLY |        |
| 003 | Don't Jump   | 8     | POLY |        |
| 004 | Big Bubbles  | 3     | POLY |        |
| 005 | X-mod Sweep  | 1     | POLY |        |
| 006 | Bag O' Bones | 6     | POLY |        |
| 007 | AirSoThin    | 2     | POLY |        |
| 008 | Analogical   | 4     | POLY |        |
| 009 | Waspy Pulse  | 2     | POLY |        |
| 010 | Soaring Saws | 6     | MONO |        |
| 011 | Square Roots | 2     | MONO |        |
| 012 | BOG          | 3     | MONO |        |
| 013 | Talking Box  | 3     | MONO |        |
| 014 | Retro Lead   | 2     | MONO |        |
| 015 | LivingInSync | 2     | MONO |        |
| 016 | Leads United | 4     | MONO |        |
| 017 | Dirty Sync   | 2     | MONO |        |
| 018 | DistortaSync | 1     | MONO |        |
| 019 | Blistering   | 2     | MONO |        |
| 020 | Guttural     | 8     | MONO |        |
| 021 | Flyin' High  | 3     | MONO |        |
| 022 | Soft Tooth   | 2     | MONO |        |
| 023 | Soaring Sqr  | 4     | MONO |        |
| 024 | Soaring Sync | 4     | MONO |        |
| 025 | Nasal Spray  | 2     | MONO |        |
| 026 | Lamb Lead    | 2     | MONO |        |
| 027 | Creamer      | 2     | MONO |        |
| 028 | Sine System  | 4     | MONO |        |
| 029 | Soft Nylon   | 4     | POLY |        |
| 030 | Nylozzicato  | 3     | POLY |        |
| 031 | Mutezzicato  | 3     | POLY |        |
| 032 | Hybrid Nylon | 3     | POLY |        |
| 033 | XV SteelGt 1 | 4     | POLY |        |
| 034 | XV SteelGt 2 | 4     | POLY |        |
| 035 | Comp'Steel   | 4     | POLY |        |
| 036 | Double Steel | 8     | POLY |        |
| 037 | Folk Guitar  | 4     | POLY |        |
| 038 | SpanishNight | 5     | POLY |        |
| 039 | Plug n' Play | 2     | POLY |        |
| 040 | Fab 4 Guitar | 4     | POLY |        |
| 041 | Searing Lead | 3     | MONO |        |
| 042 | Punker       | 2     | POLY |        |
| 043 | LouderPlease | 3     | POLY |        |
| 044 | XV Upright   | 1     | POLY |        |
| 045 | XV Ac.Bass   | 4     | POLY |        |
| 046 | LookMaNoFret | 3     | MONO |        |
| 047 | XV Fretless  | 1     | POLY |        |
| 048 | Basic F'less | 1     | MONO |        |
| 049 | 8-str F'less | 2     | POLY |        |
| 050 | Tap Bass     | 1     | POLY |        |
| 051 | Pop Bass     | 1     | POLY |        |
| 052 | P.Bs Chorus  | 4     | MONO |        |
| 053 | TremCho Bs   | 2     | POLY |        |
| 054 | Creamy Bass  | 2     | MONO |        |
| 055 | Buster Bass  | 2     | MONO |        |
| 056 | TB Squelch   | 2     | POLY |        |
| 057 | Ticker Bass  | 4     | MONO |        |
| 058 | Muscle Bass  | 2     | MONO |        |
| 059 | Grounded Bs  | 2     | MONO |        |
| 060 | West End Bs  | 5     | MONO |        |
| 061 | Snap Bass    | 2     | MONO |        |
| 062 | 700 Bassboy  | 3     | MONO |        |
| 063 | 8VCO MonoSyn | 8     | MONO |        |
| 064 | ResoMoist Bs | 4     | MONO |        |

### PG (Preset G Group)

| No. | Name         | Voice | Key  | Assign |
|-----|--------------|-------|------|--------|
| 001 | Power Octs   | 6     | POLY |        |
| 002 | WaterPiano2  | 3     | POLY |        |
| 003 | Swimming EP  | 8     | POLY |        |
| 004 | XV Crystal   | 4     | POLY |        |
| 005 | Cold Roadz   | 4     | POLY |        |
| 006 | Backrhodes   | 3     | POLY |        |
| 007 | Amped Wurlie | 3     | POLY |        |
| 008 | Dirty Wurlie | 4     | POLY |        |
| 009 | Musicbox XV  | 3     | POLY |        |
| 010 | Klubb Organ  | 2     | POLY |        |
| 011 | Drew's Bee   | 3     | POLY |        |
| 012 | Velvet Organ | 2     | POLY |        |
| 013 | Distorted B  | 1     | POLY |        |
| 014 | Radikal B    | 1     | POLY |        |
| 015 | Boogie Organ | 4     | POLY |        |
| 016 | Mood Ringz   | 4     | POLY |        |
| 017 | Wedo-Wodo    | 4     | POLY |        |
| 018 | S.O.S.trings | 4     | POLY |        |
| 019 | Syncronicity | 4     | POLY |        |
| 020 | DanceMachina | 4     | MONO |        |
| 021 | Vox Chopper  | 4     | POLY |        |
| 022 | SlicingSyVox | 2     | POLY |        |
| 023 | PressureDome | 4     | POLY |        |
| 024 | Quasar /Aft  | 4     | POLY |        |
| 025 | Ionizer      | 4     | POLY |        |
| 026 | MilleniumStr | 6     | POLY |        |
| 027 | Bounce Baby! | 1     | POLY |        |
| 028 | Bounce Daddy | 2     | POLY |        |
| 029 | Bounce Mama! | 3     | POLY |        |
| 030 | Bounce Noize | 2     | POLY |        |
| 031 | What a Gate! | 7     | MONO |        |
| 032 | Mini Sequenz | 4     | POLY |        |
| 033 | Slice & Dice | 4     | POLY |        |
| 034 | BrushingSaw1 | 8     | POLY |        |
| 035 | BrushingSaw2 | 8     | POLY |        |
| 036 | Cultivate    | 5     | POLY |        |
| 037 | 5080 Random  | 4     | POLY |        |
| 038 | XV Stepping  | 5     | POLY |        |
| 039 | India Garden | 6     | POLY |        |
| 040 | Belly Pad    | 3     | POLY |        |
| 041 | Spectre      | 4     | POLY |        |
| 042 | SoaringHrns2 | 7     | POLY |        |
| 043 | Sabbath Day  | 4     | POLY |        |
| 044 | XV BlowPad   | 4     | POLY |        |
| 045 | White Arcade | 3     | POLY |        |
| 046 | Borealis     | 4     | POLY |        |
| 047 | OvertoneScan | 4     | POLY |        |
| 048 | Whisper Vox  | 4     | POLY |        |
| 049 | Jupiter 21   | 4     | POLY |        |
| 050 | Filt Strings | 3     | POLY |        |
| 051 | HybStringsXV | 4     | POLY |        |
| 052 | Soft Symphny | 7     | POLY |        |
| 053 | Wood Symphny | 7     | POLY |        |
| 054 | HybOrchestra | 8     | POLY |        |
| 055 | Brassy Symph | 4     | POLY |        |
| 056 | Biggie Brass | 4     | POLY |        |
| 057 | BiggieBrass2 | 5     | POLY |        |
| 058 | LA Sax's     | 4     | POLY |        |
| 059 | Wind Wood    | 4     | POLY |        |
| 060 | Lonely Oboe  | 2     | MONO |        |
| 061 | Harmonica XV | 1     | POLY |        |
| 062 | Tooters Lead | 3     | POLY |        |
| 063 | Digi Phased  | 4     | POLY |        |
| 064 | Synth Ethics | 4     | POLY |        |

| No. | Name          | Voice | Key  | Assign |
|-----|---------------|-------|------|--------|
| 065 | Harm is Fine  | 3     | POLY |        |
| 066 | D-2000        | 4     | POLY |        |
| 067 | Ackward East  | 4     | POLY |        |
| 068 | Powersoaker   | 4     | MONO |        |
| 069 | Mean Thing    | 2     | MONO |        |
| 070 | Jet Sync      | 2     | MONO |        |
| 071 | Crying Solo   | 2     | POLY |        |
| 072 | Southern Fry  | 2     | POLY |        |
| 073 | Strum Distrt  | 2     | POLY |        |
| 074 | Match Drive   | 3     | POLY |        |
| 075 | Stacked       | 3     | POLY |        |
| 076 | 2-Stack Over  | 2     | POLY |        |
| 077 | COSM Searing  | 3     | MONO |        |
| 078 | COSM Loud Gt  | 3     | POLY |        |
| 079 | Blue Mutes    | 2     | POLY |        |
| 080 | Metal 5150    | 3     | POLY |        |
| 081 | Circuit Phase | 2     | POLY |        |
| 082 | Alt Dist Gtr  | 2     | POLY |        |
| 083 | So nice!      | 8     | POLY |        |
| 084 | Punch Bass    | 1     | MONO |        |
| 085 | COSM Bass     | 4     | POLY |        |
| 086 | Stream Bell   | 5     | POLY |        |
| 087 | Shuffle Bell  | 4     | POLY |        |
| 088 | Echo Vibe     | 2     | POLY |        |
| 089 | Tremolo Vibe  | 2     | POLY |        |
| 090 | True Vibe     | 2     | POLY |        |
| 091 | Marimbula     | 3     | POLY |        |
| 092 | Hit Bitz      | 4     | POLY |        |
| 093 | 80s LoFi Hit  | 4     | POLY |        |
| 094 | Auto Chord    | 4     | POLY |        |
| 095 | 3rdTeenChord  | 4     | POLY |        |
| 096 | Bend a Chord  | 4     | POLY |        |
| 097 | DiscreteChrd  | 4     | POLY |        |
| 098 | Ambi Voices   | 8     | POLY |        |
| 099 | Say Yeah !    | 2     | POLY |        |
| 100 | Xcuse me      | 2     | POLY |        |
| 101 | 5ths in 4ths  | 4     | POLY |        |
| 102 | Pretty Ugly   | 2     | POLY |        |
| 103 | Con Sequence  | 2     | POLY |        |
| 104 | BermudaShort  | 2     | POLY |        |
| 105 | Saw n' 202    | 2     | POLY |        |
| 106 | Technoheadz   | 4     | POLY |        |
| 107 | Boss'd Synth  | 4     | MONO |        |
| 108 | Cross Fire    | 2     | POLY |        |
| 109 | Techno Cave   | 2     | MONO |        |
| 110 | Generator     | 4     | MONO |        |
| 111 | GenderBender  | 4     | MONO |        |
| 112 | Xtremities    | 4     | MONO |        |
| 113 | AM 05:59      | 4     | MONO |        |
| 114 | Happy Brass   | 8     | POLY |        |
| 115 | Runaway Rez   | 2     | POLY |        |
| 116 | Droplets      | 4     | POLY |        |
| 117 | Indian Guru   | 4     | POLY |        |
| 118 | Cosmic Rain   | 1     | POLY |        |
| 119 | Trying Winds  | 3     | POLY |        |
| 120 | Space Whiz    | 2     | POLY |        |
| 121 | DigitalDrone  | 2     | POLY |        |
| 122 | Space Race    | 1     | POLY |        |
| 123 | Bowed Bell    | 2     | POLY |        |
| 124 | X-Tension     | 2     | POLY |        |
| 125 | DUB!!!        | 4     | POLY |        |
| 126 | Dream Diver   | 6     | POLY |        |
| 127 | Flashback     | 4     | POLY |        |
| 128 | St.LoFiNoise  | 2     | POLY |        |

Voice: number of voice

**PH (Preset H Group)**

| No. | Name         | Voice | Key Assign | No. | Name         | Voice | Key Assign |
|-----|--------------|-------|------------|-----|--------------|-------|------------|
| 001 | Hall Grand   | 2     | POLY       | 065 | Froggy Bass  | 1     | MONO       |
| 002 | Warm pF Mix  | 6     | POLY       | 066 | Tape Orch    | 4     | POLY       |
| 003 | R&Ballad Mix | 6     | POLY       | 067 | Tekno Pizz   | 1     | POLY       |
| 004 | PingE Piano  | 2     | POLY       | 068 | TechnoSurf 1 | 2     | POLY       |
| 005 | Hybrid EP    | 3     | POLY       | 069 | TechnoSurf 2 | 2     | POLY       |
| 006 | Wurly Gum    | 2     | POLY       | 070 | Double Helix | 4     | POLY       |
| 007 | Wurli World  | 3     | POLY       | 071 | Rhythm Sync  | 1     | POLY       |
| 008 | Voxfuzz Klav | 4     | POLY       | 072 | TMT Scanner  | 4     | POLY       |
| 009 | Light Keys   | 3     | POLY       | 073 | Complex Echo | 1     | POLY       |
| 010 | Digibell Pad | 4     | POLY       | 074 | Groovedigger | 4     | POLY       |
| 011 | IslandSpirit | 3     | POLY       | 075 | 20.000 miles | 5     | MONO       |
| 012 | Ambient Wood | 2     | POLY       | 076 | Vortex       | 4     | POLY       |
| 013 | VeloClikOrgn | 2     | POLY       | 077 | man@work     | 4     | MONO       |
| 014 | Verby Organ  | 2     | POLY       | 078 | XVoCode      | 4     | POLY       |
| 015 | Wedding Mass | 5     | POLY       | 079 | Auto Riff    | 2     | POLY       |
| 016 | Blues Harp   | 2     | POLY       | 080 | Digisquelch  | 4     | POLY       |
| 017 | Thick Steel  | 4     | POLY       | 081 | TripTheAlarm | 4     | POLY       |
| 018 | SteelRelease | 4     | POLY       | 082 | Aftertouchin | 4     | POLY       |
| 019 | Two+Ensemble | 5     | POLY       | 083 | Throbulax    | 2     | POLY       |
| 020 | Harmless     | 2     | POLY       | 084 | KeysEnsemble | 6     | POLY       |
| 021 | Swell Strat  | 1     | POLY       | 085 | Cheepy Synth | 2     | POLY       |
| 022 | StratSeq'nce | 4     | POLY       | 086 | Funky Tube   | 1     | POLY       |
| 023 | Cutting X    | 4     | MONO       | 087 | Hydrogen     | 4     | POLY       |
| 024 | Hurtin'Tubes | 3     | POLY       | 088 | Promenade    | 3     | POLY       |
| 025 | Stringless   | 4     | POLY       | 089 | Ray Tracer   | 2     | POLY       |
| 026 | Stick Chopz  | 4     | POLY       | 090 | Skinny       | 2     | POLY       |
| 027 | Fundamental  | 3     | POLY       | 091 | Dream 2002   | 3     | POLY       |
| 028 | Brash Bass   | 2     | POLY       | 092 | DrawbarHeavn | 4     | POLY       |
| 029 | ChamberQrt.1 | 4     | POLY       | 093 | Lo-fiBellPad | 4     | POLY       |
| 030 | Lead 4x Vlns | 4     | POLY       | 094 | GemniStrings | 5     | POLY       |
| 031 | BatonStrings | 3     | POLY       | 095 | Down2Earth   | 7     | POLY       |
| 032 | UltraSmooth  | 2     | POLY       | 096 | Silk Road    | 4     | POLY       |
| 033 | Hold A Chord | 6     | POLY       | 097 | Mr.Swirly    | 4     | POLY       |
| 034 | My Orchestra | 4     | POLY       | 098 | MetaXV       | 8     | POLY       |
| 035 | SwellEnsembl | 4     | POLY       | 099 | FloatingVox  | 3     | POLY       |
| 036 | Valve Job    | 4     | POLY       | 100 | Spread Pad   | 2     | POLY       |
| 037 | T8 Brass     | 3     | POLY       | 101 | Aliastrings  | 4     | POLY       |
| 038 | FatSynBrass  | 4     | POLY       | 102 | GlobalWarmup | 4     | POLY       |
| 039 | Ambient Sax  | 4     | MONO       | 103 | 2.2 Strings  | 5     | POLY       |
| 040 | Swingin'Bari | 3     | POLY       | 104 | Aftermath    | 4     | POLY       |
| 041 | Saw Grits    | 1     | MONO       | 105 | 11th Space   | 7     | POLY       |
| 042 | JD Multi Ld  | 1     | MONO       | 106 | Cloud 9      | 5     | POLY       |
| 043 | Over the top | 2     | MONO       | 107 | Traffic Pad  | 4     | POLY       |
| 044 | Try this!    | 2     | MONO       | 108 | Nanolog Pad  | 4     | POLY       |
| 045 | BoutiqueSine | 1     | POLY       | 109 | Etheraaahl   | 2     | POLY       |
| 046 | Drifter      | 6     | POLY       | 110 | Pipe Dream   | 4     | MONO       |
| 047 | Enchanted XV | 3     | MONO       | 111 | Cairo lead   | 3     | POLY       |
| 048 | Water Tubes  | 6     | POLY       | 112 | Lochscapes   | 2     | POLY       |
| 049 | Waterfront   | 5     | POLY       | 113 | Celtic Song  | 4     | POLY       |
| 050 | Peking Opera | 7     | POLY       | 114 | Blown Str.   | 2     | POLY       |
| 051 | LegatoJupitr | 1     | MONO       | 115 | Mind Games   | 4     | POLY       |
| 052 | Atlantis     | 5     | POLY       | 116 | BadJuju      | 7     | POLY       |
| 053 | LF Comb Hit  | 4     | POLY       | 117 | Eleanor      | 2     | POLY       |
| 054 | Backspinner  | 5     | POLY       | 118 | RadioHymn    | 3     | POLY       |
| 055 | Tape Q       | 4     | POLY       | 119 | Miasma       | 1     | POLY       |
| 056 | Technogrunge | 3     | POLY       | 120 | SubmarinBand | 7     | POLY       |
| 057 | Chordbender  | 4     | POLY       | 121 | I Will Lead  | 8     | POLY       |
| 058 | Dance Zipper | 4     | MONO       | 122 | LatheOfHeavn | 8     | POLY       |
| 059 | 5th Element  | 4     | POLY       | 123 | CrystalGlass | 1     | POLY       |
| 060 | Fuzzy Logic  | 2     | POLY       | 124 | Upwind Glata | 4     | POLY       |
| 061 | Sproing      | 2     | POLY       | 125 | Thor's Drums | 4     | POLY       |
| 062 | McThrob      | 2     | POLY       | 126 | TempoMadness | 4     | POLY       |
| 063 | Space Bassed | 4     | POLY       | 127 | GenerationXV | 4     | POLY       |
| 064 | Vocovox Wave | 1     | MONO       | 128 | Wedding Gig  | 4     | POLY       |

Voice: number of voice

## Patch List

### GM (GM2 Group)

| No. | Name         | Voice | LSB | PC | No. | Name         | Voice | LSB | PC | No. | Name         | Voice | LSB | PC  | No. | Name         | Voice | LSB | PC  |
|-----|--------------|-------|-----|----|-----|--------------|-------|-----|----|-----|--------------|-------|-----|-----|-----|--------------|-------|-----|-----|
| 001 | Piano 1      | 4     | 0   | 1  | 065 | Chorus Gt.   | 2     | 1   |    | 129 | French Horns | 2     | 0   | 61  | 193 | Sitar        | 1     | 0   | 105 |
| 002 | Piano 1w     | 2     | 1   |    | 066 | Mid Tone GTR | 1     | 2   |    | 130 | Fr.Horn 2    | 2     | 1   |     | 194 | Sitar 2      | 2     | 1   |     |
| 003 | European Pf  | 1     | 2   |    | 067 | Muted Gt.    | 1     | 0   | 29 | 131 | Brass 1      | 3     | 0   | 62  | 195 | Banjo        | 1     | 0   | 106 |
| 004 | Piano 2      | 4     | 0   | 2  | 068 | Funk Pop     | 1     | 1   |    | 132 | Brass 2      | 2     | 1   |     | 196 | Shamisen     | 1     | 0   | 107 |
| 005 | Piano 2w     | 1     | 1   |    | 069 | Funk Gt.2    | 2     | 2   |    | 133 | Synth Brass1 | 2     | 0   | 63  | 197 | Koto         | 2     | 0   | 108 |
| 006 | Piano 3      | 1     | 0   | 3  | 070 | Jazz Man     | 2     | 3   |    | 134 | Pro Brass    | 2     | 1   |     | 198 | Taisho Koto  | 1     | 1   |     |
| 007 | Piano 3w     | 1     | 1   |    | 071 | Overdrive Gt | 2     | 0   | 30 | 135 | Oct SynBrass | 2     | 2   |     | 199 | Kalimba      | 1     | 0   | 109 |
| 008 | Honky-tonk   | 2     | 0   | 4  | 072 | Guitar Pinch | 2     | 1   |    | 136 | Jump Brass   | 3     | 3   |     | 200 | Bagpipe      | 2     | 0   | 110 |
| 009 | Honky-tonk 2 | 2     | 1   |    | 073 | DistortionGt | 2     | 0   | 31 | 137 | Synth Brass2 | 2     | 0   | 64  | 201 | Fiddle       | 1     | 0   | 111 |
| 010 | E.Piano 1    | 2     | 0   | 5  | 074 | Feedback Gt. | 2     | 1   |    | 138 | SynBrass sfz | 2     | 1   |     | 202 | Shanai       | 1     | 0   | 112 |
| 011 | St.Soft EP   | 2     | 1   |    | 075 | Dist Rtm GTR | 2     | 2   |    | 139 | Velo Brass 1 | 2     | 2   |     | 203 | Tinkle Bell  | 3     | 0   | 113 |
| 012 | FM+SA EP     | 2     | 2   |    | 076 | Gt.Harmonics | 1     | 0   | 32 | 140 | Soprano Sax  | 1     | 0   | 65  | 204 | Agogo        | 1     | 0   | 114 |
| 013 | Wurlly       | 2     | 3   |    | 077 | Gt. Feedback | 1     | 1   |    | 141 | Alto Sax     | 1     | 0   | 66  | 205 | Steel Drums  | 1     | 0   | 115 |
| 014 | E.Piano 2    | 2     | 0   | 6  | 078 | Acoustic Bs. | 1     | 0   | 33 | 142 | Tenor Sax    | 2     | 0   | 67  | 206 | Woodblock    | 1     | 0   | 116 |
| 015 | Detuned EP 2 | 2     | 1   |    | 079 | Fingered Bs. | 1     | 0   | 34 | 143 | Baritone Sax | 1     | 0   | 68  | 207 | Castanets    | 1     | 1   |     |
| 016 | St.FM EP     | 2     | 2   |    | 080 | Finger Slap  | 2     | 1   |    | 144 | Oboe         | 2     | 0   | 69  | 208 | Taiko        | 3     | 0   | 117 |
| 017 | EP Legend    | 2     | 3   |    | 081 | Picked Bass  | 1     | 0   | 35 | 145 | English Horn | 1     | 0   | 70  | 209 | Concert BD   | 2     | 1   |     |
| 018 | EP Phase     | 2     | 4   |    | 082 | Fretless Bs. | 1     | 0   | 36 | 146 | Bassoon      | 1     | 0   | 71  | 210 | Melo. Tom 1  | 1     | 0   | 118 |
| 019 | Harpichord   | 1     | 0   | 7  | 083 | Slap Bass 1  | 1     | 0   | 37 | 147 | Clarinet     | 1     | 0   | 72  | 211 | Melo. Tom 2  | 1     | 1   |     |
| 020 | Coupled Hps. | 2     | 1   |    | 084 | Slap Bass 2  | 2     | 0   | 38 | 148 | Piccolo      | 1     | 0   | 73  | 212 | Synth Drum   | 2     | 0   | 119 |
| 021 | Harpsi.w     | 1     | 2   |    | 085 | Synth Bass 1 | 1     | 0   | 39 | 149 | Flute        | 1     | 0   | 74  | 213 | 808 Tom      | 2     | 1   |     |
| 022 | Harpsi.o     | 2     | 3   |    | 086 | SynthBass101 | 1     | 1   |    | 150 | Recorder     | 1     | 0   | 75  | 214 | Elec Perc    | 1     | 2   |     |
| 023 | Clav.        | 1     | 0   | 8  | 087 | Acid Bass    | 1     | 2   |    | 151 | Pan Flute    | 1     | 0   | 76  | 215 | Reverse Cym. | 1     | 0   | 120 |
| 024 | Pulse Clav   | 1     | 1   |    | 088 | Clavi Bass   | 2     | 3   |    | 152 | Bottle Blow  | 2     | 0   | 77  | 216 | Gt.FretNoise | 1     | 0   | 121 |
| 025 | Celesta      | 1     | 0   | 9  | 089 | Hammer       | 2     | 4   |    | 153 | Shakuhachi   | 2     | 0   | 78  | 217 | Gt.Cut Noise | 1     | 1   |     |
| 026 | Glockenspiel | 1     | 0   | 10 | 090 | Synth Bass 2 | 2     | 0   | 40 | 154 | Whistle      | 1     | 0   | 79  | 218 | String Slap  | 1     | 2   |     |
| 027 | Music Box    | 1     | 0   | 11 | 091 | Beef FM Bass | 2     | 1   |    | 155 | Ocarina      | 2     | 0   | 80  | 219 | Breath Noise | 1     | 0   | 122 |
| 028 | Vibraphone   | 2     | 0   | 12 | 092 | RubberBass 2 | 2     | 2   |    | 156 | Square Wave  | 2     | 0   | 81  | 220 | Fl.Key Click | 1     | 1   |     |
| 029 | Vibraphone w | 2     | 1   |    | 093 | Attack Pulse | 1     | 3   |    | 157 | MG Square    | 1     | 1   |     | 221 | Seashore     | 1     | 0   | 123 |
| 030 | Marimba      | 1     | 0   | 13 | 094 | Violin       | 1     | 0   | 41 | 158 | 2600 Sine    | 1     | 2   |     | 222 | Rain         | 1     | 1   |     |
| 031 | Marimba w    | 1     | 1   |    | 095 | Slow Violin  | 1     | 1   |    | 159 | Saw Wave     | 2     | 0   | 82  | 223 | Thunder      | 1     | 2   |     |
| 032 | Xylophone    | 1     | 0   | 14 | 096 | Viola        | 1     | 0   | 42 | 160 | OB2 Saw      | 1     | 1   |     | 224 | Wind         | 1     | 3   |     |
| 033 | Tubular-bell | 1     | 0   | 15 | 097 | Cello        | 1     | 0   | 43 | 161 | Doctor Solo  | 2     | 2   |     | 225 | Stream       | 2     | 4   |     |
| 034 | Church Bell  | 1     | 1   |    | 098 | Contrabass   | 1     | 0   | 44 | 162 | Natural Lead | 2     | 3   |     | 226 | Bubble       | 2     | 5   |     |
| 035 | Carillon     | 1     | 2   |    | 099 | Tremolo Str  | 1     | 0   | 45 | 163 | SequencedSaw | 2     | 4   |     | 227 | Bird         | 2     | 0   | 124 |
| 036 | Santur       | 1     | 0   | 16 | 100 | PizzicatoStr | 1     | 0   | 46 | 164 | Syn.Calliope | 2     | 0   | 83  | 228 | Dog          | 1     | 1   |     |
| 037 | Organ 1      | 2     | 0   | 17 | 101 | Harp         | 1     | 0   | 47 | 165 | Chiffer Lead | 2     | 0   | 84  | 229 | Horse-Gallop | 1     | 2   |     |
| 038 | Trem. Organ  | 2     | 1   |    | 102 | Yang Qin     | 2     | 1   |    | 166 | Charang      | 2     | 0   | 85  | 230 | Bird 2       | 1     | 3   |     |
| 039 | 60's Organ 1 | 1     | 2   |    | 103 | Timpani      | 1     | 0   | 48 | 167 | Wire Lead    | 2     | 1   |     | 231 | Telephone 1  | 1     | 0   | 125 |
| 040 | 70's E.Organ | 2     | 3   |    | 104 | Strings      | 2     | 0   | 49 | 168 | Solo Vox     | 2     | 0   | 86  | 232 | Telephone 2  | 1     | 1   |     |
| 041 | Organ 2      | 2     | 0   | 18 | 105 | Orchestra    | 3     | 1   |    | 169 | 5th Saw Wave | 2     | 0   | 87  | 233 | DoorCreaking | 1     | 2   |     |
| 042 | Chorus Or.2  | 2     | 1   |    | 106 | 60s Strings  | 2     | 2   |    | 170 | Bass & Lead  | 2     | 0   | 88  | 234 | Door         | 1     | 3   |     |
| 043 | Perc. Organ  | 2     | 2   |    | 107 | Slow Strings | 1     | 0   | 50 | 171 | Delayed Lead | 2     | 1   |     | 235 | Scratch      | 2     | 4   |     |
| 044 | Organ 3      | 2     | 0   | 19 | 108 | Syn.Strings1 | 2     | 0   | 51 | 172 | Fantasia     | 2     | 0   | 89  | 236 | Wind Chimes  | 2     | 5   |     |
| 045 | Church Org.1 | 1     | 0   | 20 | 109 | Syn.Strings3 | 2     | 1   |    | 173 | Warm Pad     | 1     | 0   | 90  | 237 | Helicopter   | 2     | 0   | 126 |
| 046 | Church Org.2 | 2     | 1   |    | 110 | Syn.Strings2 | 2     | 0   | 52 | 174 | Sine Pad     | 2     | 1   |     | 238 | Car-Engine   | 1     | 1   |     |
| 047 | Church Org.3 | 2     | 2   |    | 111 | Choir Aahs   | 2     | 0   | 53 | 175 | Polysynth    | 2     | 0   | 91  | 239 | Car-Stop     | 1     | 2   |     |
| 048 | Reed Organ   | 1     | 0   | 21 | 112 | Chorus Aahs  | 2     | 1   |    | 176 | Space Voice  | 2     | 0   | 92  | 240 | Car-Pass     | 1     | 3   |     |
| 049 | Puff Organ   | 2     | 1   |    | 113 | Voice Oohs   | 1     | 0   | 54 | 177 | Itopia       | 2     | 1   |     | 241 | Car-Crash    | 2     | 4   |     |
| 050 | Accordion Fr | 2     | 0   | 22 | 114 | Humming      | 2     | 1   |    | 178 | Bowed Glass  | 3     | 0   | 93  | 242 | Siren        | 1     | 5   |     |
| 051 | Accordion It | 2     | 1   |    | 115 | SynVox       | 1     | 0   | 55 | 179 | Metal Pad    | 3     | 0   | 94  | 243 | Train        | 1     | 6   |     |
| 052 | Harmonica    | 1     | 0   | 23 | 116 | Analog Voice | 1     | 1   |    | 180 | Halo Pad     | 2     | 0   | 95  | 244 | Jetplane     | 2     | 7   |     |
| 053 | Bandoneon    | 2     | 0   | 24 | 117 | OrchestraHit | 2     | 0   | 56 | 181 | Sweep Pad    | 1     | 0   | 96  | 245 | Starship     | 2     | 8   |     |
| 054 | Nylon-str.Gt | 1     | 0   | 25 | 118 | Bass Hit     | 2     | 1   |    | 182 | Ice Rain     | 2     | 0   | 97  | 246 | Burst Noise  | 2     | 9   |     |
| 055 | Ukulele      | 1     | 1   |    | 119 | 6th Hit      | 2     | 2   |    | 183 | Soundtrack   | 2     | 0   | 98  | 247 | Applause     | 2     | 0   | 127 |
| 056 | Nylon Gt.o   | 2     | 2   |    | 120 | Euro Hit     | 2     | 3   |    | 184 | Crystal      | 2     | 0   | 99  | 248 | Laughing     | 1     | 1   |     |
| 057 | Nylon Gt.2   | 2     | 3   |    | 121 | Trumpet      | 1     | 0   | 57 | 185 | Syn Mallet   | 1     | 1   |     | 249 | Screaming    | 1     | 2   |     |
| 058 | Steel-str.Gt | 1     | 0   | 26 | 122 | Dark Trumpet | 1     | 1   |    | 186 | Atmosphere   | 2     | 0   | 100 | 250 | Punch        | 1     | 3   |     |
| 059 | 12-str.Gt    | 2     | 1   |    | 123 | Trombone     | 1     | 0   | 58 | 187 | Brightness   | 2     | 0   | 101 | 251 | Heart Beat   | 1     | 4   |     |
| 060 | Mandolin     | 2     | 2   |    | 124 | Trombone 2   | 1     | 1   |    | 188 | Goblin       | 2     | 0   | 102 | 252 | Footsteps    | 1     | 5   |     |
| 061 | Steel + Body | 2     | 3   |    | 125 | Bright Tb    | 1     | 2   |    | 189 | Echo Drops   | 1     | 0   | 103 | 253 | Gun Shot     | 1     | 0   | 128 |
| 062 | Jazz Gt.     | 1     | 0   | 27 | 126 | Tuba         | 1     | 0   | 59 | 190 | Echo Bell    | 2     | 1   |     | 254 | Machine Gun  | 1     | 1   |     |
| 063 | Pedal Steel  | 1     | 1   |    | 127 | MutedTrumpet | 1     | 0   | 60 | 191 | Echo Pan     | 2     | 2   |     | 255 | Lasergun     | 1     | 2   |     |
| 064 | Clean Gt.    | 1     | 0   | 28 | 128 | MuteTrumpet2 | 1     | 1   |    | 192 | Star Theme   | 2     | 0   | 104 | 256 | Explosion    | 2     | 3   |     |

Voice: number of voice    LSB: Bank Select LSB, MSB is all 121    PC: Program Change Number    Key Assign: all POLY

# Rhythm Set List

## US (User Group)

| Note No. | 001<br>R&B Kit 1 | 002<br>House Kit | 003<br>XV WayHipKit | 004<br>XV Jazz Kit |
|----------|------------------|------------------|---------------------|--------------------|
| 28       | Dance Kick       | House Kick 6     | 808 Kick            | JazzDry Kick       |
| 29       | Dry Kick         | House Kick 5     | Dry Kick            | Pillow Kick        |
| 30       | R&B1 SN Roll     | House CIHH 3     | WHip Sweep          | Jazz Swish         |
| 31       | Hybrid Kick      | House Kick 4     | Noisy Kick          | Hybrid Kick2       |
| 32       | R&B1 SN Ghst     | Reso Stick       | WHip RimShot        | Snare Ghost        |
| 33       | Round Kick       | House Kick 3     | Hybrid Kick         | MpLmtr Kick        |
| 34       | R&B 1 PdHH       | House OpHH 2     | WHip PdHH           | Jazz PdHH          |
| 35       | R&B 1 Kick 2     | House Kick 2     | WHip OldKick        | JazzDry Kick       |
| C2       | R&B 1 Kick 1     | House Kick 1     | WHip 909Kick        | Jazz Kick          |
| 37       | R&B 1 Stick      | House Stick      | WHip Stik           | Dry Stick 2        |
| 38       | R&B 1 SN 1       | House SN 1       | WHip 70s Snr        | Jazz SN            |
| 39       | Snare Ghost      | House Claps      | WHip Clap           | Snare Ghost        |
| 40       | R&B 1 SN 2       | House SN 2       | WHip Snare          | Jazz Rim           |
| 41       | R&B 1 Tom L      | House NzTomL     | SciHip Tom L        | Jazz Tom L         |
| 42       | R&B 1 CIHH 1     | House CIHH 1     | WHip CIHH 1         | Jazz CIHH1         |
| 43       | Rock Flm L       | 808 Tom L        | WHip Tom L          | Jazz Flm L         |
| 44       | R&B 1 CIHH 2     | House CIHH 2     | WHip CIHH 2         | Jazz CIHH2         |
| 45       | R&B 1 Tom M      | House NzTomM     | SciHip Tom M        | Jazz Tom M         |
| 46       | R&B 1 OpHH       | House OpHH       | WHip Op HH          | Jazz OpHH          |
| 47       | Rock Flm M       | 808 Tom M        | WHip Tom M          | Jazz Flm M         |
| C3       | R&B 1 Tom H      | House NzTomH     | SciHip Tom H        | Jazz Tom H         |
| 49       | R&B 1 CrCym1     | House CrCym      | Crash Cymbal        | Jazz CrCym         |
| 50       | Rock Flm H       | 808 Tom H        | WHip Tom H          | Jazz Flm H         |
| 51       | Rock RdCym1      | House FbkCym     | Rock RdCym 1        | Jazz RdCym         |
| 52       | R&B 1 CrCym2     | House SN 3       | Rock CrCym 1        | Rock RdCym1        |
| 53       | Rock RdCym2      | House FSnaps     | Rock RdCym 2        | Rock RdCym2        |
| 54       | Tambourine 1     | House CIHH 4     | Tambourine          | Tambourine 1       |
| 55       | Rock CrCym2      | House Cowbel     | Rock CrCym 2        | Crash 1            |
| 56       | Cowbell Lo       | House CIHH 5     | LoFiCowbell1        | Cowbell Lo         |
| 57       | Crash 1          | House WBlock     | Crash               | Crash 2            |
| 58       | Cowbell Hi       | House OpHH 3     | LoFiCowbell2        | Cowbell Hi         |
| 59       | Ride Bell        | House Claps2     | Ride Bell           | Ride Bell          |
| C4       | Bongo Hi         | House Cabasa     | Cga Mute Hi         | Cga Mute Hi        |
| 61       | Bongo Lo         | House WCrak      | Cga Mute Lo         | Cga Mute Lo        |
| 62       | Cga Mute Hi      | House VoxNz      | LoFi Cga Slp        | Cga Slap           |
| 63       | Cga Open Hi      | House Kick 7     | LoFi Cga Hi         | Cga Open Hi        |
| 64       | Cga Open Lo      | Timp 3           | LoFi Cga Lo         | Cga Open Lo        |
| 65       | Timbale Hi       | House Bird       | El.TimbaleHi        | Timbale Hi         |
| 66       | Timbale Lo       | House Gun        | El.TimbaleLo        | Timbale Lo         |
| 67       | R&B 1 AgBel1     | House FBell      | El.Agogo Hi         | AgogoBellsHi       |
| 68       | R&B 1 AgBel2     | House Rattle     | El.Agogo Lo         | AgogoBellsLo       |
| 69       | R&B 1 AgBel3     | House RvOHit     | NoisyCabasa1        | Cabasa Up          |
| 70       | Maracas          | House Noize1     | Nz Blip             | Maracas            |
| 71       | 606 Cl HiHat     | House Noize2     | Digi Pulse 1        | ShortWhistle       |
| C5       | 606 Cl HiHat     | House BongoL     | Digi Pulse 2        | Long Whistle       |
| 73       | 606 Op HiHat     | House BongoH     | LoFi Guiro          | Short Guiro        |
| 74       | Long Guiro       | House Tambrn     | WHip Noise 1        | Long Guiro         |
| 75       | Claves           | House Heart      | WHip Noise 2        | Claves             |
| 76       | Wood BlockHi     | House CgaSlp     | WHip Noise 3        | WoodBlock Hi       |
| 77       | Wood BlockLo     | House CgMute     | WHip Noise 4        | WoodBlock Lo       |
| 78       | R&B 1 Pizz       | House Tri        | Digi Tamb. 1        | Mute Cuica         |
| 79       | R&B 1 Gmlan1     | House Vibra      | Digi Tamb. 2        | Open Cuica         |
| 80       | R&B 1 Gmlan2     | House FXLoop     | Mute Triangl        | Mute Triangl       |
| 81       | R&B 1 BtlHit     | House Aplase     | Open Triangl        | Open Triangl       |
| 82       | R&B 1 Thrill     | House Chord      | NoisyCabasa2        | Cabasa Cut         |
| 83       | R&B 1 ThrillH    | House OrcHit     | Nz Spectrum         | Spectrum           |
| C6       | 808 SN           | House Spectr     | LoFi Block          | Wind Chimes        |
| 85       | R&B 1 WdBlk      | House Train      | Rattle Block        | Wood Block         |
| 86       | R&B 1 CgSlap     | House StrSip     | Steps               | Mute Surdo         |
| 87       | Dry Tom L        | House Crunch     | WHip Noise 5        | Open Surdo         |
| 88       | Lite Kick        | House Tel2       | Creak               | Lite Kick          |
| 89       | Hybrid Kick2     | House Bubble     | Bubble              | Hybrid Kick2       |
| 90       | Old Kick         | Bird             | Door Slam           | Old Kick           |
| 91       | Pop Voice        | House Gun 2      | Sci Punch           | Pop Voice          |
| 92       | Wind Agogo       | House Metro      | Noise Fall          | Wind Agogo         |
| 93       | R&B 1 OpHH       | House BakHit     | WHip Noise 6        | Op HiHat 2         |
| 94       | Anklungs         | House TekHit     | WHip Noise 7        | Anklungs           |
| 95       | R&B 1 OpHH       | House SNRoll     | Org Click           | Op HiHat 2         |
| C7       | Metronome 2      | House Loop       | Metronome 2         | Metronome 2        |
| 97       | R8 Click         | R8 Click         | R8 Click            | R8 Click           |
| 98       | Metronome 1      | Metronome 1      | Metronome 1         | Metronome 1        |
| 99       | R&B 1 HClaps     | Hand Claps       | Hand Claps          | Hand Claps         |
| 100      | R&B 1 CrCym1     | House Tom2 L     | ----                | ----               |
| 101      | Rock RdCym2      | House Tom2 M     | ----                | ----               |
| 102      | Tambourine 1     | House Rim        | ----                | ----               |
| 103      | Rock CrCym2      | House Tom2 H     | ----                | ----               |

# Rhythm Set List

|          |    | <b>PA (Preset A Group)</b> |                     | <b>PB (Preset B Group)</b> |                    | <b>PC (Preset C Group)</b> |                    |
|----------|----|----------------------------|---------------------|----------------------------|--------------------|----------------------------|--------------------|
| Note No. |    | 001<br>PopDrumSet 1        | 002<br>PopDrumSet 2 | 001<br>PowerDrumSet        | 002<br>RaveDrumSet | 001<br>JazzDrumSet2        | 002<br>OrchDrumSet |
| 28       |    | ----                       | ----                | ----                       | ----               | ----                       | ----               |
| 29       | 30 | ----                       | ----                | ----                       | ----               | ----                       | ----               |
| 31       | 32 | ----                       | ----                | ----                       | ----               | ----                       | ----               |
| 33       | 34 | ----                       | ----                | ----                       | ----               | ----                       | ----               |
| 35       |    | ----                       | ----                | ----                       | ----               | ----                       | ----               |
| C2       |    | Verb Kick                  | Hybrid Kick         | Verb Kick                  | 808 Kick           | Round Kick                 | Old Kick           |
|          |    | Hybrid Kick                | Round Kick          | Round Kick                 | Round Kick         | Old Kick                   | Round Kick         |
|          | 37 | Side Stick                 | Dry Stick 2         | Dry Stick 2                | Side Stick         | Side Stick                 | Side Stick         |
|          |    | Natural SN2                | Piccolo SN          | Piccolo SN                 | 808 SN             | Ballad SN                  | Ballad SN          |
|          | 39 | 808 Claps                  | Hand Claps          | 808 Claps                  | 808 Claps          | Hand Claps                 | 808 Claps          |
|          | 40 | SN Roll                    | Piccolo SN          | Natural SN2                | 808 SN             | SN Roll                    | SN Roll            |
|          | 41 | Verb Tom Lo                | Verb Tom Lo         | Verb Tom Lo                | 808 Kick           | Verb Tom Lo                | Timpani            |
|          | 42 | Cl HiHat 4                 | Cl HiHat 4          | Cl HiHat 4                 | 606 Cl HiHat       | Cl HiHat 5                 | Timpani            |
|          | 43 | Verb Tom Lo                | Verb Tom Lo         | Verb Tom Lo                | Tekno Hit          | Dry Tom Lo                 | Timpani            |
|          | 44 | Cl HiHat 5                 | Cl HiHat 5          | Pedal HiHat2               | 606 Cl HiHat       | Pedal HiHat2               | Timpani            |
| C3       | 45 | Verb Tom Hi                | Verb Tom Hi         | Verb Tom Lo                | 808 Kick           | Verb Tom Lo                | Timpani            |
|          | 46 | Op HiHat 2                 | Op HiHat 2          | Op HiHat 2                 | 606 Op HiHat       | Op HiHat 2                 | Timpani            |
|          | 47 | Verb Tom Hi                | Verb Tom Hi         | Verb Tom Lo                | Tekno Hit          | Dry Tom Lo                 | Timpani            |
|          | 48 | Verb Tom Hi                | Verb Tom Hi         | Verb Tom Hi                | 808 Kick           | Verb Tom Hi                | Timpani            |
|          | 49 | Crash 1                    | Crash 1             | Crash 1                    | Crash 1            | Crash 1                    | Timpani            |
|          | 50 | Verb Tom Hi                | Verb Tom Hi         | Verb Tom Hi                | Tekno Hit          | Dry Tom Hi                 | Timpani            |
|          | 51 | Ride 2                     | Ride 1              | Ride 1                     | Voice Breath       | Ride 2                     | Timpani            |
|          |    | China Cym                  | China Cym           | China Cym                  | MC500 Beep 1       | China Cym                  | Timpani            |
|          |    | Ride Bell                  | Ride Bell           | Ride Bell                  | MC500 Beep 2       | Ride Bell                  | Timpani            |
|          | 54 | Tambourine 1               | Tambourine 1        | Tambourine 1               | R8 Click           | Tambourine 1               | Tambourine 1       |
| C4       | 55 | Crash 1                    | Crash 1             | Crash 1                    | Pizz               | Crash 1                    | Crash 1            |
|          | 56 | Cowbell                    | Cowbell             | Cowbell                    | DIGI Bell 1        | Cowbell                    | Cowbell            |
|          | 57 | Crash 1                    | Crash 1             | Crash 1                    | Rattles            | Crash 1                    | Crash 1            |
|          | 58 | Cowbell                    | Cowbell             | Vibraslap                  | Ride Bell          | Vibraslap                  | Ride 1             |
|          | 59 | Ride Bell                  | Ride Bell           | Ride 1                     | REV Tamb 1         | Ride 2                     | Ride 2             |
|          | 60 | Cga Mute Hi                | Cga Mute Hi         | Bongo Hi                   | 2.2 Vibwave        | Bongo Hi                   | Bongo Hi           |
|          | 61 | Cga Mute Lo                | Cga Mute Lo         | Bongo Lo                   | Low Pink NZ        | Bongo Lo                   | Bongo Lo           |
|          | 62 | Cga Slap                   | Cga Slap            | Cga Mute Hi                | Kalimba            | Cga Mute Hi                | Cga Mute Hi        |
|          | 63 | Cga Open Hi                | Cga Open Hi         | Cga Open Hi                | Metal Wind         | Cga Open Hi                | Cga Open Hi        |
|          | 64 | Cga Open Lo                | Cga Open Lo         | Cga Open Lo                | Lead Wave          | Cga Open Lo                | Cga Open Lo        |
| C5       |    | Timbale                    | Timbale             | Timbale                    | Tin Wave           | Timbale                    | Timbale            |
|          | 66 | Timbale                    | Timbale             | Timbale                    | AgogoBells         | Timbale                    | Timbale            |
|          | 67 | AgogoBells                 | AgogoBells          | AgogoBells                 | Lite Kick          | AgogoBells                 | AgogoBells         |
|          | 68 | AgogoBells                 | AgogoBells          | AgogoBells                 | AgogoBells         | AgogoBells                 | AgogoBells         |
|          | 69 | Cabasa Up                  | Cabasa Up           | Cabasa Up                  | Lite Kick          | Cabasa Up                  | Cabasa Up          |
|          | 70 | Maracas                    | Maracas             | Maracas                    | AgogoBells         | Maracas                    | Maracas            |
|          | 71 | Soft Pad A                 | Cabasa Down         | Soft Pad A                 | Gtr Harm A         | Soft Pad A                 | Soft Pad A         |
|          | 72 | Soft Pad B                 | Cabasa Cut          | Soft Pad B                 | Gtr Harm A         | Brush Swish                | Soft Pad B         |
|          | 73 | Long Guiro                 | 808 Kick            | Long Guiro                 | Piano Thump        | Long Guiro                 | Long Guiro         |
|          | 74 | Long Guiro                 | 808 SN              | Long Guiro                 | Natural SN1        | Long Guiro                 | Long Guiro         |
| C6       | 75 | Claves                     | DIGI Bell 1         | Claves                     | Hand Claps         | Claves                     | Claves             |
|          | 76 | Wood Block                 | 808 SN              | Wood Block                 | Natural SN1        | Wood Block                 | Wood Block         |
|          | 77 | Wood Block                 | 808 Kick            | Wood Block                 | 808 SN             | Metronome 2                | Wood Block         |
|          | 78 | Cuica                      | Spectrum            | Cuica                      | PowerChord B       | Cuica                      | Cuica              |
|          | 79 | Cuica                      | 808 Kick            | Cuica                      | Hybrid Kick2       | Cuica                      | Cuica              |
|          | 80 | Open Triangl               | Spectrum            | Open Triangl               | PowerChord B       | Open Triangl               | Open Triangl       |
|          | 81 | Open Triangl               | 808 Kick            | Open Triangl               | Gt.FretNoise       | Open Triangl               | Open Triangl       |
|          | 82 | Cabasa Cut                 | Spectrum            | Maracas                    | Banjo B            | Cabasa Cut                 | Cabasa Cut         |
|          | 83 | Spectrum                   | 808 Kick            | Ice Rain                   | Slap Bass 1        | Spectrum                   | Spectrum           |
|          | 84 | Wind Chimes                | 808 Kick            | Wind Chimes                | Oboe mf A          | Wind Chimes                | Wind Chimes        |
| C7       | 85 | Wood Block                 | Feedbackwave        | Claves                     | Shakuhachi         | Wood Block                 | Wood Block         |
|          | 86 | Cga Slap                   | 808 Kick            | 808 SN                     | Pizz               | Cga Slap                   | Cga Slap           |
|          | 87 | Dry Tom Lo                 | Feedbackwave        | Verb Tom Hi                | Syn Vox 1          | Dry Tom Lo                 | Dry Tom Lo         |
|          | 88 | Lite Kick                  | Pop Voice           | Piccolo SN                 | Voice Aahs A       | Lite Kick                  | Applause           |
|          |    | Hybrid Kick2               | Pop Voice           | Scratch 3                  | Voice Oohs2A       | Hybrid Kick2               | Hybrid Kick2       |
|          | 90 | Old Kick                   | Wind Agogo          | Tin Wave                   | Pop Voice          | Old Kick                   | Cl HiHat 4         |
|          | 91 | Pop Voice                  | Pop Voice           | Spectrum                   | Male Ooh A         | Natural SN2                | Round Kick         |
|          | 92 | Wind Agogo                 | Wind Agogo          | REV Steel DR               | Voice Breath       | Natural SN1                | Pedal HiHat2       |
|          | 93 | Op HiHat 2                 | Op HiHat 2          | REV Tin Wave               | Org Vox C          | Brush Swish                | Natural SN2        |
|          | 94 | Anklungs                   | Anklungs            | REV PiccloSN               | Vox Noise          | Brush Roll                 | Op HiHat 2         |
| C7       | 95 | Op HiHat 2                 | Op HiHat 2          | REV Crash 1                | Vox Noise          | Brush Slap                 | Brush Slap         |
|          | 96 | Metronome 2                | Metronome 2         | Metronome 2                | Applause           | Metronome 2                | Brush Swish        |
|          | 97 | R8 Click                   | R8 Click            | R8 Click                   | R8 Click           | R8 Click                   | Brush Roll         |
|          | 98 | Metronome 1                | Metronome 1         | Metronome 1                | Metronome 2        | Metronome 1                | SN Roll            |
|          | 99 | ----                       | ----                | ----                       | ----               | ----                       | ----               |

## PD (Preset D Group)

001 PowerDrmSet2

002 PowerRaveSet

## PE (Preset E Group)

001 XV Pop Kit

002 XV Rock Kit

## PF (Preset F Group)

001 XV Jazz Kit

002 XV Rust Kit

| Note No. | 001 PowerDrmSet2 | 002 PowerRaveSet | 001 XV Pop Kit | 002 XV Rock Kit | 001 XV Jazz Kit | 002 XV Rust Kit |
|----------|------------------|------------------|----------------|-----------------|-----------------|-----------------|
| 28       | -----            | -----            | Dance Kick     | Dance Kick      | JazzDry Kick    | 70s Kick 2      |
| 29       | -----            | -----            | Dry Kick       | Round Kick      | Pillow Kick     | Old Kick        |
| 30       | -----            | -----            | Rock Roll      | Rock Roll       | Jazz Swish      | Rock Roll       |
| 31       | -----            | -----            | Hybrid Kick    | Jazz Kick       | Hybrid Kick2    | 909 Kick 2      |
| 32       | -----            | -----            | Snare Ghost    | Rock Gst        | Snare Ghost     | Rock Gst        |
| 33       | -----            | -----            | Round Kick     | Verb Kick       | MplLmtr Kick    | 909 Kick 1      |
| 34       | -----            | -----            | Rock PdHH      | Rock PdHH       | Jazz PdHH       | Rock PdHH       |
| 35       | -----            | -----            | Hybrid Kick2   | Maple Kick      | JazzDry Kick    | 808 Kick        |
| C2 36    | Round Kick       | Round Kick       | Old Kick       | Rock Kick       | Jazz Kick       | Dance Kick      |
| 37       | Dry Stick 2      | Dry Stick 2      | Side Stick     | RockStick       | Dry Stick 2     | RockStick       |
| 38       | Piccolo SN       | Piccolo SN       | Wet SN         | Rock SN         | Jazz SN         | Old Fill SN     |
| 39       | 808 Claps        | 808 Claps        | Snare Ghost    | Rock Gst        | Snare Ghost     | Rock Gst        |
| 40       | SN Roll          | Natural SN2      | AmbientSN      | Rock Rim        | Jazz Rim        | Rock SN         |
| 41       | Verb Tom Lo      | Verb Tom Lo      | Maple Tom 3    | Rock TomL2      | Jazz Tom L      | Elec.Tom L2     |
| 42       | Cl HiHat 4       | Cl HiHat 4       | Rock CIHH2     | Rock CIHH2      | Jazz CIHH1      | Rock CIHH1      |
| 43       | Verb Tom Lo      | Verb Tom Lo      | Rock Flm L2    | Rock Flm L2     | Jazz Flm L      | Elec.Tom L1     |
| 44       | Pedal HiHat2     | Pedal HiHat2     | Rock CIHH1     | Rock CIHH1      | Jazz CIHH2      | Rock CIHH2      |
| 45       | Verb Tom Lo      | Verb Tom Lo      | Maple Tom 2    | Rock Tom M      | Jazz Tom M      | Elec.Tom M      |
| 46       | Op HiHat 2       | Op HiHat 2       | Rock OpHH      | Rock OpHH       | Jazz OpHH       | Rock OpHH       |
| 47       | Verb Tom Lo      | Verb Tom Lo      | Rock Flm M     | Rock Flm M      | Jazz Flm M      | Elec.Tom M      |
| C3 48    | Verb Tom Hi      | Verb Tom Hi      | Maple Tom 1    | Rock Tom H      | Jazz Tom H      | Elec.Tom H      |
| 49       | Crash 1          | Crash 1          | Crash Cymbal   | Rock CrCym1     | Jazz CrCym      | Rock CrCym1     |
| 50       | Verb Tom Hi      | Verb Tom Hi      | Rock Flm H     | Rock Flm H      | Jazz Flm H      | Elec.Tom H      |
| 51       | Ride 1           | Ride 1           | Rock RdCym1    | Rock RdCym1     | Jazz RdCym      | Rock RdCym1     |
| 52       | China Cym        | China Cym        | Crash 1        | Rock China      | Rock RdCym1     | Rock CrCym2     |
| 53       | Ride Bell        | Ride Bell        | Rock RdCym2    | Rock RdCym2     | Rock RdCym1     | Rock RdCym2     |
| 54       | Tambourine 1     | Tambourine 1     | Tambourine 2   | Tambourine 2    | Tambourine 1    | Tambourine 1    |
| 55       | Crash 1          | Crash 1          | Rock CrCym2    | Rock CrCym2     | Crash 1         | Rock Splash     |
| 56       | Cowbell          | Cowbell          | Cowbell Lo     | Cowbell Lo      | Cowbell Lo      | Cowbell         |
| 57       | Crash 1          | Crash 1          | Crash 1        | Crash 1         | Crash 1         | China Cym       |
| 58       | Vibraslap        | Vibraslap        | Cowbell Hi     | Cowbell Hi      | Cowbell Hi      | Vibraslap       |
| 59       | Ride 1           | Ride 1           | Ride Bell      | Ride Bell       | Ride Bell       | 70s Kick 2      |
| C4 60    | Bongo Hi         | Bongo Hi         | Cga Mute Hi    | Cga Mute Hi     | Cga Mute Hi     | 70s Kick 1      |
| 61       | Bongo Lo         | Bongo Lo         | Cga Mute Lo    | Cga Mute Lo     | Cga Mute Lo     | Dry Stick       |
| 62       | Cga Mute Hi      | Cga Mute Hi      | Cga Slap       | Cga Slap        | Cga Slap        | 70s SN          |
| 63       | Cga Open Hi      | Cga Open Hi      | Cga Open Hi    | Cga Open Hi     | Cga Open Hi     | Finger Snaps    |
| 64       | Cga Open Lo      | Cga Open Lo      | Cga Open Lo    | Cga Open Lo     | Cga Open Lo     | HumanClapsEQ    |
| 65       | Timbale          | Timbale          | Timbale Hi     | Timbale Hi      | Timbale Hi      | JD Cowbell      |
| 66       | Timbale          | Timbale          | Timbale Lo     | Timbale Lo      | Timbale Lo      | 70s Cl HiHat    |
| 67       | AgogoBells       | AgogoBells       | AgogoBellsHi   | AgogoBellsHi    | AgogoBellsHi    | AgogoBells      |
| 68       | AgogoBells       | AgogoBells       | AgogoBellsLo   | AgogoBellsLo    | AgogoBellsLo    | 70s Cl HiHat    |
| 69       | Cabasa Up        | AgogoBells       | Cabasa Up      | Cabasa Up       | Cabasa Up       | 909 NZ HiHat    |
| 70       | Maracas          | Maracas          | Maracas        | Maracas         | Maracas         | 70s Op HiHat    |
| 71       | Soft Pad A       | 606 Cl HiHat     | ShortWhistle   | ShortWhistle    | ShortWhistle    | Cabasa Up       |
| C5 72    | Soft Pad B       | 606 Cl HiHat     | Long Whistle   | Long Whistle    | Long Whistle    | Long Whistle    |
| 73       | Long Guiro       | 606 Op HiHat     | Short Guiro    | Short Guiro     | Short Guiro     | REV RkOpHH f    |
| 74       | Long Guiro       | Long Guiro       | Long Guiro     | Long Guiro      | Long Guiro      | Tambourine 2    |
| 75       | Claves           | Claves           | Claves         | Claves          | Claves          | REV JzOpHH f    |
| 76       | Wood Block       | Wood Block       | WoodBlock Hi   | WoodBlock Hi    | WoodBlock Hi    | Scratch 2       |
| 77       | Wood Block       | Wood Block       | WoodBlock Lo   | WoodBlock Lo    | WoodBlock Lo    | Mute Triangl    |
| 78       | Cuica            | Pizz             | Mute Cuica     | Mute Cuica      | Mute Cuica      | 909 Cl HiHat    |
| 79       | Cuica            | Syn Vox 1        | Open Cuica     | Open Cuica      | Open Cuica      | Open Triangl    |
| 80       | Open Triangl     | Voice Aahs A     | Mute Triangl   | Mute Triangl    | Mute Triangl    | 909 Cl HiHat    |
| 81       | Open Triangl     | Voice Oohs2A     | Open Triangl   | Open Triangl    | Open Triangl    | Cabasa          |
| 82       | Maracas          | Male Ooh A       | Cabasa Cut     | Cabasa Cut      | Cabasa Cut      | 909 Op HiHat    |
| 83       | Ice Rain         | Ice Rain         | Spectrum       | Spectrum        | Spectrum        | Spectrum        |
| C6 84    | Wind Chimes      | 808 SN           | Wind Chimes    | Wind Chimes     | Wind Chimes     | Maple Kick      |
| 85       | Claves           | 808 SN           | Wood Block     | Wood Block      | Wood Block      | Woody Stick     |
| 86       | 808 SN           | 808 SN           | Mute Surdo     | Mute Surdo      | Mute Surdo      | Maple SN        |
| 87       | Verb Tom Hi      | Hand Claps       | Open Surdo     | Open Surdo      | Open Surdo      | SN Roll         |
| 88       | Piccolo SN       | Voice Breath     | Lite Kick      | Lite Kick       | Lite Kick       | Maple Tom 3     |
| 89       | Scratch 3        | Scratch 3        | Hybrid Kick2   | Hybrid Kick2    | Hybrid Kick2    | 909 Kick 1      |
| 90       | Tin Wave         | Tin Wave         | Old Kick       | Old Kick        | Old Kick        | Old Kick        |
| 91       | Spectrum         | Crash 1          | Pop Voice      | Pop Voice       | Pop Voice       | 808 Kick        |
| 92       | REV Steel DR     | Ride Bell        | Wind Agogo     | Wind Agogo      | Wind Agogo      | 909 SN 2        |
| 93       | REV Tin Wave     | REV Tin Wave     | Op HiHat 2     | Op HiHat 2      | Op HiHat 2      | 909 SN 1        |
| 94       | REV PiccloSN     | DIGI Bell 1      | Anklungs       | Anklungs        | Anklungs        | 808 SN          |
| 95       | REV Crash 1      | Metal Wind       | Op HiHat 2     | Op HiHat 2      | Op HiHat 2      | Dance Kick      |
| C7 96    | Metronome 2      | Applause         | Metronome 2    | Metronome 2     | Metronome 2     | REV Timp3       |
| 97       | R8 Click         | R8 Click         | R8 Click       | R8 Click        | R8 Click        | R8 Click        |
| 98       | Metronome 1      | Metronome 1      | Metronome 1    | Metronome 1     | Metronome 1     | Metronome 2     |
| 99       | -----            | -----            | Hand Claps     | Hand Claps      | Hand Claps      | 808 Claps       |

# Rhythm Set List

## PG (Preset G Group)

## PH (Preset H Group)

| Note No. | 001<br>XV WayHipKit | 002<br>XV Bully Kit | 001<br>R&B Kit 1 | 002<br>House Kit |
|----------|---------------------|---------------------|------------------|------------------|
| 28       | 808 Kick            | 808 Kick            | Dance Kick       | House Kick 6     |
| 29       | Dry Kick            | Jazz Kick           | Dry Kick         | House Kick 5     |
| 30       | WHip Sweep          | Jazz Roll           | R&B1 SN Roll     | House ClHH 3     |
| 31       | Noisy Kick          | Old Kick            | Hybrid Kick      | House Kick 4     |
| 32       | WHip RimShot        | Brush Slap          | R&B1 SN Ghst     | Reso Stick       |
| 33       | Hybrid Kick         | Hybrid Kick         | Round Kick       | House Kick 3     |
| 34       | WHip PdHH           | Bully PdHH          | R&B 1 PdHH       | House OpHH 2     |
| 35       | WHip OldKick        | 909 Kick 1          | R&B 1 Kick 2     | House Kick 2     |
| C2 36    | WHip 909Kick        | 909 Kick 2          | R&B 1 Kick 1     | House Kick 1     |
| 37       | WHip Stik           | Woody Stick         | R&B 1 Stick      | House Stick      |
| 38       | WHip 70s Snr        | 909 Snare           | R&B 1 SN 1       | House SN 1       |
| 39       | WHip Clap           | 808 Claps           | Snare Ghost      | House Claps      |
| 40       | WHip Snare          | 808 Snare           | R&B 1 SN 2       | House SN 2       |
| 41       | SciHip Tom L        | Bully Tom L2        | R&B 1 Tom L      | House NzTomL     |
| 42       | WHip ClHH 1         | Bully ClHH 1        | R&B 1 ClHH 1     | House ClHH 1     |
| 43       | WHip Tom L          | Bully Tom L1        | Rock Flm L       | 808 Tom L        |
| 44       | WHip ClHH 2         | Bully ClHH 2        | R&B 1 ClHH 2     | House ClHH 2     |
| 45       | SciHip Tom M        | Bully Tom M         | R&B 1 Tom M      | House NzTomM     |
| 46       | WHip Op HH          | Bully OpHH          | R&B 1 OpHH       | House OpHH       |
| 47       | WHip Tom M          | Bully Tom M         | Rock Flm M       | 808 Tom M        |
| C3 48    | SciHip Tom H        | Bully Tom H         | R&B 1 Tom H      | House NzTomH     |
| 49       | Crash Cymbal        | Crash               | R&B 1 CrCym1     | House CrCym      |
| 50       | WHip Tom H          | Bully Tom H         | Rock Flm H       | 808 Tom H        |
| 51       | Rock RdCym 1        | Ride                | Rock RdCym1      | House FbkCym     |
| 52       | Rock CrCym 1        | China Cym           | R&B 1 CrCym2     | House SN 3       |
| 53       | Rock RdCym 2        | Ride Bell           | Rock RdCym2      | House FSnap      |
| 54       | Tambourine          | Tambourine          | Tambourine 1     | House ClHH 4     |
| 55       | Rock CrCym 2        | Crash               | Rock CrCym2      | House Cowbel     |
| 56       | LoFiCowbell1        | Cowbell 1           | Cowbell Lo       | House ClHH 5     |
| 57       | Crash               | Cymbal              | Crash 1          | House WBlock     |
| 58       | LoFiCowbell2        | Cowbell 2           | Cowbell Hi       | House OpHH 3     |
| 59       | Ride Bell           | Rock RdCym          | Ride Bell        | House Claps2     |
| C4 60    | Cga Mute Hi         | LoFi Cga Mth        | Bongo Hi         | House Cabasa     |
| 61       | Cga Mute Lo         | LoFi Cga Mtl        | Bongo Lo         | House WCra       |
| 62       | LoFi Cga Slp        | LoFi Cga Slp        | Cga Mute Hi      | House VoxNz      |
| 63       | LoFi Cga Hi         | LoFi Cga OpH        | Cga Open Hi      | House Kick 7     |
| 64       | LoFi Cga Lo         | LoFi Cga OpL        | Cga Open Lo      | Timp 3           |
| 65       | El.TimbaleHi        | Timbale Hi          | Timbale Hi       | House Bird       |
| 66       | El.TimbaleLo        | Timbale Lo          | Timbale Lo       | House Gun        |
| 67       | El.Agogo Hi         | AgogoBell Hi        | R&B 1 AgBel1     | House FBell      |
| 68       | El.Agogo Lo         | AgogoBell Lo        | R&B 1 AgBel2     | House Rattle     |
| 69       | NoisyCabasa1        | Cabasa Up           | R&B 1 AgBel3     | House RvOHit     |
| 70       | Nz Blip             | Maracas             | Maracas          | House Noize1     |
| 71       | Digi Pulse 1        | Noise Stop          | 606 Cl HiHat     | House Noize2     |
| C5 72    | Digi Pulse 2        | Noise Open          | 606 Cl HiHat     | House BongoL     |
| 73       | LoFi Guiro          | Rattles Stop        | 606 Op HiHat     | House BongoH     |
| 74       | WHip Noise 1        | Rattles             | Long Guiro       | House Tambrn     |
| 75       | WHip Noise 2        | Claves              | Claves           | House Heart      |
| 76       | WHip Noise 3        | StrikePole          | Wood BlockHi     | House CgaSlp     |
| 77       | WHip Noise 4        | GtrBody Hit         | Wood BlockLo     | House CgMute     |
| 78       | Digi Tamb. 1        | LoFi Cuica 1        | R&B 1 Pizz       | House Tri        |
| 79       | Digi Tamb. 2        | LoFi Cuica 2        | R&B 1 Gmlan1     | House Vibra      |
| 80       | Mute Triangl        | Mute Triangl        | R&B 1 Gmlan2     | House FXLoop     |
| 81       | Open Triangl        | Open Triangl        | R&B 1 BtlHit     | House Aplase     |
| 82       | NoisyCabasa2        | Cabasa Cut          | R&B 1 Thrill     | House Chord      |
| 83       | Nz Spectrum         | Spectrum            | R&B 1 ThrillH    | House OrcHit     |
| C6 84    | LoFi Block          | Wind Chimes         | 808 SN           | House Spectr     |
| 85       | Rattle Block        | Steps               | R&B 1 WdBk       | House Train      |
| 86       | Steps               | GtrString Nz        | R&B 1 CgSlap     | House StrSip     |
| 87       | WHip Noise 5        | BreathNoise         | Dry Tom L        | House Crunch     |
| 88       | Creak               | REV 909 Kick        | Lite Kick        | House Tel2       |
| 89       | Bubble              | REV 909 Snr         | Hybrid Kick2     | House Bubble     |
| 90       | Door Slam           | Pitch Wind          | Old Kick         | Bird             |
| 91       | Sci Punch           | Oohs Chord L        | Pop Voice        | House Gun 2      |
| 92       | Noise Fall          | Metal Wind          | Wind Agogo       | House Metro      |
| 93       | WHip Noise 6        | 909 Op HiHat        | R&B 1 OpHH       | House BakHit     |
| 94       | WHip Noise 7        | SlowAnklungs        | Anklungs         | House TekHit     |
| 95       | Org Click           | Block               | R&B 1 OpHH       | House SNRoll     |
| C7 96    | Metronome 2         | Metronome 2         | Metronome 2      | House Loop       |
| 97       | R8 Click            | R8 Click            | R8 Click         | R8 Click         |
| 98       | Metronome 1         | Metronome 1         | Metronome 1      | Metronome 1      |
| 99       | Hand Claps          | Hand Claps          | R&B 1 HClaps     | Hand Claps       |
| 100      | ----                | ----                | R&B 1 CrCym1     | House Tom2 L     |
| 101      | ----                | ----                | Rock RdCym2      | House Tom2 M     |
| 102      | ----                | ----                | Tambourine 1     | House Rim        |
| 103      | ----                | ----                | Rock CrCym2      | House Tom2 H     |

# Rhythm Set List

## GM (GM2 Group)

| Note No. | 001 (PC: 1)<br>GM2 STANDARD | 002 (PC: 9)<br>GM2 ROOM | 003 (PC: 17)<br>GM2 POWER | 004 (PC: 25)<br>GM2 ELECTRIC | 005 (PC: 26)<br>GM2 ANALOG | 006 (PC: 33)<br>GM2 JAZZ |
|----------|-----------------------------|-------------------------|---------------------------|------------------------------|----------------------------|--------------------------|
| 27       | High-Q                      | High-Q                  | High-Q                    | High-Q                       | High-Q                     | High-Q                   |
| 28       | Slap                        | Slap                    | Slap                      | Slap                         | Slap                       | Slap                     |
| 29       | ScratchPush                 | ScratchPush             | ScratchPush               | ScratchPush                  | ScratchPush                | ScratchPush              |
| 30       | ScratchPull                 | ScratchPull             | ScratchPull               | ScratchPull                  | ScratchPull                | ScratchPull              |
| 31       | Sticks                      | Sticks                  | Sticks                    | Sticks                       | Sticks                     | Sticks                   |
| 32       | SquareClick                 | SquareClick             | SquareClick               | SquareClick                  | SquareClick                | SquareClick              |
| 33       | Mtrnm.Click                 | Mtrnm.Click             | Mtrnm.Click               | Mtrnm.Click                  | Mtrnm.Click                | Mtrnm.Click              |
| 34       | Mtrnm. Bell                 | Mtrnm. Bell             | Mtrnm. Bell               | Mtrnm. Bell                  | Mtrnm. Bell                | Mtrnm. Bell              |
| 35       | Mix Kick                    | Mix Kick                | Mix Kick                  | Mix Kick                     | Mix Kick                   | Jazz Kick 2              |
| C2 36    | Standard KK1                | Standard KK1            | Power Kick1               | Elec Kick 1                  | TR-808 Kick                | Jazz Kick 1              |
| 37       | Side Stick                  | Side Stick              | Side Stick                | Side Stick                   | 808 Rimshot                | Side Stick               |
| 38       | Standard SN1                | Standard SN1            | Dance Snare1              | Elec. Snare                  | 808 Snare 1                | Standard SN1             |
| 39       | 909 HandClap                | 909 HandClap            | 909 HandClap              | 909 HandClap                 | 909 HandClap               | 909 HandClap             |
| 40       | Elec Snare 3                | Elec Snare 3            | Elec Snare 3              | Elec Snare 2                 | Elec Snare 3               | Elec Snare 3             |
| 41       | Real Tom 6                  | Room Tom 5              | Rock Tom 4                | Synth Drum 2                 | 808 Tom 2                  | Real Tom 6               |
| 42       | Close HiHat2                | Close HiHat2            | Close HiHat2              | Close HiHat2                 | TR-808 CHH                 | Close HiHat2             |
| 43       | Real Tom 6                  | Room Tom 5              | Rock Tom 4                | Synth Drum 2                 | 808 Tom 2                  | Real Tom 6               |
| 44       | Pedal HiHat2                | Pedal HiHat2            | Pedal HiHat2              | Pedal HiHat2                 | 808_chh                    | Pedal HiHat2             |
| 45       | Real Tom 4                  | Room Tom 2              | Rock Tom 4                | Synth Drum 2                 | 808 Tom 2                  | Real Tom 4               |
| 46       | Open HiHat2                 | Open HiHat2             | Open HiHat2               | Open HiHat2                  | TR-808 OHH                 | Open HiHat2              |
| 47       | Real Tom 4                  | Room Tom 2              | Rock Tom 4                | Synth Drum 2                 | 808 Tom 2                  | Real Tom 4               |
| C3 48    | Real Tom 1                  | Room Tom 2              | Rock Tom 1                | Synth Drum 2                 | 808 Tom 2                  | Real Tom 1               |
| 49       | Crash Cym.1                 | Crash Cym.1             | Crash Cym.1               | Crash Cym.1                  | 808 Crash                  | Crash Cym.1              |
| 50       | Real Tom 1                  | Room Tom 2              | Rock Tom 1                | Synth Drum 2                 | 808 Tom 2                  | Real Tom 1               |
| 51       | Ride Cymbal                 | Ride Cymbal             | Ride Cymbal               | Ride Cymbal                  | Ride Cymbal                | Ride Cymbal              |
| 52       | ChinaCymbal                 | ChinaCymbal             | ChinaCymbal               | ReverseCymbal                | ChinaCymbal                | ChinaCymbal              |
| 53       | Ride Bell                   | Ride Bell               | Ride Bell                 | Ride Bell                    | Ride Bell                  | Ride Bell                |
| 54       | Tambourine                  | Tambourine              | Tambourine                | Tambourine                   | Tambourine                 | Tambourine               |
| 55       | Splash Cym.                 | Splash Cym.             | Splash Cym.               | Splash Cym.                  | Splash Cym.                | Splash Cym.              |
| 56       | Cowbell                     | Cowbell                 | Cowbell                   | Cowbell                      | 808cowbe                   | Cowbell                  |
| 57       | Crash Cym.2                 | Crash Cym.2             | Crash Cym.2               | Crash Cym.2                  | Crash Cym.2                | Crash Cym.2              |
| 58       | Vibraslap                   | Vibraslap               | Vibraslap                 | Vibraslap                    | Vibraslap                  | Vibraslap                |
| 59       | Ride Cymbal                 | Ride Cymbal             | Ride Cymbal               | Ride Cymbal                  | Ride Cymbal                | Ride Cymbal              |
| C4 60    | Bongo High                  | Bongo High              | Bongo High                | Bongo High                   | Bongo High                 | Bongo High               |
| 61       | Bongo Lo                    | Bongo Lo                | Bongo Lo                  | Bongo Lo                     | Bongo Lo                   | Bongo Lo                 |
| 62       | Mute H.Conga                | Mute H.Conga            | Mute H.Conga              | Mute H.Conga                 | 808 Conga                  | Mute H.Conga             |
| 63       | Conga Hi Opn                | Conga Hi Opn            | Conga Hi Opn              | Conga Hi Opn                 | 808 Conga                  | Conga Hi Opn             |
| 64       | Conga Lo Opn                | Conga Lo Opn            | Conga Lo Opn              | Conga Lo Opn                 | 808 Conga                  | Conga Lo Opn             |
| 65       | High Timbale                | High Timbale            | High Timbale              | High Timbale                 | High Timbale               | High Timbale             |
| 66       | Low Timbale                 | Low Timbale             | Low Timbale               | Low Timbale                  | Low Timbale                | Low Timbale              |
| 67       | Agogo                       | Agogo                   | Agogo                     | Agogo                        | Agogo                      | Agogo                    |
| 68       | Agogo                       | Agogo                   | Agogo                     | Agogo                        | Agogo                      | Agogo                    |
| 69       | Cabasa                      | Cabasa                  | Cabasa                    | Cabasa                       | Cabasa                     | Cabasa                   |
| 70       | Maracas                     | Maracas                 | Maracas                   | Maracas                      | 808marac                   | Maracas                  |
| 71       | ShrtWhistle                 | ShrtWhistle             | ShrtWhistle               | ShrtWhistle                  | ShrtWhistle                | ShrtWhistle              |
| C5 72    | LongWhistle                 | LongWhistle             | LongWhistle               | LongWhistle                  | LongWhistle                | LongWhistle              |
| 73       | Short Guiro                 | Short Guiro             | Short Guiro               | Short Guiro                  | Short Guiro                | Short Guiro              |
| 74       | Long Guiro                  | Long Guiro              | Long Guiro                | Long Guiro                   | Long Guiro                 | Long Guiro               |
| 75       | Claves                      | Claves                  | Claves                    | Claves                       | 808clave                   | Claves                   |
| 76       | Woodblock                   | Woodblock               | Woodblock                 | Woodblock                    | Woodblock                  | Woodblock                |
| 77       | Woodblock                   | Woodblock               | Woodblock                 | Woodblock                    | Woodblock                  | Woodblock                |
| 78       | Mute Cuica                  | Mute Cuica              | Mute Cuica                | Mute Cuica                   | Mute Cuica                 | Mute Cuica               |
| 79       | Open Cuica                  | Open Cuica              | Open Cuica                | Open Cuica                   | Open Cuica                 | Open Cuica               |
| 80       | MuteTriangl                 | MuteTriangl             | MuteTriangl               | MuteTriangl                  | MuteTriangl                | MuteTriangl              |
| 81       | OpenTriangl                 | OpenTriangl             | OpenTriangl               | OpenTriangl                  | OpenTriangl                | OpenTriangl              |
| 82       | Shaker                      | Shaker                  | Shaker                    | Shaker                       | Shaker                     | Shaker                   |
| 83       | Jingle Bell                 | Jingle Bell             | Jingle Bell               | Jingle Bell                  | Jingle Bell                | Jingle Bell              |
| C6 84    | Bell Tree                   | Bell Tree               | Bell Tree                 | Bell Tree                    | Bell Tree                  | Bell Tree                |
| 85       | Castanets                   | Castanets               | Castanets                 | Castanets                    | Castanets                  | Castanets                |
| 86       | Mute Surdo                  | Mute Surdo              | Mute Surdo                | Mute Surdo                   | Mute Surdo                 | Mute Surdo               |
| 87       | Open Surdo                  | Open Surdo              | Open Surdo                | Open Surdo                   | Open Surdo                 | Open Surdo               |
| 88       | ----                        | ----                    | ----                      | ----                         | ----                       | ----                     |

PC: Program Change Number

Bank Select MSB is all 120, LSB is all 0

# Rhythm Set List

## GM (GM2 Group)

| Note No. | 007 (PC: 41)<br>GM2 BRUSH | 008 (PC: 49)<br>GM2 ORCHSTRA | 009 (PC: 57)<br>GM2 SFX |
|----------|---------------------------|------------------------------|-------------------------|
| 27       | High-Q                    | Close HiHat2                 | -----                   |
| 28       | Slap                      | Pedal HiHat2                 | -----                   |
| 29       | ScratchPush               | Open HiHat2                  | -----                   |
| 30       | ScratchPull               | Ride Cymbal                  | -----                   |
| 31       | Sticks                    | Sticks                       | -----                   |
| 32       | SquareClick               | SquareClick                  | -----                   |
| 33       | Mtrnm.Click               | Mtrnm.Click                  | -----                   |
| 34       | Mtrnm. Bell               | Mtrnm. Bell                  | -----                   |
| 35       | Jazz Kick 2               | Concert BD                   | -----                   |
| C2 36    | Jazz Kick 1               | ConcertBD Mt                 | -----                   |
| 37       | Side Stick                | Side Stick                   | -----                   |
| 38       | Brush Swirl               | Concert Snr                  | -----                   |
| 39       | Brush Slap1               | Castanets                    | High-Q                  |
| 40       | Brush Swirl               | Concert Snr                  | Slap                    |
| 41       | Real Tom 6                | Timpani                      | ScratchPush             |
| 42       | Close HiHat2              | Timpani                      | ScratchPull             |
| 43       | Real Tom 6                | Timpani                      | Sticks                  |
| 44       | Pedal HiHat2              | Timpani                      | SquareClick             |
| 45       | Real Tom 4                | Timpani                      | Mtrnm.Click             |
| 46       | Open HiHat2               | Timpani                      | Mtrnm. Bell             |
| 47       | Real Tom 4                | Timpani                      | Gt.FretNoiz             |
| C3 48    | Real Tom 1                | Timpani                      | Gt.CutNoise             |
| 49       | Crash Cym.1               | Timpani                      | Gt.CutNoise             |
| 50       | Real Tom 1                | Timpani                      | String Slap             |
| 51       | Ride Cymbal               | Timpani                      | Fl.KeyClick             |
| 52       | ChinaCymbal               | Timpani                      | Laughing                |
| 53       | Ride Bell                 | Timpani                      | Screaming               |
| 54       | Tambourine                | Tambourine                   | Punch                   |
| 55       | Splash Cym.               | Splash Cym.                  | Heart Beat              |
| 56       | Cowbell                   | Cowbell                      | Footsteps               |
| 57       | Crash Cym.2               | Con.Cymbal2                  | Footsteps               |
| 58       | Vibraslap                 | Vibraslap                    | Applause                |
| 59       | Ride Cymbal               | Concert Cym.                 | Creaking                |
| C4 60    | Bongo High                | Bongo High                   | Door                    |
| 61       | Bongo Lo                  | Bongo Lo                     | Scratch                 |
| 62       | Mute H.Conga              | Mute H.Conga                 | Wind Chimes             |
| 63       | Conga Hi Opn              | Conga Hi Opn                 | Car-Engine              |
| 64       | Conga Lo Opn              | Conga Lo Opn                 | Car-Stop                |
| 65       | High Timbale              | High Timbale                 | Car-Pass                |
| 66       | Low Timbale               | Low Timbale                  | Car-Crash               |
| 67       | Agogo                     | Agogo                        | Siren                   |
| 68       | Agogo                     | Agogo                        | Train                   |
| 69       | Cabasa                    | Cabasa                       | Jetplane                |
| 70       | Maracas                   | Maracas                      | Helicopter              |
| 71       | ShrtWhistle               | ShrtWhistle                  | Starship                |
| C5 72    | LongWhistle               | LongWhistle                  | Gun Shot                |
| 73       | Short Guiro               | Short Guiro                  | Machine Gun             |
| 74       | Long Guiro                | Long Guiro                   | Lasergun                |
| 75       | Claves                    | Claves                       | Explosion               |
| 76       | Woodblock                 | Woodblock                    | Dog                     |
| 77       | Woodblock                 | Woodblock                    | HorseGallop             |
| 78       | Mute Cuica                | Mute Cuica                   | Bird                    |
| 79       | Open Cuica                | Open Cuica                   | Rain                    |
| 80       | MuteTriangl               | MuteTriangl                  | Thunder                 |
| 81       | OpenTriangl               | OpenTriangl                  | Wind                    |
| 82       | Shaker                    | Shaker                       | Seashore                |
| 83       | Jingle Bell               | Jingle Bell                  | Stream                  |
| C6 84    | Bell Tree                 | Bell Tree                    | Bubble                  |
| 85       | Castanets                 | Castanets                    | -----                   |
| 86       | Mute Surdo                | Mute Surdo                   | -----                   |
| 87       | Open Surdo                | Open Surdo                   | -----                   |
| 88       | -----                     | Applause                     | -----                   |

PC: Program Change Number

Bank Select MSB is all 120, LSB is all 0

# Performance List

## US (User Group)

| No. | Name         | No. | Name         |
|-----|--------------|-----|--------------|
| 001 | Soaring 5050 | 033 | WayHipKits   |
| 002 | Analog Stack | 034 | Symphony JV  |
| 003 | Watta Gate!  | 035 | BellyPad5050 |
| 004 | Road2Heaven  | 036 | DulcitarStk  |
| 005 | My Orchestra | 037 | Nebular Vox  |
| 006 | R&B Kit 1    | 038 | Cosmic Dawn  |
| 007 | AggressiveXV | 039 | Labyrinth    |
| 008 | Big Bottom   | 040 | S&H Pad      |
| 009 | ComplexEcho+ | 041 | EasternSplit |
| 010 | Flying Keys  | 042 | Bully Kit    |
| 011 | Nirvana      | 043 | TeknoSplit 1 |
| 012 | PhsDyno&Bs   | 044 | ChildrenSplt |
| 013 | StPhaserStak | 045 | Organ / Lead |
| 014 | Hit it! RSS  | 046 | Pad / Lead   |
| 015 | Barococo     | 047 | Bass / Lead  |
| 016 | BellPad 5050 | 048 | S&H / Pad    |
| 017 | Dulcimar&Gtr | 049 | Seq:Template |
| 018 | Springy      | 050 | Seq:Techno   |
| 019 | InstantScore | 051 | Seq:House    |
| 020 | Voltage Ctrl | 052 | Seq:Hip-Hop  |
| 021 | StereoSlicer | 053 | Seq:Pop      |
| 022 | 5050 Bells   | 054 | Seq:FunkRock |
| 023 | House Kit    | 055 | Seq:HardRock |
| 024 | BlisteringXV | 056 | Seq:Blues    |
| 025 | XV SweepPad  | 057 | Seq:Ac.Jazz  |
| 026 | Andreas Cave | 058 | Seq:Cont.Jz  |
| 027 | Pad/SqrLd XV | 059 | Seq:BigBand  |
| 028 | HybStr 5050  | 060 | Seq:Latin    |
| 029 | Old Friends  | 061 | Seq:NewAge   |
| 030 | FM BellLayer | 062 | Seq:Orch     |
| 031 | SlicedTrance | 063 | Seq:Film     |
| 032 | CrystalVoxXV | 064 | Seq:GM2Temp  |

## PA (Preset A Group)

| No. | Name         |
|-----|--------------|
| 001 | Seq:Template |
| 002 | Seq:Techno   |
| 003 | Seq:House    |
| 004 | Seq:Hip-Hop  |
| 005 | Seq:Pop      |
| 006 | Seq:FunkRock |
| 007 | Seq:HardRock |
| 008 | Seq:Blues    |
| 009 | Seq:Ac.Jazz  |
| 010 | Seq:Cont.Jz  |
| 011 | Seq:BigBand  |
| 012 | Seq:Latin    |
| 013 | Seq:NewAge   |
| 014 | Seq:Orch     |
| 015 | Seq:Film     |
| 016 | Seq:GM2Temp  |
| 017 | Soaring 5050 |
| 018 | Analog Stack |
| 019 | Watta Gate!  |
| 020 | Road2Heaven  |
| 021 | My Orchestra |
| 022 | R&B Kit 1    |
| 023 | AggressiveXV |
| 024 | Big Bottom   |
| 025 | ComplexEcho+ |
| 026 | Flying Keys  |
| 027 | Nirvana      |
| 028 | PhsDyno&Bs   |
| 029 | StPhaserStak |
| 030 | Hit it! RSS  |
| 031 | Barococo     |
| 032 | BellPad 5050 |

## PB (Preset B Group)

| No. | Name         |
|-----|--------------|
| 001 | Dulcimar&Gtr |
| 002 | Springy      |
| 003 | InstantScore |
| 004 | Voltage Ctrl |
| 005 | StereoSlicer |
| 006 | 5050 Bells   |
| 007 | House Kit    |
| 008 | BlisteringXV |
| 009 | XV SweepPad  |
| 010 | Andreas Cave |
| 011 | Pad/SqrLd XV |
| 012 | HybStr 5050  |
| 013 | Old Friends  |
| 014 | FM BellLayer |
| 015 | SlicedTrance |
| 016 | CrystalVoxXV |
| 017 | WayHipKits   |
| 018 | Symphony JV  |
| 019 | BellyPad5050 |
| 020 | DulcitarStk  |
| 021 | Nebular Vox  |
| 022 | Cosmic Dawn  |
| 023 | Labyrinth    |
| 024 | S&H Pad      |
| 025 | EasternSplit |
| 026 | Bully Kit    |
| 027 | TeknoSplit 1 |
| 028 | ChildrenSplt |
| 029 | Organ / Lead |
| 030 | Pad / Lead   |
| 031 | Bass / Lead  |
| 032 | S&H / Pad    |

# Demo Song List

1. Turbulent © 2001 Roland Corporation
2. Take Control © 2001 Roland Corporation
3. No Return © 2001 Roland Corporation
4. Grow Up © 2001 Roland Corporation



All rights reserved. Unauthorized use of this material for purposes other than private, personal enjoyment is a violation of applicable laws.

# MIDI Implementation

Model: XV-5050  
Date: Oct. 4, 2001  
Version: 1.00

## 1. Receive data

### ■Channel Voice Messages

\* Not received in Performance mode when the Receive Switch parameter (PERFORM/MIDI) is OFF.

#### ●Note off

| Status                   | 2nd byte | 3rd byte            |
|--------------------------|----------|---------------------|
| 8nH                      | kkH      | vvH                 |
| 9nH                      | kkH      | 00H                 |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16) |
| kk = note number:        |          | 00H - 7FH (0 - 127) |
| vv = note off velocity:  |          | 00H - 7FH (0 - 127) |

\* Not received when the Envelope Mode parameter (PATCH/CONTROL and RHYTHM/CONTROL) is NO-SUS.

#### ●Note on

| Status                   | 2nd byte | 3rd byte            |
|--------------------------|----------|---------------------|
| 9nH                      | kkH      | vvH                 |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16) |
| kk = note number:        |          | 00H - 7FH (0 - 127) |
| vv = note on velocity:   |          | 01H - 7FH (1 - 127) |

#### ●Polyphonic Key Pressure

| Status                        | 2nd byte | 3rd byte            |
|-------------------------------|----------|---------------------|
| AnH                           | kkH      | vvH                 |
| n = MIDI channel number:      |          | 0H - FH (ch.1 - 16) |
| kk = note number:             |          | 00H - 7FH (0 - 127) |
| vv = Polyphonic Key Pressure: |          | 00H - 7FH (0 - 127) |

\* Not received in Performance mode when the Receive Poly Key Pressure parameter (PERFORM/MIDI) is OFF.

#### ●Control Change

- \* If the corresponding Controller number is selected for the Patch Control Source 1, 2, 3 or 4 parameter (PATCH/CONTROL), the corresponding effect will occur.
- \* If a Controller number that corresponds to the System Control Source 1, 2, 3 or 4 parameter (SYSTEM/CONTROL) is selected, the specified effect will apply if Patch Control Source 1, 2, 3 or 4 parameter (PATCH/CONTROL) is set to SYS-CTRL1, SYS-CTRL2, SYS-CTRL3 or SYS-CTRL4.

#### ○Bank Select (Controller number 0, 32)

| Status                   | 2nd byte | 3rd byte                              |
|--------------------------|----------|---------------------------------------|
| BnH                      | 00H      | mmH                                   |
| BnH                      | 20H      | llH                                   |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16)                   |
| mm, ll = Bank number:    |          | 00 00H - 7F 7FH (bank.1 - bank.16384) |

- \* Not received in Performance mode when the Receive Bank Select (PERFORM/MIDI) is OFF.
- \* The Performances, Patches, and Rhythms corresponding to each Bank Select are as follows.
- \* The SRX series corresponding to each Bank Select are to see the SRX series owner's manual.

| BANK | SELECT | PROGRAM   | GROUP                | NUMBER    |
|------|--------|-----------|----------------------|-----------|
| MSB  | LSB    | NUMBER    |                      |           |
| 085  | 000    | 001 - 064 | User Performance     | 001 - 064 |
|      | 064    | 001 - 032 | Preset Performance A | 001 - 032 |
|      | 065    | 001 - 032 | Preset Performance B | 001 - 032 |
| 086  | 000    | 001 - 004 | User Rhythm          | 001 - 004 |
|      | 064    | 001 - 002 | Preset Rhythm A      | 001 - 002 |
|      | 065    | 001 - 002 | Preset Rhythm B      | 001 - 002 |
| 087  | 000    | 001 - 128 | User Patch           | 001 - 128 |
|      | 064    | 001 - 128 | Preset Patch A       | 001 - 128 |
|      | 065    | 001 - 128 | Preset Patch B       | 001 - 128 |
| 092  | 000    | 001 -     | SRX Rhythm           | 001 -     |
|      | 000    | 001 -     | SRX Patch            | 001 -     |
|      | 000    | 001 -     | GM Rhythm            | 001 - 009 |
| 120  | 000    | 001 - 057 | GM Rhythm            | 001 - 009 |
| 121  | 000    | 001 - 128 | GM Patch             | 001 - 256 |

#### ○Modulation (Controller number 1)

| Status                   | 2nd byte | 3rd byte            |
|--------------------------|----------|---------------------|
| BnH                      | 01H      | vvH                 |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16) |
| vv = Modulation depth:   |          | 00H - 7FH (0 - 127) |

\* Not received in Performance mode when the Receive Modulation parameter (PERFORM/MIDI) is OFF.

#### ○Breath type (Controller number 2)

| Status                   | 2nd byte | 3rd byte            |
|--------------------------|----------|---------------------|
| BnH                      | 02H      | vvH                 |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16) |
| vv = Control value:      |          | 00H - 7FH (0 - 127) |

#### ○Foot type (Controller number 4)

| Status                   | 2nd byte | 3rd byte            |
|--------------------------|----------|---------------------|
| BnH                      | 04H      | vvH                 |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16) |
| vv = Control value:      |          | 00H - 7FH (0 - 127) |

#### ○Portamento Time (Controller number 5)

| Status                   | 2nd byte | 3rd byte            |
|--------------------------|----------|---------------------|
| BnH                      | 05H      | vvH                 |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16) |
| vv = Portamento Time:    |          | 00H - 7FH (0 - 127) |

\* In Performance mode the Part Portamento Time parameter (PERFORM/PART) will change.

#### ○Data Entry (Controller number 6, 38)

| Status                                                    | 2nd byte | 3rd byte            |
|-----------------------------------------------------------|----------|---------------------|
| BnH                                                       | 06H      | mmH                 |
| BnH                                                       | 26H      | llH                 |
| n = MIDI channel number:                                  |          | 0H - FH (ch.1 - 16) |
| mm, ll = the value of the parameter specified by RPN/NRPN |          |                     |
| mm = MSB, ll = LSB                                        |          |                     |

#### ○Volume (Controller number 7)

| Status                   | 2nd byte | 3rd byte            |
|--------------------------|----------|---------------------|
| BnH                      | 07H      | vvH                 |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16) |
| vv = Volume:             |          | 00H - 7FH (0 - 127) |

\* Not received in Performance mode when the Receive Volume parameter (PERFORM/MIDI) is OFF.

\* In Performance mode the Part Level parameter (PERFORM/PART) will change.

#### ○Balance (Controller number 8)

| Status                   | 2nd byte | 3rd byte            |
|--------------------------|----------|---------------------|
| BnH                      | 08H      | vvH                 |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16) |
| vv = Balance:            |          | 00H - 7FH (0 - 127) |

#### ○Panpot (Controller number 10)

| Status                   | 2nd byte | 3rd byte                                |
|--------------------------|----------|-----------------------------------------|
| BnH                      | 0AH      | vvH                                     |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16)                     |
| vv = Panpot:             |          | 00H - 40H - 7FH (Left - Center - Right) |

\* Not received in Performance mode when the Receive Pan parameter (PERFORM/MIDI) is OFF.

\* In Performance mode the Part Pan parameter (PERFORM/PART) will change.

#### ○Expression (Controller number 11)

| Status                   | 2nd byte | 3rd byte            |
|--------------------------|----------|---------------------|
| BnH                      | 0BH      | vvH                 |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16) |
| vv = Expression:         |          | 00H - 7FH (0 - 127) |

\* Not received when Tone Receive Expression parameter (PATCH/CONTROL or RHYTHM/CONTROL) is OFF.

\* Not received in Performance mode when Receive Expression parameter (PERFORM/MIDI) is OFF.

**○Hold 1 (Controller number 64)**

| Status                   | 2nd byte                                    | 3rd byte |
|--------------------------|---------------------------------------------|----------|
| BnH                      | 40H                                         | vvH      |
| n = MIDI channel number: | 0H - FH (ch.1 - 16)                         |          |
| vv = Control value:      | 00H - 7FH (0 - 127) 0-63 = OFF, 64-127 = ON |          |

- \* Not received when Tone Receive Hold-1 parameter (PATCH/CONTROL or RHYTHM/CONTROL) is OFF.
- \* Not received in Performance mode when Receive Hold-1 parameter (PERFORM/MIDI) is OFF.

**○Portamento (Controller number 65)**

| Status                   | 2nd byte                                        | 3rd byte |
|--------------------------|-------------------------------------------------|----------|
| BnH                      | 41H                                             | vvH      |
| n = MIDI channel number: | 0H - FH (ch.1 - 16)                             |          |
| vv = Control value:      | 00H - 7FH (0 - 127) 0 - 63 = OFF, 64 - 127 = ON |          |

- \* In Performance mode the Part Portamento Switch parameter (PERFORM/PART) will change.

**○Sostenuto (Controller number 66)**

| Status                   | 2nd byte                                        | 3rd byte |
|--------------------------|-------------------------------------------------|----------|
| BnH                      | 42H                                             | vvH      |
| n = MIDI channel number: | 0H - FH (ch.1 - 16)                             |          |
| vv = Control value:      | 00H - 7FH (0 - 127) 0 - 63 = OFF, 64 - 127 = ON |          |

**○Soft (Controller number 67)**

| Status                   | 2nd byte                                        | 3rd byte |
|--------------------------|-------------------------------------------------|----------|
| BnH                      | 43H                                             | vvH      |
| n = MIDI channel number: | 0H - FH (ch.1 - 16)                             |          |
| vv = Control value:      | 00H - 7FH (0 - 127) 0 - 63 = OFF, 64 - 127 = ON |          |

**○Legato Foot Switch (Controller number 68)**

| Status                   | 2nd byte                                        | 3rd byte |
|--------------------------|-------------------------------------------------|----------|
| BnH                      | 44H                                             | vvH      |
| n = MIDI channel number: | 0H - FH (ch.1 - 16)                             |          |
| vv = Control value:      | 00H - 7FH (0 - 127) 0 - 63 = OFF, 64 - 127 = ON |          |

- \* In Performance mode the Part Legato Switch parameter (PERFORM/PART) will change.

**○Hold-2 (Controller number 69)**

| Status                   | 2nd byte            | 3rd byte |
|--------------------------|---------------------|----------|
| BnH                      | 45H                 | vvH      |
| n = MIDI channel number: | 0H - FH (ch.1 - 16) |          |
| vv = Control value:      | 00H - 7FH (0 - 127) |          |

- \* A hold movement isn't done.

**○Resonance (Controller number 71)**

| Status                                  | 2nd byte                         | 3rd byte |
|-----------------------------------------|----------------------------------|----------|
| BnH                                     | 47H                              | vvH      |
| n = MIDI channel number:                | 0H - FH (ch.1 - 16)              |          |
| vv = Resonance value (relative change): | 00H - 40H - 7FH (-64 - 0 - +63), |          |

- \* In Performance mode the Part Resonance Offset parameter (PERFORM/PART) will change.

**○Release Time (Controller number 72)**

| Status                                     | 2nd byte                        | 3rd byte |
|--------------------------------------------|---------------------------------|----------|
| BnH                                        | 48H                             | vvH      |
| n = MIDI channel number:                   | 0H - FH (ch.1 - 16)             |          |
| vv = Release Time value (relative change): | 00H - 40H - 7FH (-64 - 0 - +63) |          |

- \* In Performance mode the Part Release Time Offset parameter (PERFORM/PART) will change.

**○Attack time (Controller number 73)**

| Status                                    | 2nd byte                        | 3rd byte |
|-------------------------------------------|---------------------------------|----------|
| BnH                                       | 49H                             | vvH      |
| n = MIDI channel number:                  | 0H - FH (ch.1 - 16)             |          |
| vv = Attack time value (relative change): | 00H - 40H - 7FH (-64 - 0 - +63) |          |

- \* In Performance mode the Part Attack Time Offset parameter (PERFORM/PART) will change.

**○Cutoff (Controller number 74)**

| Status                               | 2nd byte                        | 3rd byte |
|--------------------------------------|---------------------------------|----------|
| BnH                                  | 4AH                             | vvH      |
| n = MIDI channel number:             | 0H - FH (ch.1 - 16)             |          |
| vv = Cutoff value (relative change): | 00H - 40H - 7FH (-64 - 0 - +63) |          |

- \* In Performance mode the Part Cutoff Offset parameter (PERFORM/PART) will change.

**○Decay Time (Controller number 75)**

| Status                                   | 2nd byte                        | 3rd byte |
|------------------------------------------|---------------------------------|----------|
| BnH                                      | 4BH                             | vvH      |
| n = MIDI channel number:                 | 0H - FH (ch.1 - 16)             |          |
| vv = Decay Time value (relative change): | 00H - 40H - 7FH (-64 - 0 - +63) |          |

- \* In Performance mode the Part Decay Time Offset parameter (PERFORM/PART) will change.

**○Vibrato Rate (Controller number 76)**

| Status                                     | 2nd byte                        | 3rd byte |
|--------------------------------------------|---------------------------------|----------|
| BnH                                        | 4CH                             | vvH      |
| n = MIDI channel number:                   | 0H - FH (ch.1 - 16)             |          |
| vv = Vibrato Rate value (relative change): | 00H - 40H - 7FH (-64 - 0 - +63) |          |

- \* In Performance mode the Part Vibrato Rate parameter (PERFORM/PART) will change.

**○Vibrato Depth (Controller number 77)**

| Status                                      | 2nd byte                        | 3rd byte |
|---------------------------------------------|---------------------------------|----------|
| BnH                                         | 4DH                             | vvH      |
| n = MIDI channel number:                    | 0H - FH (ch.1 - 16)             |          |
| vv = Vibrato Depth Value (relative change): | 00H - 40H - 7FH (-64 - 0 - +63) |          |

- \* In Performance mode the Part Vibrato Depth parameter (PERFORM/PART) will change.

**○Vibrato Delay (Controller number 78)**

| Status                                      | 2nd byte                        | 3rd byte |
|---------------------------------------------|---------------------------------|----------|
| BnH                                         | 4EH                             | vvH      |
| n = MIDI channel number:                    | 0H - FH (ch.1 - 16)             |          |
| vv = Vibrato Delay value (relative change): | 00H - 40H - 7FH (-64 - 0 - +63) |          |

- \* In Performance mode the Part Vibrato Delay parameter (PERFORM/PART) will change.

**○General Purpose Controller 5 (Controller number 80)**

| Status                   | 2nd byte            | 3rd byte |
|--------------------------|---------------------|----------|
| BnH                      | 50H                 | vvH      |
| n = MIDI channel number: | 0H - FH (ch.1 - 16) |          |
| vv = Control value:      | 00H - 7FH (0 - 127) |          |

- \* The Tone Level parameter (PATCH/TVA) of Tone 1 will change.

**○General Purpose Controller 6 (Controller number 81)**

| Status                   | 2nd byte            | 3rd byte |
|--------------------------|---------------------|----------|
| BnH                      | 51H                 | vvH      |
| n = MIDI channel number: | 0H - FH (ch.1 - 16) |          |
| vv = Control value:      | 00H - 7FH (0 - 127) |          |

- \* The Tone Level parameter (PATCH/TVA) of Tone 2 will change.

**○General Purpose Controller 7 (Controller number 82)**

| Status                   | 2nd byte            | 3rd byte |
|--------------------------|---------------------|----------|
| BnH                      | 52H                 | vvH      |
| n = MIDI channel number: | 0H - FH (ch.1 - 16) |          |
| vv = Control value:      | 00H - 7FH (0 - 127) |          |

- \* The Tone Level parameter (PATCH/TVA) of Tone 3 will change.

**○General Purpose Controller 8 (Controller number 83)**

| Status                   | 2nd byte            | 3rd byte |
|--------------------------|---------------------|----------|
| BnH                      | 53H                 | vvH      |
| n = MIDI channel number: | 0H - FH (ch.1 - 16) |          |
| vv = Control value:      | 00H - 7FH (0 - 127) |          |

- \* The Tone Level parameter (PATCH/TVA) of Tone 4 will change.

# MIDI Implementation

## ○Portamento control (Controller number 84)

| Status                   | 2nd byte | 3rd byte             |
|--------------------------|----------|----------------------|
| BnH                      | 54H      | kkH                  |
| n = MIDI channel number: |          | 00H - FH (ch.1 - 16) |
| kk = source note number: |          | 00H - 7FH (0 - 127)  |

- \* A Note-on received immediately after a Portamento Control message will change continuously in pitch, starting from the pitch of the Source Note Number.
- \* If a voice is already sounding for a note number identical to the Source Note Number, this voice will continue sounding (i.e., legato) and will, when the next Note-on is received, smoothly change to the pitch of that Note-on.
- \* The rate of the pitch change caused by Portamento Control is determined by the Portamento Time value.

## ○Effect 1 (Reverb Send Level) (Controller number 91)

| Status                   | 2nd byte | 3rd byte             |
|--------------------------|----------|----------------------|
| BnH                      | 5BH      | vvH                  |
| n = MIDI channel number: |          | 00H - FH (ch.1 - 16) |
| vv = Reverb Send Level:  |          | 00H - 7FH (0 - 127)  |

- \* In Performance mode the Part Reverb Send Level parameter (PERFORM/EFFECTS) will change.

## ○Effect 3 (Chorus Send Level) (Controller number 93)

| Status                   | 2nd byte | 3rd byte             |
|--------------------------|----------|----------------------|
| BnH                      | 5DH      | vvH                  |
| n = MIDI channel number: |          | 00H - FH (ch.1 - 16) |
| vv = Chorus Send Level:  |          | 00H - 7FH (0 - 127)  |

- \* In Performance mode the Part Chorus Send Level parameter (PERFORM/EFFECTS) will change.

## ○RPN MSB/LSB (Controller number 100, 101)

| Status                                                     | 2nd byte             | 3rd byte |
|------------------------------------------------------------|----------------------|----------|
| BnH                                                        | 65H                  | mmH      |
| BnH                                                        | 64H                  | llH      |
| n = MIDI channel number:                                   | 00H - FH (ch.1 - 16) |          |
| mm = upper byte (MSB) of parameter number specified by RPN |                      |          |
| ll = lower byte (LSB) of parameter number specified by RPN |                      |          |

<<< RPN >>>

Control Changes include RPN (Registered Parameter Numbers), which are extended. When using RPNs, first RPN (Controller numbers 100 and 101; they can be sent in any order) should be sent in order to select the parameter, then Data Entry (Controller numbers 6 and 38) should be sent to set the value. Once RPN messages are received, Data Entry messages that is received at the same MIDI channel after that are recognized as changing toward the value of the RPN messages. In order not to make any mistakes, transmitting RPN Null is recommended after setting parameters you need.

This device receives the following RPNs.

| RPN                                                                                                                                               | Data entry | Notes                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| MSB, LSB                                                                                                                                          | MSB, LSB   |                                                                                                                                                    |
| 00H, 00H                                                                                                                                          | mmH, llH   | Pitch Bend Sensitivity<br>mm: 00H - 18H (0 - 24 semitones)<br>ll: ignored (processed as 00H)<br>Up to 2 octave can be specified in semitone steps. |
| * In Performance mode, the Part Bend Range parameter (PERFORM/PART) will change.                                                                  |            |                                                                                                                                                    |
| 00H, 01H                                                                                                                                          | mmH, llH   | Channel Fine Tuning<br>mm, ll: 20 00H - 40 00H - 60 00H<br>(-4096 x 100 / 8192 - 0 - +4096 x 100 / 8192 cent)                                      |
| * In Performance mode, the Part Fine Tune parameter (PERFORM/PART) will change.                                                                   |            |                                                                                                                                                    |
| 00H, 02H                                                                                                                                          | mmH, llH   | Channel Coarse Tuning<br>mm: 10H - 40H - 70H (-48 - 0 - +48 semitones)<br>ll: ignored (processed as 00H)                                           |
| * In Performance mode, the Part Coarse Tune parameter (PERFORM/PART) will change.                                                                 |            |                                                                                                                                                    |
| 00H, 05H                                                                                                                                          | mmH, llH   | Modulation Depth Range<br>mm: 00 00H - 06 00H<br>(0 - 16384 x 600 / 16384 cent)                                                                    |
| * Not received in Patch mode.                                                                                                                     |            |                                                                                                                                                    |
| 7FH, 7FH                                                                                                                                          | ---        | RPN null                                                                                                                                           |
| RPN and NRPN will be set as "unspecified." Once this setting has been made, subsequent Parameter values that were previously set will not change. |            |                                                                                                                                                    |
|                                                                                                                                                   |            | mm, ll: ignored                                                                                                                                    |

## ●Program Change

| Status                   | 2nd byte                      |
|--------------------------|-------------------------------|
| CnH                      | ppH                           |
| n = MIDI channel number: | 00H - FH (ch.1 - 16)          |
| pp = Program number:     | 00H - 7FH (prog.1 - prog.128) |

- \* Not received in Performance mode when the Receive Program Change parameter (PERFORM/MIDI) is OFF.

## ●Channel Pressure

| Status                   | 2nd byte             |
|--------------------------|----------------------|
| DnH                      | vvH                  |
| n = MIDI channel number: | 00H - FH (ch.1 - 16) |
| vv = Channel Pressure:   | 00H - 7FH (0 - 127)  |

- \* Not received in Performance mode when the Receive Channel Pressure parameter (PERFORM/MIDI) is OFF.

## ●Pitch Bend Change

| Status                     | 2nd byte | 3rd byte                                     |
|----------------------------|----------|----------------------------------------------|
| EnH                        | llH      | mmH                                          |
| n = MIDI channel number:   |          | 00H - FH (ch.1 - 16)                         |
| mm, ll = Pitch Bend value: |          | 00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191) |

- \* Not received when the Tone Receive Bender parameter (PATCH/CONTROL) is OFF.
- \* Not received in Performance mode when the Receive Pitch Bend parameter (PERFORM/MIDI) is OFF.

## ■Channel Mode Messages

- \* Not received in Performance mode when the Receive Switch parameter (PERFORM/MIDI) is OFF.

## ●All Sounds Off (Controller number 120)

| Status                   | 2nd byte             | 3rd byte |
|--------------------------|----------------------|----------|
| BnH                      | 78H                  | 00H      |
| n = MIDI channel number: | 00H - FH (ch.1 - 16) |          |

- \* When this message is received, all notes currently sounding on the corresponding channel will be turned off.

## ●Reset All Controllers (Controller number 121)

| Status                   | 2nd byte             | 3rd byte |
|--------------------------|----------------------|----------|
| BnH                      | 79H                  | 00H      |
| n = MIDI channel number: | 00H - FH (ch.1 - 16) |          |

- \* When this message is received, the following controllers will be set to their reset values.

| Controller              | Reset value                                |
|-------------------------|--------------------------------------------|
| Pitch Bend Change       | +/-0 (center)                              |
| Polyphonic Key Pressure | 0 (off)                                    |
| Channel Pressure        | 0 (off)                                    |
| Modulation              | 0 (off)                                    |
| Breath Type             | 0 (min)                                    |
| Expression              | 127 (max)                                  |
|                         | However the controller will be at minimum. |
| Hold 1                  | 0 (off)                                    |
| Sostenuto               | 0 (off)                                    |
| Soft                    | 0 (off)                                    |
| Hold 2                  | 0 (off)                                    |
| RPN                     | unset; previously set data will not change |
| NRPN                    | unset; previously set data will not change |

## ●All Notes Off (Controller number 123)

| Status                   | 2nd byte             | 3rd byte |
|--------------------------|----------------------|----------|
| BnH                      | 7BH                  | 00H      |
| n = MIDI channel number: | 00H - FH (ch.1 - 16) |          |

- \* When All Notes Off is received, all notes on the corresponding channel will be turned off. However, if Hold 1 or Sostenuto is ON, the sound will be continued until these are turned off.

**●OMNI OFF (Controller number 124)**

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH    | 7CH      | 00H      |

n = MIDI channel number: 0H - FH (ch.1 - 16)

\* The same processing will be carried out as when All Notes Off is received.

**●OMNI ON (Controller number 125)**

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH    | 7DH      | 00H      |

n = MIDI channel number: 0H - FH (ch.1 - 16)

\* The same processing will be carried out as when All Notes Off is received. OMNI ON will not be turned on.

**●MONO (Controller number 126)**

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH    | 7EH      | mmH      |

n = MIDI channel number: 0H - FH (ch.1 - 16)  
mm = mono number: 00H - 10H (0 - 16)

\* The same processing will be carried out as when All Notes Off is received.

\* In Performance mode, the Part Mono/Poly parameter (PERFORM/PART) will change.

**●POLY (Controller number 127)**

| Status | 2nd byte | 3rd byte |
|--------|----------|----------|
| BnH    | 7FH      | 00H      |

n = MIDI channel number: 0H - FH (ch.1 - 16)

\* The same processing will be carried out as when All Notes Off is received.

\* In Performance mode, the Part Mono/Poly parameter (PERFORM/PART) will change.

**■System Realtime Message****●Active Sensing**

| Status |
|--------|
| FEH    |

\* When Active Sensing is received, the unit will begin monitoring the intervals of all further messages. While monitoring, if the interval between messages exceeds 420 ms, the same processing will be carried out as when All Sounds Off, All Notes Off and Reset All Controllers are received, and message interval monitoring will be halted.

**■System Exclusive Message**

| Status             | Data byte                                                                                                                                                                                                                                                               | Status |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| F0H                | iiH, ddH, .....,eeH                                                                                                                                                                                                                                                     | F7H    |
| F0H:               | System Exclusive Message status                                                                                                                                                                                                                                         |        |
| ii = ID number:    | This is the ID number (manufacturer ID) to indicate the manufacturer whose Exclusive message. Roland's manufacturer ID is 41H. ID numbers 7EH and 7FH are extensions of the MIDI standard; Universal Non-realtime Messages (7EH) and Universal Realtime Messages (7FH). |        |
| dd,....,ee = data: | 00H - 7FH (0 - 127)                                                                                                                                                                                                                                                     |        |
| F7H:               | EOX (End Of Exclusive)                                                                                                                                                                                                                                                  |        |

Of the System Exclusive messages received by this device, the Universal Non-realtime messages and the Universal Realtime messages and the Data Request (RQ1) messages and the Data Set (DT1) messages will be set automatically.

**●Universal Non-realtime System Exclusive Messages****○Identity Request Message**

| Status | Data byte                                  | Status |
|--------|--------------------------------------------|--------|
| F0H    | 7EH, dev, 06H, 01H                         | F7H    |
| Byte   | Explanation                                |        |
| F0H    | Exclusive status                           |        |
| 7EH    | ID number (Universal Non-realtime Message) |        |
| dev    | Device ID (dev: 10H - 1FH, 7FH)            |        |
| 06H    | Sub ID#1 (General Information)             |        |
| 01H    | Sub ID#2 (Identity Request)                |        |
| F7H    | EOX (End Of Exclusive)                     |        |

\* When this message is received, Identity Reply message (p. 161) will be transmitted.

**○GM1 System On**

| Status | Data byte          | Status |
|--------|--------------------|--------|
| F0H    | 7EH, 7FH, 09H, 01H | F7H    |

| Byte | Explanation                                |
|------|--------------------------------------------|
| F0H  | Exclusive status                           |
| 7EH  | ID number (Universal Non-realtime Message) |
| 7FH  | Device ID (Broadcast)                      |
| 09H  | Sub ID#1 (General MIDI Message)            |
| 01H  | Sub ID#2 (General MIDI 1 On)               |
| F7H  | EOX (End Of Exclusive)                     |

\* When this messages is received, this instrument will turn to the GM mode.

\* Not received when the Receive GM1 System On parameter (SYSTEM/MIDI&USB) is OFF.

**○GM2 System On**

| Status | Data byte       | Status |
|--------|-----------------|--------|
| F0H    | 7EH 7FH 09H 03H | F7H    |

| Byte | Explanation                                |
|------|--------------------------------------------|
| F0H  | Exclusive status                           |
| 7EH  | ID number (Universal Non-realtime Message) |
| 7FH  | Device ID (Broadcast)                      |
| 09H  | Sub ID#1 (General MIDI Message)            |
| 03H  | Sub ID#2 (General MIDI 2 On)               |
| F7H  | EOX (End Of Exclusive)                     |

\* When this messages is received, this instrument will turn to the GM mode.

\* Not received when the Receive GM2 System On parameter (SYSTEM/MIDI&USB) is OFF.

**○GM System Off**

| Status | Data byte         | Status |
|--------|-------------------|--------|
| F0H    | 7EH, 7F, 09H, 02H | F7H    |

| Byte | Explanation                                |
|------|--------------------------------------------|
| F0H  | Exclusive status                           |
| 7EH  | ID number (Universal Non-realtime Message) |
| 7FH  | Device ID (Broadcast)                      |
| 09H  | Sub ID#1 (General MIDI Message)            |
| 02H  | Sub ID#2 (General MIDI Off)                |
| F7H  | EOX (End Of Exclusive)                     |

\* When this messages is received, this instrument will return to the Performance mode.

**●Universal Realtime System Exclusive Messages****○Master Volume**

| Status | Data byte                    | Status |
|--------|------------------------------|--------|
| F0H    | 7FH, 7FH, 04H, 01H, llH, mmH | F7H    |

| Byte | Explanation                            |
|------|----------------------------------------|
| F0H  | Exclusive status                       |
| 7FH  | ID number (universal realtime message) |
| 7FH  | Device ID (Broadcast)                  |
| 04H  | Sub ID#1 (Device Control)              |
| 01H  | Sub ID#2 (Master Volume)               |
| llH  | Master Volume lower byte               |
| mmH  | Master Volume upper byte               |
| F7H  | EOX (End Of Exclusive)                 |

\* The lower byte (llH) of Master Volume will be handled as 00H.

\* The Master Level parameter (SYSTEM/GENERAL) will change.

# MIDI Implementation

## ○Master Fine Tuning

| Status | Data byte                    | Status |
|--------|------------------------------|--------|
| F0H    | 7FH, 7FH, 04H, 03H, 11H, mmH | F7H    |

| Byte | Explanation                            |
|------|----------------------------------------|
| F0H  | Exclusive status                       |
| 7FH  | ID number (universal realtime message) |
| 7FH  | Device ID (Broadcast)                  |
| 04H  | Sub ID#1 (Device Control)              |
| 03H  | Sub ID#2 (Master Fine Tuning)          |
| 11H  | Master Fine Tuning LSB                 |
| mmH  | Master Fine Tuning MSB                 |
| F7H  | EOX (End Of Exclusive)                 |

mm, ll: 00 00H - 40 00H - 7F 7FH (-100 - 0 - +99.9 [cents])

\* The Master Tune parameter (SYSTEM/GENERAL) will change.

## ○Master Coarse Tuning

| Status | Data byte                    | Status |
|--------|------------------------------|--------|
| F0H    | 7FH, 7FH, 04H, 04H, 11H, mmH | F7     |

| Byte | Explanation                            |
|------|----------------------------------------|
| F0H  | Exclusive status                       |
| 7FH  | ID number (universal realtime message) |
| 7FH  | Device ID (Broadcast)                  |
| 04H  | Sub ID#1 (Device Control)              |
| 04H  | Sub ID#2 (Master Coarse Tuning)        |
| 11H  | Master Coarse Tuning LSB               |
| mmH  | Master Coarse Tuning MSB               |
| F7H  | EOX (End Of Exclusive)                 |

11H: ignored (processed as 00H)  
mmH: 28H - 40H - 58H (-24 - 0 - +24 [semitones])

\* The Master Key Shift parameter (SYSTEM/GENERAL) will change.

## ●Global Parameter Control

\* Not received in Patch mode.

## ○Reverb Parameters

| Status | Data byte                                                | Status |
|--------|----------------------------------------------------------|--------|
| F0H    | 7FH, 7FH, 04H, 05H, 01H, 01H,<br>01H, 01H, 01H, ppH, vvH | F7H    |

| Byte | Explanation                            |
|------|----------------------------------------|
| F0H  | Exclusive status                       |
| 7FH  | ID number (universal realtime message) |
| 7FH  | Device ID (Broadcast)                  |
| 04H  | Sub ID#1 (Device Control)              |
| 05H  | Sub ID#2 (Global Parameter Control)    |
| 01H  | Slot path length                       |
| 01H  | Parameter ID width                     |
| 01H  | Value width                            |
| 01H  | Slot path MSB                          |
| 01H  | Slot path LSB (Effect 0101: Reverb)    |
| ppH  | Parameter to be controlled.            |
| vvH  | Value for the parameter.               |
|      | pp=0 Reverb Type                       |
|      | vv = 00H Small Room                    |
|      | vv = 01H Medium Room                   |
|      | vv = 02H Large Room                    |
|      | vv = 03H Medium Hall                   |
|      | vv = 04H Large Hall                    |
|      | vv = 08H Plate                         |
|      | pp=1 Reverb Time                       |
|      | vv = 00H - 7FH 0 - 127                 |
| F7H  | EOX (End Of Exclusive)                 |

## ○Chorus Parameters

| Status | Data byte                                                | Status |
|--------|----------------------------------------------------------|--------|
| F0H    | 7FH, 7FH, 04H, 05H, 01H, 01H,<br>01H, 01H, 02H, ppH, vvH | F7H    |

| Byte | Explanation                            |
|------|----------------------------------------|
| F0H  | Exclusive status                       |
| 7FH  | ID number (universal realtime message) |
| 7FH  | Device ID (Broadcast)                  |
| 04H  | Sub ID#1 (Device Control)              |
| 05H  | Sub ID#2 (Global Parameter Control)    |
| 01H  | Slot path length                       |
| 01H  | Parameter ID width                     |
| 01H  | Value width                            |
| 01H  | Slot path MSB                          |
| 02H  | Slot path LSB (Effect 0102: Chorus)    |
| ppH  | Parameter to be controlled.            |
| vvH  | Value for the parameter.               |

pp=0 Chorus Type  
vv=0 Chorus1  
vv=1 Chorus2  
vv=2 Chorus3  
vv=3 Chorus4  
vv=4 FB Chorus  
vv=5 Flanger  
pp=1 Mod Rate  
vv= 00H - 7FH 0 - 127  
pp=2 Mod Depth  
vv = 00H - 7FH 0 - 127  
pp=3 Feedback  
vv = 00H - 7FH 0 - 127  
pp=4 Send To Reverb  
vv = 00H - 7FH 0 - 127  
F7H EOX (End Of Exclusive)

## ○Channel Pressure

| Status | Data byte                         | Status |
|--------|-----------------------------------|--------|
| F0H    | 7FH, 7FH, 09H, 01H, 0nH, ppH, rrH | F7H    |

| Byte | Explanation                               |
|------|-------------------------------------------|
| F0H  | Exclusive status                          |
| 7FH  | ID number (universal realtime message)    |
| 7FH  | Device ID (Broadcast)                     |
| 09H  | Sub ID#1 (Controller Destination Setting) |
| 01H  | Sub ID#2 (Channel Pressure)               |
| 0nH  | MIDI Channel (00 - 0F)                    |
| ppH  | Controlled parameter                      |
| rrH  | Controlled range                          |
|      | pp=0 Pitch Control                        |
|      | rr = 28H - 58H -24 - +24 [semitones]      |
|      | pp=1 Filter Cutoff Control                |
|      | rr = 00H - 7FH -9600 - +9450 [cents]      |
|      | pp=2 Amplitude Control                    |
|      | rr = 00H - 7FH 0 - 200%                   |
|      | pp=3 LFO Pitch Depth                      |
|      | rr = 00H - 7FH 0 - 600 [cents]            |
|      | pp=4 LFO Filter Depth                     |
|      | rr = 00H - 7FH 0 - 2400 [cents]           |
|      | pp=5 LFO Amplitude Depth                  |
|      | rr = 00H - 7FH 0 - 100%                   |
| F7H  | EOX (End Of Exclusive)                    |

## ○Controller

| Status | Data byte                                 | Status |
|--------|-------------------------------------------|--------|
| F0H    | 7FH, 7FH, 09H, 03H, 0nH, ccH, ppH, rrH    | F7H    |
| Byte   | Explanation                               |        |
| F0H    | Exclusive status                          |        |
| 7FH    | ID number (universal realtime message)    |        |
| 7FH    | Device ID (Broadcast)                     |        |
| 09H    | Sub ID#1 (Controller Destination Setting) |        |
| 03H    | Sub ID#2 (Control Change)                 |        |
| 0nH    | MIDI Channel (00 - 0F)                    |        |
| ccH    | Controller number (01 - 1F, 40 - 5F)      |        |
| ppH    | Controlled parameter                      |        |
| rrH    | Controlled range                          |        |
|        | pp=0 Pitch Control                        |        |
|        | rr = 28H - 58H -24 - +24 [semitones]      |        |
|        | pp=1 Filter Cutoff Control                |        |
|        | rr = 00H - 7FH -9600 - +9450 [cents]      |        |
|        | pp=2 Amplitude Control                    |        |
|        | rr = 00H - 7FH 0 - 200%                   |        |
|        | pp=3 LFO Pitch Depth                      |        |
|        | rr = 00H - 7FH 0 - 600 [cents]            |        |
|        | pp=4 LFO Filter Depth                     |        |
|        | rr = 00H - 7FH 0 - 2400 [cents]           |        |
|        | pp=5 LFO Amplitude Depth                  |        |
|        | rr = 00H - 7FH 0 - 100%                   |        |
| F7H    | EOX (End Of Exclusive)                    |        |

## ○Scale/Octave Tuning Adjust

| Status | Data byte                                         | Status |
|--------|---------------------------------------------------|--------|
| F0H    | 7EH, 7FH, 08H, 08H, ffH, ggH, hhH, ssH...         | F7     |
| Byte   | Explanation                                       |        |
| F0H    | Exclusive status                                  |        |
| 7EH    | ID number (Universal Non-realtime Message)        |        |
| 7FH    | Device ID (Broadcast)                             |        |
| 08H    | Sub ID#1 (MIDI Tuning Standard)                   |        |
| 08H    | Sub ID#2 (scale/octave tuning 1-byte form)        |        |
| ffH    | Channel/Option byte 1                             |        |
|        | bits 0 to 1 = channel 15 to 16                    |        |
|        | bit 2 to 6 = Undefined                            |        |
| ggH    | Channel byte 2                                    |        |
|        | bits 0 to 6 = channel 8 to 14                     |        |
| hhH    | Channel byte 3                                    |        |
|        | bits 0 to 6 = channel 1 to 7                      |        |
| ssH    | 12 byte tuning offset of 12 semitones from C to B |        |
|        | 00H = -64 [cents]                                 |        |
|        | 40H = 0 [cents] (equal temperament)               |        |
|        | 7FH = +63 [cents]                                 |        |
| F7H    | EOX (End Of Exclusive)                            |        |

## ○Key-based Instrument Controllers

| Status | Data byte                               | Status |
|--------|-----------------------------------------|--------|
| F0H    | 7FH, 7FH, 0AH, 01H, 0nH, kkH, nnH, vvH  | F7H    |
| Byte   | Explanation                             |        |
| F0H    | Exclusive status                        |        |
| 7FH    | ID number (universal realtime message)  |        |
| 7FH    | Device ID (Broadcast)                   |        |
| 0AH    | Sub ID#1 (Key-Based Instrument Control) |        |
| 01H    | Sub ID#2 (Controller)                   |        |
| 0nH    | MIDI Channel (00 - 0FH)                 |        |
| kkH    | Key Number                              |        |
| nnH    | Control Number                          |        |
| vvH    | Value                                   |        |
|        | nn=07H Level                            |        |
|        | vv = 00H - 7FH 0 - 200% (Relative)      |        |
|        | nn=0AH Pan                              |        |
|        | vv = 00H - 7FH Left - Right (Absolute)  |        |
|        | nn=5BH Reverb Send                      |        |
|        | vv = 00H - 7FH 0 - 127 (Absolute)       |        |
|        | nn=5D Chorus Send                       |        |
|        | vv = 00H - 7FH 0 - 127 (Absolute)       |        |
| :      | :                                       |        |
| F7     | EOX (End Of Exclusive)                  |        |

\* This parameter affects drum instruments only.

## ●Data Transmission

This instrument can use exclusive messages to exchange many varieties of internal settings with other devices.

The model ID of the exclusive messages used by this instrument is 00H 10H.

## ○Data Request 1 RQ1 (11H)

This message requests the other device to transmit data. The address and size indicate the type and amount of data that is requested.

When a Data Request message is received, if the device is in a state in which it is able to transmit data, and if the address and size are appropriate, the requested data is transmitted as a Data Set 1 (DT1) message. If the conditions are not met, nothing is transmitted.

| Status | data byte                                                            | status |
|--------|----------------------------------------------------------------------|--------|
| F0H    | 41H, dev, 00H, 10H, 11H, aaH, bbH, ccH, ddH, ssH, ttH, uuH, vvH, sum | F7H    |
| Byte   | Remarks                                                              |        |
| F0H    | Exclusive status                                                     |        |
| 41H    | ID number (Roland)                                                   |        |
| dev    | device ID (dev: 10H - 1FH, 7FH)                                      |        |
| 00H    | model ID #1 (XV-5050)                                                |        |
| 10H    | model ID #2 (XV-5050)                                                |        |
| 11H    | command ID (RQ1)                                                     |        |
| aaH    | address MSB                                                          |        |
| bbH    | address                                                              |        |
| ccH    | address                                                              |        |
| ddH    | address LSB                                                          |        |
| ssH    | size MSB                                                             |        |
| ttH    | size                                                                 |        |
| uuH    | size                                                                 |        |
| vvH    | size LSB                                                             |        |
| sum    | checksum                                                             |        |
| F7H    | EOX (End Of Exclusive)                                               |        |

\* The size of data that can be transmitted at one time is fixed for each type of data. And data requests must be made with a fixed starting address and size. Refer to the address and size given in "Parameter Address Map" (p. 162).

\* For the checksum, refer to (p. 174).

\* Not received when the Receive Exclusive parameter (SYSTEM/MIDI&USB) is OFF.

## ○Data set 1 DT1 (12H)

| Status | Data byte                                                                                                    | Status |
|--------|--------------------------------------------------------------------------------------------------------------|--------|
| F0H    | 41H, dev, 00H, 10H, 12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum                                               | F7H    |
| Byte   | Explanation                                                                                                  |        |
| F0H    | Exclusive status                                                                                             |        |
| 41H    | ID number (Roland)                                                                                           |        |
| dev    | Device ID (dev: 00H - 1FH, 7FH)                                                                              |        |
| 00H    | Model ID #1 (XV-5050)                                                                                        |        |
| 10H    | Model ID #2 (XV-5050)                                                                                        |        |
| 12H    | Command ID (DT1)                                                                                             |        |
| aaH    | Address MSB: upper byte of the starting address of the data to be sent                                       |        |
| bbH    | Address: upper middle byte of the starting address of the data to be sent                                    |        |
| ccH    | Address: lower middle byte of the starting address of the data to be sent                                    |        |
| ddH    | Address LSB: lower byte of the starting address of the data to be sent.                                      |        |
| eeH    | Data: the actual data to be sent. Multiple bytes of data are transmitted in order starting from the address. |        |
| :      | :                                                                                                            |        |
| ffH    | Data                                                                                                         |        |
| sum    | Checksum                                                                                                     |        |
| F7H    | EOX (End Of Exclusive)                                                                                       |        |

\* The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the address and size given in "Parameter Address Map" (p. 162).

\* Data larger than 256 bytes will be divided into packets of 256 bytes or less, and each packet will be sent at an interval of about 20 ms.

\* Regarding the checksum, please refer to (p. 174)

\* Not received when the Receive Exclusive parameter (SYSTEM/MIDI&USB) is OFF.

# MIDI Implementation

| Status | Data byte                                                                                                  | Status |
|--------|------------------------------------------------------------------------------------------------------------|--------|
| F0H    | 41H, dev, 42H, 12H, aaH, bbH, ccH, ddH, ... eeH, sum                                                       | F7H    |
| Byte   | Explanation                                                                                                |        |
| F0H    | Exclusive status                                                                                           |        |
| 41H    | ID number (Roland)                                                                                         |        |
| dev    | Device ID (dev: 10H - 1FH, 7FH)                                                                            |        |
| 42H    | Model ID (GS)                                                                                              |        |
| 12H    | Command ID (DT1)                                                                                           |        |
| aaH    | Address MSB: upper byte of the starting address of the transmitted data                                    |        |
| bbH    | Address: middle byte of the starting address of the transmitted data                                       |        |
| ccH    | Address LSB: lower byte of the starting address of the transmitted data                                    |        |
| ddH    | Data: the actual data to be transmitted. Multiple bytes of data are transmitted starting from the address. |        |
| :      | :                                                                                                          |        |
| eeH    | Data                                                                                                       |        |
| sum    | Checksum                                                                                                   |        |
| F7H    | EOX (End Of Exclusive)                                                                                     |        |

- \* The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the address and size given in "Parameter Address Map" (p. 162).
- \* Data larger than 256 bytes will be divided into packets of 256 bytes or less, and each packet will be sent at an interval of about 20 ms.
- \* Regarding the checksum, please refer to (p. 174)
- \* Not received when the Receive Exclusive parameter (SYSTEM/MIDI&USB) is OFF.

## 2. Data Transmission

### ■Channel Voice Messages

When execute the Data Transfer, following Control Changes and Program Change will transmit.

### ●Control Change

#### ○Bank Select (Controller number 0, 32)

| Status                   | 2nd byte | 3rd byte                              |
|--------------------------|----------|---------------------------------------|
| BnH                      | 00H      | mmH                                   |
| BnH                      | 20H      | llH                                   |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16)                   |
| mm, ll = Bank number:    |          | 00 00H - 7F 7FH (bank.1 - bank.16384) |

#### ○Portamento Time (Controller number 5)

| Status                   | 2nd byte | 3rd byte            |
|--------------------------|----------|---------------------|
| BnH                      | 05H      | vvH                 |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16) |
| vv = Portamento Time:    |          | 00H - 7FH (0 - 127) |

#### ○Data Entry (Controller number 6, 38)

| Status                                                    | 2nd byte | 3rd byte            |
|-----------------------------------------------------------|----------|---------------------|
| BnH                                                       | 06H      | mmH                 |
| BnH                                                       | 26H      | llH                 |
| n = MIDI channel number:                                  |          | 0H - FH (ch.1 - 16) |
| mm, ll = the value of the parameter specified by RPN/NRPN |          |                     |
| mm = MSB, ll = LSB                                        |          |                     |

#### ○Volume (Controller number 7)

| Status                   | 2nd byte | 3rd byte            |
|--------------------------|----------|---------------------|
| BnH                      | 07H      | vvH                 |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16) |
| vv = Volume:             |          | 00H - 7FH (0 - 127) |

#### ○Panpot (Controller number 10)

| Status                   | 2nd byte | 3rd byte                                 |
|--------------------------|----------|------------------------------------------|
| BnH                      | 0AH      | vvH                                      |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16)                      |
| vv = Panpot:             |          | 00H - 40H - 7FH (Left - Center - Right), |

#### ○Portamento (Controller number 65)

| Status                   | 2nd byte | 3rd byte                                        |
|--------------------------|----------|-------------------------------------------------|
| BnH                      | 41H      | vvH                                             |
| n = MIDI channel number: |          | 0H - FH (ch.1 - 16)                             |
| vv = Control value:      |          | 00H - 7FH (0 - 127) 0 - 63 = OFF, 64 - 127 = ON |

#### ○Resonance (Controller number 71)

| Status                                  | 2nd byte | 3rd byte                        |
|-----------------------------------------|----------|---------------------------------|
| BnH                                     | 47H      | vvH                             |
| n = MIDI channel number:                |          | 0H - FH (ch.1 - 16)             |
| vv = Resonance value (relative change): |          | 00H - 40H - 7FH (-64 - 0 - +63) |

#### ○Release Time (Controller number 72)

| Status                                     | 2nd byte | 3rd byte                        |
|--------------------------------------------|----------|---------------------------------|
| BnH                                        | 48H      | vvH                             |
| n = MIDI channel number:                   |          | 0H - FH (ch.1 - 16)             |
| vv = Release Time value (relative change): |          | 00H - 40H - 7FH (-64 - 0 - +63) |

#### ○Attack time (Controller number 73)

| Status                                    | 2nd byte | 3rd byte                        |
|-------------------------------------------|----------|---------------------------------|
| BnH                                       | 49H      | vvH                             |
| n = MIDI channel number:                  |          | 0H - FH (ch.1 - 16)             |
| vv = Attack time value (relative change): |          | 00H - 40H - 7FH (-64 - 0 - +63) |

#### ○Cutoff (Controller number 74)

| Status                               | 2nd byte | 3rd byte                        |
|--------------------------------------|----------|---------------------------------|
| BnH                                  | 4AH      | vvH                             |
| n = MIDI channel number:             |          | 0H - FH (ch.1 - 16)             |
| vv = Cutoff value (relative change): |          | 00H - 40H - 7FH (-64 - 0 - +63) |

**○Decay Time (Controller number 75)**

| Status                                                                   | 2nd byte | 3rd byte |
|--------------------------------------------------------------------------|----------|----------|
| BnH                                                                      | 4BH      | vvH      |
| n = MIDI channel number: 0H - FH (ch.1 - 16)                             |          |          |
| vv = Decay Time value (relative change): 00H - 40H - 7FH (-64 - 0 - +63) |          |          |

**○Vibrato Rate (Controller number 76)**

| Status                                                                     | 2nd byte | 3rd byte |
|----------------------------------------------------------------------------|----------|----------|
| BnH                                                                        | 4CH      | vvH      |
| n = MIDI channel number: 0H - FH (ch.1 - 16)                               |          |          |
| vv = Vibrato Rate value (relative change): 00H - 40H - 7FH (-64 - 0 - +63) |          |          |

**○Vibrato Depth (Controller number 77)**

| Status                                                                      | 2nd byte | 3rd byte |
|-----------------------------------------------------------------------------|----------|----------|
| BnH                                                                         | 4DH      | vvH      |
| n = MIDI channel number: 0H - FH (ch.1 - 16)                                |          |          |
| vv = Vibrato Depth value (relative change): 00H - 40H - 7FH (-64 - 0 - +63) |          |          |

**○Vibrato Delay (Controller number 78)**

| Status                                                                      | 2nd byte | 3rd byte |
|-----------------------------------------------------------------------------|----------|----------|
| BnH                                                                         | 4EH      | vvH      |
| n = MIDI channel number: 0H - FH (ch.1 - 16)                                |          |          |
| vv = Vibrato Delay value (relative change): 00H - 40H - 7FH (-64 - 0 - +63) |          |          |

**○Effect 1 (Reverb Send Level) (Controller number 91)**

| Status                                       | 2nd byte | 3rd byte |
|----------------------------------------------|----------|----------|
| BnH                                          | 5BH      | vvH      |
| n = MIDI channel number: 0H - FH (ch.1 - 16) |          |          |
| vv = Reverb Send Level: 00H - 7FH (0 - 127)  |          |          |

**○Effect 3 (Chorus Send Level) (Controller number 93)**

| Status                                       | 2nd byte | 3rd byte |
|----------------------------------------------|----------|----------|
| BnH                                          | 5DH      | vvH      |
| n = MIDI channel number: 0H - FH (ch.1 - 16) |          |          |
| vv = Chorus Send Level: 00H - 7FH (0 - 127)  |          |          |

**○RPN MSB/LSB (Controller number 100, 101)**

| Status                                                     | 2nd byte | 3rd byte |
|------------------------------------------------------------|----------|----------|
| BnH                                                        | 65H      | mmH      |
| BnH                                                        | 64H      | llH      |
| n = MIDI channel number: 0H - FH (ch.1 - 16)               |          |          |
| mm = upper byte (MSB) of parameter number specified by RPN |          |          |
| ll = lower byte (LSB) of parameter number specified by RPN |          |          |

&lt;&lt;&lt; RPN &gt;&gt;&gt;

Control Changes include RPN (Registered Parameter Numbers), which are extended.

When using RPNs, first RPN (Controller numbers 100 and 101; they can be sent in any order) should be sent in order to select the parameter, then

Data Entry (Controller numbers 6 and 38) should be sent to set the value. Once RPN messages are received, Data Entry messages that is received at the same MIDI channel after that are recognized as changing toward the value of the RPN messages. In order not to make any mistakes, transmitting RPN Null is recommended after setting parameters you need.

This device transmits the following RPNs.

| RPN      | Data entry | Notes                                                                                                         |
|----------|------------|---------------------------------------------------------------------------------------------------------------|
| MSB, LSB | MSB, LSB   |                                                                                                               |
| 00H, 00H | mmH, llH   | Pitch Bend Sensitivity<br>mm: 00H - 18H (0 - 24 semitones)<br>ll: ignored (processed as 00H)                  |
| 00H, 01H | mmH, llH   | Channel Fine Tuning<br>mm, ll: 20 00H - 40 00H - 60 00H<br>(-4096 x 100 / 8192 - 0 - +4096 x 100 / 8192 cent) |
| 00H, 02H | mmH, llH   | Channel Coarse Tuning<br>mm: 10H - 40H - 70H (-48 - 0 - +48 semitones)<br>ll: ignored (processed as 00H)      |
| 00H, 05H | mmH, llH   | Modulation Depth Range<br>mm, ll: 00 00H - 06 00H<br>(0 - 16384 x 600 / 16384 cent)                           |
| 7FH, 7FH | ---, ---   | RPN null                                                                                                      |

RPN and NRPN will be set as "unspecified." Once this setting has been made, subsequent

**●Program Change**

| Status                                             | 2nd byte |
|----------------------------------------------------|----------|
| CnH                                                | ppH      |
| n = MIDI channel number: 0H - FH (ch.1 - 16)       |          |
| pp = Program number: 00H - 7FH (prog.1 - prog.128) |          |

**■System Exclusive Messages**

Universal Non-realtime System Exclusive Message and Data Set 1 (DT1) are the only System Exclusive messages transmitted by the XV-5050.

**●Universal Non-realtime System Exclusive Message****○Identity Reply Message**

Receiving Identity Request Message, the XV-5050 send this message.

| Status | Data byte                                                       | Status |
|--------|-----------------------------------------------------------------|--------|
| F0H    | 7EH, dev, 06H, 02H, 41H, 10H, 01H, 02H, 02H, 03H, 00H, 00H, 00H | F7H    |

| Byte            | Explanation                                |
|-----------------|--------------------------------------------|
| F0H             | Exclusive status                           |
| 7EH             | ID number (Universal Non-realtime Message) |
| dev             | Device ID (dev: 10H - 1FH)                 |
| 06H             | Sub ID#1 (General Information)             |
| 02H             | Sub ID#2 (Identity Reply)                  |
| 41H             | ID number (Roland)                         |
| 10H 01H         | Device family code                         |
| 02H 02H         | Device family number code                  |
| 03H 00H 00H 00H | Software revision level                    |
| F7H             | EOX (End of Exclusive)                     |

**●Data Transmission****○Data set 1 DT1 (12H)**

| Status | Data byte                                                      | Status |
|--------|----------------------------------------------------------------|--------|
| F0H    | 41H, dev, 00H, 10H, 12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum | F7H    |

| Byte | Explanation                                                                                                  |
|------|--------------------------------------------------------------------------------------------------------------|
| F0H  | Exclusive status                                                                                             |
| 41H  | ID number (Roland)                                                                                           |
| dev  | Device ID (dev: 00H - 1FH, 7FH)                                                                              |
| 00H  | Model ID #1 (XV-5050)                                                                                        |
| 10H  | Model ID #2 (XV-5050)                                                                                        |
| 12H  | Command ID (DT1)                                                                                             |
| aaH  | Address MSB: upper byte of the starting address of the data to be sent                                       |
| bbH  | Address: upper middle byte of the starting address of the data to be sent                                    |
| ccH  | Address: lower middle byte of the starting address of the data to be sent                                    |
| ddH  | Address LSB: lower byte of the starting address of the data to be sent                                       |
| eeH  | Data: the actual data to be sent. Multiple bytes of data are transmitted in order starting from the address. |
| :    | :                                                                                                            |
| ffH  | Data                                                                                                         |
| sum  | Checksum                                                                                                     |
| F7H  | EOX (End Of Exclusive)                                                                                       |

\* The amount of data that can be transmitted at one time depends on the type of data, and data will be transmitted from the specified starting address and size. Refer to the address and size given in "Parameter Address Map" (p. 162).

\* Data larger than 256 bytes will be divided into packets of 256 bytes or less, and each packet will be sent at an interval of about 20 ms.

# MIDI Implementation

## 3. Parameter Address Map

- \* Transmission of “#” marked address is divided to some packets. For example, ABH in hexadecimal notation will be divided to 0AH and 0BH, and is sent/received in this order.
- \* “<\*>” marked address or parameters are ignored when the XV-5050 received them.

### ■XV-5050 (Model ID = 00H 10H)

| Start Address | Description                                       |        |
|---------------|---------------------------------------------------|--------|
| 01 00 00 00   | Setup                                             | *1-1   |
| 02 00 00 00   | System                                            | *1-2   |
| 10 00 00 00   | Temporary Performance                             | *1-3   |
| 11 00 00 00   | Temporary Patch/Rhythm (Performance Mode Part 1)  | *1-4   |
| 11 20 00 00   | Temporary Patch/Rhythm (Performance Mode Part 2)  |        |
| 1F 00 00 00   | Temporary Patch/Rhythm (Performance Mode Part 16) |        |
| 20 00 00 00   | User Performance (01)                             | *1-3   |
| 20 01 00 00   | User Performance (02)                             |        |
| 20 3F 00 00   | User Performance (64)                             |        |
| 30 00 00 00   | User Patch (001)                                  | *1-4-1 |
| 30 01 00 00   | User Patch (002)                                  |        |
| 30 7F 00 00   | User Patch (128)                                  |        |
| 40 00 00 00   | User Rhythm (001)                                 | *1-4-2 |
| 40 10 00 00   | User Rhythm (002)                                 |        |
| 41 30 00 00   | User Rhythm (004)                                 |        |

#### 1-2 System

| Offset Address | Description   |        |
|----------------|---------------|--------|
| 00 00 00       | System Common | *1-2-1 |
| 00 02 00       | System EQ     | *1-2-2 |

#### 1-4 Temporary Patch/Rhythm

| Offset Address | Description      |        |
|----------------|------------------|--------|
| 00 00 00       | Temporary Patch  | *1-4-1 |
| 10 00 00       | Temporary Rhythm | *1-4-2 |

#### 1-3 Performance

| Offset Address | Description                   |        |
|----------------|-------------------------------|--------|
| 00 00 00       | Performance Common            | *1-3-1 |
| 00 02 00       | Performance Common MFXA       | *1-3-2 |
| 00 04 00       | Performance Common Chorus     | *1-3-3 |
| 00 06 00       | Performance Common Reverb     | *1-3-4 |
| 00 08 00       | Performance Common MFXB       | *1-3-2 |
| 00 0A 00       | Performance Common MFXC       | *1-3-2 |
| 00 10 00       | Performance MIDI (Channel 1)  | *1-3-5 |
| 00 11 00       | Performance MIDI (Channel 2)  |        |
| 00 1F 00       | Performance MIDI (Channel 16) |        |
| 00 20 00       | Performance Part (Part 1)     | *1-3-6 |
| 00 21 00       | Performance Part (Part 2)     |        |
| 00 2F 00       | Performance Part (Part 16)    |        |

#### 1-4-1 Patch

| Offset Address | Description                |          |
|----------------|----------------------------|----------|
| 00 00 00       | Patch Common               | *1-4-1-1 |
| 00 02 00       | Patch Common MFX           | *1-4-1-2 |
| 00 04 00       | Patch Common Chorus        | *1-4-1-3 |
| 00 06 00       | Patch Common Reverb        | *1-4-1-4 |
| 00 10 00       | Patch TMT (Tone Mix Table) | *1-4-1-5 |
| 00 20 00       | Patch Tone (Tone 1)        | *1-4-1-6 |
| 00 22 00       | Patch Tone (Tone 2)        |          |
| 00 24 00       | Patch Tone (Tone 3)        |          |
| 00 26 00       | Patch Tone (Tone 4)        |          |

#### 1-4-2 Rhythm

| Offset Address | Description             |          |
|----------------|-------------------------|----------|
| 00 00 00       | Rhythm Common           | *1-4-2-1 |
| 00 02 00       | Rhythm Common MFX       | *1-4-2-2 |
| 00 04 00       | Rhythm Common Chorus    | *1-4-2-3 |
| 00 06 00       | Rhythm Common Reverb    | *1-4-2-4 |
| 00 10 00       | Rhythm Tone (Key # 21)  | *1-4-2-5 |
| 00 12 00       | Rhythm Tone (Key # 22)  |          |
| 01 3E 00       | Rhythm Tone (Key # 108) |          |

#### 1-1 Setup

| Offset Address | Description |                                                    |
|----------------|-------------|----------------------------------------------------|
| 00 00          | 0000 0aaa   | Sound Mode (1 - 5)<br>PATCH, PERFORM, GM1, GM2, GS |
| 00 01          | 0aaa aaaa   | (reserved)                                         |
| 00 02          | 0aaa aaaa   | (reserved)                                         |
| 00 04          | 0aaa aaaa   | Performance Bank Select MSB (CC# 0) (0 - 127)      |

|             |            |                                      |                       |
|-------------|------------|--------------------------------------|-----------------------|
| 00 05       | 0aaa aaaa  | Performance Bank Select LSB (CC# 32) | (0 - 127)             |
| 00 06       | 0aaa aaaa  | Performance Program Number (PC)      | (0 - 127)             |
| 00 07       | 0aaa aaaa  | Patch Bank Select MSB (CC# 0)        | (0 - 127)             |
| 00 08       | 0aaa aaaa  | Patch Bank Select LSB (CC# 32)       | (0 - 127)             |
| 00 09       | 0aaa aaaa  | Patch Program Number (PC)            | (0 - 127)             |
| 00 0A       | 0000 000a  | MFx Switch                           | (0 - 1)<br>BYPASS, ON |
| 00 0B       | 0000 000a  | Chorus Switch                        | (0 - 1)<br>OFF, ON    |
| 00 0C       | 0000 000a  | Reverb Switch                        | (0 - 1)<br>OFF, ON    |
| 00 0D       | 0000 aaaa  | Transpose Value                      | (59 - 70)<br>-5 - +6  |
| 00 0E       | 0000 0aaa  | Octave Shift                         | (61 - 67)<br>-3 - +3  |
| 00 00 00 0F | Total Size |                                      |                       |

#### 1-2-1 System Common

| Offset<br>Address |             | Description                                                                        |                                                                  |
|-------------------|-------------|------------------------------------------------------------------------------------|------------------------------------------------------------------|
| #                 | 00 00       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd                                   | Master Tune<br>(24 - 2024)<br>-100.0 - 100.0 [cent]<br>(40 - 88) |
|                   | 00 04       | 00aa aaaa                                                                          | Master Key Shift<br>-24 - +24<br>(0 - 127)                       |
|                   | 00 05       | 0aaa aaaa                                                                          | Master Level<br>(0 - 1)                                          |
|                   | 00 06       | 0000 000a                                                                          | Scale Tune Switch<br>(0 - 1)<br>OFF, ON                          |
|                   | 00 07       | 0000 000a                                                                          | Patch Remain<br>(0 - 1)<br>OFF, ON                               |
|                   | 00 08       | 0000 000a                                                                          | Mix/Parallel<br>(0 - 1)<br>MIX, PARALLEL                         |
|                   | 00 09       | 000a aaaa                                                                          | Performance Control Channel<br>(0 - 16)<br>1 - 16, OFF           |
|                   | 00 0A       | 000a aaaa                                                                          | (reserved)                                                       |
|                   | 00 0B       | 0000 aaaa                                                                          | Patch Receive Channel<br>(0 - 15)<br>1 - 16                      |
| 00 0C             | 0aaa aaaa   | Patch Scale Tune for C<br>(0 - 127)<br>-64 - +63                                   |                                                                  |
| 00 0D             | 0aaa aaaa   | Patch Scale Tune for C#<br>(0 - 127)<br>-64 - +63                                  |                                                                  |
| 00 0E             | 0aaa aaaa   | Patch Scale Tune for D<br>(0 - 127)<br>-64 - +63                                   |                                                                  |
| 00 0F             | 0aaa aaaa   | Patch Scale Tune for D#<br>(0 - 127)<br>-64 - +63                                  |                                                                  |
| 00 10             | 0aaa aaaa   | Patch Scale Tune for E<br>(0 - 127)<br>-64 - +63                                   |                                                                  |
| 00 11             | 0aaa aaaa   | Patch Scale Tune for F<br>(0 - 127)<br>-64 - +63                                   |                                                                  |
| 00 12             | 0aaa aaaa   | Patch Scale Tune for F#<br>(0 - 127)<br>-64 - +63                                  |                                                                  |
| 00 13             | 0aaa aaaa   | Patch Scale Tune for G<br>(0 - 127)<br>-64 - +63                                   |                                                                  |
| 00 14             | 0aaa aaaa   | Patch Scale Tune for G#<br>(0 - 127)<br>-64 - +63                                  |                                                                  |
| 00 15             | 0aaa aaaa   | Patch Scale Tune for A<br>(0 - 127)<br>-64 - +63                                   |                                                                  |
| 00 16             | 0aaa aaaa   | Patch Scale Tune for A#<br>(0 - 127)<br>-64 - +63                                  |                                                                  |
| 00 17             | 0aaa aaaa   | Patch Scale Tune for B<br>(0 - 127)<br>-64 - +63                                   |                                                                  |
| 00 18             | 0aaa aaaa   | System Control 1 Source<br>(0 - 97)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, AFT |                                                                  |
| 00 19             | 0aaa aaaa   | System Control 2 Source<br>(0 - 97)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, AFT |                                                                  |
| 00 1A             | 0aaa aaaa   | System Control 3 Source<br>(0 - 97)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, AFT |                                                                  |
| 00 1B             | 0aaa aaaa   | System Control 4 Source<br>(0 - 97)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, AFT |                                                                  |
| 00 1C             | 0000 000a   | Receive Program Change<br>(0 - 1)<br>OFF, ON                                       |                                                                  |
| 00 1D             | 0000 000a   | Receive Bank Select<br>(0 - 1)<br>OFF, ON                                          |                                                                  |
| 00 1E             | 0000 000a   | System Clock Source<br>(0 - 2)<br>INT, MIDI, USB                                   |                                                                  |
| #                 | 00 1F       | 0000 aaaa<br>0000 bbbb                                                             | System Tempo<br>(20 - 250)                                       |
|                   | 00 00 00 21 | Total Size                                                                         |                                                                  |

#### 1-2-2 System EQ

| Offset Address | Description |                                                     |
|----------------|-------------|-----------------------------------------------------|
| 00 00          | 0000 000a   | EQ Switch (0 - 1)<br>BYPASS, ON                     |
| 00 01          | 0000 000a   | EQ1 Low Frequency (0 - 1)<br>200, 400 [Hz]          |
| 00 02          | 000a aaaa   | EQ1 Low Gain (0 - 30)<br>-15 - +15                  |
| 00 03          | 0000 00aa   | EQ1 High Frequency (0 - 2)<br>2000, 4000, 8000 [Hz] |
| 00 04          | 000a aaaa   | EQ1 High Gain (0 - 30)<br>-15 - +15                 |
| 00 05          | 0000 000a   | EQ2 Low Frequency (0 - 1)<br>200, 400 [Hz]          |
| 00 06          | 000a aaaa   | EQ2 Low Gain (0 - 30)<br>-15 - +15                  |
| 00 07          | 0000 00aa   | EQ2 High Frequency (0 - 2)<br>2000, 4000, 8000 [Hz] |
| 00 08          | 000a aaaa   | EQ2 High Gain (0 - 30)<br>-15 - +15                 |
| 00 09          | 0000 000a   | EQ3 Low Frequency (0 - 1)<br>200, 400 [Hz]          |
| 00 0A          | 000a aaaa   | EQ3 Low Gain (0 - 30)<br>-15 - +15                  |
| 00 0B          | 0000 00aa   | EQ3 High Frequency (0 - 2)<br>2000, 4000, 8000 [Hz] |
| 00 0C          | 000a aaaa   | EQ3 High Gain (0 - 30)<br>-15 - +15                 |
| 00 0D          | 0000 000a   | EQ4 Low Frequency (0 - 1)<br>200, 400 [Hz]          |
| 00 0E          | 000a aaaa   | EQ4 Low Gain (0 - 30)<br>-15 - +15                  |
| 00 0F          | 0000 00aa   | EQ4 High Frequency (0 - 2)<br>2000, 4000, 8000 [Hz] |

|             |            |               |                       |
|-------------|------------|---------------|-----------------------|
| 00 10       | 000a aaaa  | EQ4 High Gain | (0 - 30)<br>-15 - +15 |
| 00 00 00 11 | Total Size |               |                       |

## 1-3-1 Performance Common

| Offset<br>Address | Description |                      |                                         |
|-------------------|-------------|----------------------|-----------------------------------------|
| 00 00             | 0aaa aaaa   | Performance Name 1   | (32 - 127)<br>(32 - 127 [ASCII])        |
| 00 01             | 0aaa aaaa   | Performance Name 2   | (32 - 127 [ASCII])                      |
| 00 02             | 0aaa aaaa   | Performance Name 3   | (32 - 127 [ASCII])                      |
| 00 03             | 0aaa aaaa   | Performance Name 4   | (32 - 127 [ASCII])                      |
| 00 04             | 0aaa aaaa   | Performance Name 5   | (32 - 127 [ASCII])                      |
| 00 05             | 0aaa aaaa   | Performance Name 6   | (32 - 127 [ASCII])                      |
| 00 06             | 0aaa aaaa   | Performance Name 7   | (32 - 127 [ASCII])                      |
| 00 07             | 0aaa aaaa   | Performance Name 8   | (32 - 127 [ASCII])                      |
| 00 08             | 0aaa aaaa   | Performance Name 9   | (32 - 127 [ASCII])                      |
| 00 09             | 0aaa aaaa   | Performance Name 10  | (32 - 127 [ASCII])                      |
| 00 0A             | 0aaa aaaa   | Performance Name 11  | (32 - 127 [ASCII])                      |
| 00 0B             | 0aaa aaaa   | Performance Name 12  | (32 - 127 [ASCII])                      |
| 00 0C             | 00aa aaaa   | Solo Part Select     | (0 - 32)<br>OFF, 1 - 16, 17 - 32<*>     |
| 00 0D             | 000a aaaa   | MFx Control Channel  | (0 - 16)<br>1 - 16, OFF                 |
| 00 0E             | 0000 000a   | MFx Control MIDI1<*> | (0 - 1)<br>OFF, ON                      |
| 00 0F             | 0000 000a   | MFx Control MIDI2<*> | (0 - 1)<br>OFF, ON                      |
| 00 10             | 0aaa aaaa   | Voice Reserve 1      | (0 - 64)<br>0 - 63, FULL                |
| 00 11             | 0aaa aaaa   | Voice Reserve 2      | (0 - 64)<br>0 - 63, FULL                |
| 00 12             | 0aaa aaaa   | Voice Reserve 3      | (0 - 64)<br>0 - 63, FULL                |
| 00 13             | 0aaa aaaa   | Voice Reserve 4      | (0 - 64)<br>0 - 63, FULL                |
| 00 14             | 0aaa aaaa   | Voice Reserve 5      | (0 - 64)<br>0 - 63, FULL                |
| 00 15             | 0aaa aaaa   | Voice Reserve 6      | (0 - 64)<br>0 - 63, FULL                |
| 00 16             | 0aaa aaaa   | Voice Reserve 7      | (0 - 64)<br>0 - 63, FULL                |
| 00 17             | 0aaa aaaa   | Voice Reserve 8      | (0 - 64)<br>0 - 63, FULL                |
| 00 18             | 0aaa aaaa   | Voice Reserve 9      | (0 - 64)<br>0 - 63, FULL                |
| 00 19             | 0aaa aaaa   | Voice Reserve 10     | (0 - 64)<br>0 - 63, FULL                |
| 00 1A             | 0aaa aaaa   | Voice Reserve 11     | (0 - 64)<br>0 - 63, FULL                |
| 00 1B             | 0aaa aaaa   | Voice Reserve 12     | (0 - 64)<br>0 - 63, FULL                |
| 00 1C             | 0aaa aaaa   | Voice Reserve 13     | (0 - 64)<br>0 - 63, FULL                |
| 00 1D             | 0aaa aaaa   | Voice Reserve 14     | (0 - 64)<br>0 - 63, FULL                |
| 00 1E             | 0aaa aaaa   | Voice Reserve 15     | (0 - 64)<br>0 - 63, FULL                |
| 00 1F             | 0aaa aaaa   | Voice Reserve 16     | (0 - 64)<br>0 - 63, FULL                |
| 00 20             | 0aaa aaaa   | Voice Reserve 17<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 21             | 0aaa aaaa   | Voice Reserve 18<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 22             | 0aaa aaaa   | Voice Reserve 19<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 23             | 0aaa aaaa   | Voice Reserve 20<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 24             | 0aaa aaaa   | Voice Reserve 21<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 25             | 0aaa aaaa   | Voice Reserve 22<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 26             | 0aaa aaaa   | Voice Reserve 23<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 27             | 0aaa aaaa   | Voice Reserve 24<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 28             | 0aaa aaaa   | Voice Reserve 25<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 29             | 0aaa aaaa   | Voice Reserve 26<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 2A             | 0aaa aaaa   | Voice Reserve 27<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 2B             | 0aaa aaaa   | Voice Reserve 28<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 2C             | 0aaa aaaa   | Voice Reserve 29<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 2D             | 0aaa aaaa   | Voice Reserve 30<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 2E             | 0aaa aaaa   | Voice Reserve 31<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 2F             | 0aaa aaaa   | Voice Reserve 32<*>  | (0 - 64)<br>0 - 63, FULL                |
| 00 30             | 00aa aaaa   | MFxA Source          | (0 - 32)<br>PERFORM, 1 - 16, 17 - 32<*> |
| 00 31             | 00aa aaaa   | MFxB Source<*>       | (0 - 32)<br>PERFORM, 1 - 32             |
| 00 32             | 00aa aaaa   | MFxC Source<*>       | (0 - 32)<br>PERFORM, 1 - 32             |
| 00 33             | 00aa aaaa   | Chorus Source        | (0 - 32)<br>PERFORM, 1 - 16, 17 - 32<*> |
| 00 34             | 00aa aaaa   | Reverb Source        | (0 - 32)<br>PERFORM, 1 - 16, 17 - 32<*> |
| 00 00 00 35       | Total Size  |                      |                                         |

## 1-3-2 Performance Common MFx

| Offset<br>Address | Description |                       |                             |
|-------------------|-------------|-----------------------|-----------------------------|
| 00 00             | 0aaa aaaa   | MFx Type              | (0 - 127)                   |
| 00 01             | 0aaa aaaa   | MFx Dry Send Level    | (0 - 127)                   |
| 00 02             | 0aaa aaaa   | MFx Chorus Send Level | (0 - 127)                   |
| 00 03             | 0aaa aaaa   | MFx Reverb Send Level | (0 - 127)                   |
| 00 04             | 0000 00aa   | MFx Output Assign     | (0 - 3)<br>A, B, C<*>, D<*> |

|         |                                                  |                      |                                                                       |
|---------|--------------------------------------------------|----------------------|-----------------------------------------------------------------------|
| 00 05   | 0aaa aaaa                                        | MFx Control 1 Source | (0 - 101)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, AFT, SYS1 - SYS4 |
| 00 06   | 0aaa aaaa                                        | MFx Control 1 Sens   | (1 - 127)<br>-63 - +63<br>(0 - 101)                                   |
| 00 07   | 0aaa aaaa                                        | MFx Control 2 Source | (0 - 101)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, AFT, SYS1 - SYS4 |
| 00 08   | 0aaa aaaa                                        | MFx Control 2 Sens   | (1 - 127)<br>-63 - +63<br>(0 - 101)                                   |
| 00 09   | 0aaa aaaa                                        | MFx Control 3 Source | (0 - 101)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, AFT, SYS1 - SYS4 |
| 00 0A   | 0aaa aaaa                                        | MFx Control 3 Sens   | (1 - 127)<br>-63 - +63<br>(0 - 101)                                   |
| 00 0B   | 0aaa aaaa                                        | MFx Control 4 Source | (0 - 101)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, AFT, SYS1 - SYS4 |
| 00 0C   | 0aaa aaaa                                        | MFx Control 4 Sens   | (1 - 127)<br>-63 - +63                                                |
| 00 0D   | 000a aaaa                                        | MFx Control Assign 1 | (0 - 16)<br>OFF, 1 - 16                                               |
| 00 0E   | 000a aaaa                                        | MFx Control Assign 2 | (0 - 16)<br>OFF, 1 - 16                                               |
| 00 0F   | 000a aaaa                                        | MFx Control Assign 3 | (0 - 16)<br>OFF, 1 - 16                                               |
| 00 10   | 000a aaaa                                        | MFx Control Assign 4 | (0 - 16)<br>OFF, 1 - 16                                               |
| # 00 11 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 1      | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 15 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 2      | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 19 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 3      | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 1D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 4      | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 21 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 5      | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 25 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 6      | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 29 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 7      | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 2D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 8      | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 31 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 9      | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 35 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 10     | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 39 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 11     | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 3D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 12     | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 41 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 13     | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 45 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 14     | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 49 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 15     | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 4D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 16     | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 51 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 17     | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 55 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 18     | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 59 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 19     | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 5D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 20     | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 61 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 21     | (12768 - 52768)<br>-20000 - +20000                                    |
| # 00 65 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFx Parameter 22     | (12768 - 52768)                                                       |

# MIDI Implementation

|             |       |                                                  |                   |                                    |
|-------------|-------|--------------------------------------------------|-------------------|------------------------------------|
| #           | 00 69 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MPFX Parameter 23 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 6D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MPFX Parameter 24 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 71 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MPFX Parameter 25 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 75 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MPFX Parameter 26 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 79 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MPFX Parameter 27 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 7D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MPFX Parameter 28 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 01 01 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MPFX Parameter 29 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 01 05 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MPFX Parameter 30 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 01 09 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MPFX Parameter 31 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 01 0D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MPFX Parameter 32 | (12768 - 52768)<br>-20000 - +20000 |
| 00 00 01 11 |       | Total Size                                       |                   |                                    |

## 1-3-3 Performance Common Chorus

| Offset<br>Address | Description |                                                  |                                                           |
|-------------------|-------------|--------------------------------------------------|-----------------------------------------------------------|
| 00 00             | 0000 aaaa   | Chorus Type                                      | (0 - 3)<br>OFF, CHORUS, DELAY, GM2 CHORUS                 |
| 00 01             | 0aaa aaaa   | Chorus Level                                     | (0 - 127)                                                 |
| 00 02             | 0000 00aa   | Chorus Output Assign                             | (0 - 3)<br>A, B, C<*>, D<*>                               |
| 00 03             | 0000 00aa   | Chorus Output Select                             | (0 - 2)<br>MAIN, REV, MAIN+REV                            |
| #                 | 00 04       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 1<br>(12768 - 52768)<br>-20000 - +20000  |
| #                 | 00 08       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 2<br>(12768 - 52768)<br>-20000 - +20000  |
| #                 | 00 0C       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 3<br>(12768 - 52768)<br>-20000 - +20000  |
| #                 | 00 10       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 4<br>(12768 - 52768)<br>-20000 - +20000  |
| #                 | 00 14       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 5<br>(12768 - 52768)<br>-20000 - +20000  |
| #                 | 00 18       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 6<br>(12768 - 52768)<br>-20000 - +20000  |
| #                 | 00 1C       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 7<br>(12768 - 52768)<br>-20000 - +20000  |
| #                 | 00 20       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 8<br>(12768 - 52768)<br>-20000 - +20000  |
| #                 | 00 24       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 9<br>(12768 - 52768)<br>-20000 - +20000  |
| #                 | 00 28       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 10<br>(12768 - 52768)<br>-20000 - +20000 |
| #                 | 00 2C       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 11<br>(12768 - 52768)<br>-20000 - +20000 |
| #                 | 00 30       | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 12<br>(12768 - 52768)<br>-20000 - +20000 |
| 00 00 00 34       |             | Total Size                                       |                                                           |

## 1-3-4 Performance Common Reverb

| Offset<br>Address | Description |
|-------------------|-------------|
|-------------------|-------------|

|             |       |                                                  |                                                                          |                                    |
|-------------|-------|--------------------------------------------------|--------------------------------------------------------------------------|------------------------------------|
|             | 00 00 | 0000 aaaa                                        | Reverb Type<br>OFF, REVERB, SRV ROOM, SRV HALL, SRV PLATE,<br>GM2 REVERB | (0 - 5)                            |
|             | 00 01 | 0aaa aaaa                                        | Reverb Level                                                             | (0 - 127)                          |
|             | 00 02 | 0000 00aa                                        | Reverb Output Assign                                                     | (0 - 3)<br>A, B, C<*>, D<*>        |
| #           | 00 03 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 1                                                       | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 07 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 2                                                       | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 0B | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 3                                                       | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 0F | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 4                                                       | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 13 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 5                                                       | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 17 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 6                                                       | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 1B | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 7                                                       | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 1F | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 8                                                       | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 23 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 9                                                       | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 27 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 10                                                      | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 2B | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 11                                                      | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 2F | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 12                                                      | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 33 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 13                                                      | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 37 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 14                                                      | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 3B | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 15                                                      | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 3F | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 16                                                      | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 43 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 17                                                      | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 47 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 18                                                      | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 4B | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 19                                                      | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 4F | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 20                                                      | (12768 - 52768)<br>-20000 - +20000 |
| 00 00 00 53 |       | Total Size                                       |                                                                          |                                    |

## 1-3-5 Performance MIDI

| Offset<br>Address | Description |                                 |                    |
|-------------------|-------------|---------------------------------|--------------------|
| 00 00             | 0000 000a   | Receive Program Change          | (0 - 1)<br>OFF, ON |
| 00 01             | 0000 000a   | Receive Bank Select             | (0 - 1)<br>OFF, ON |
| 00 02             | 0000 000a   | Receive Bender                  | (0 - 1)<br>OFF, ON |
| 00 03             | 0000 000a   | Receive Polyphonic Key Pressure | (0 - 1)<br>OFF, ON |
| 00 04             | 0000 000a   | Receive Channel Pressure        | (0 - 1)<br>OFF, ON |
| 00 05             | 0000 000a   | Receive Modulation              | (0 - 1)<br>OFF, ON |
| 00 06             | 0000 000a   | Receive Volume                  | (0 - 1)<br>OFF, ON |
| 00 07             | 0000 000a   | Receive Pan                     | (0 - 1)<br>OFF, ON |
| 00 08             | 0000 000a   | Receive Expression              | (0 - 1)<br>OFF, ON |
| 00 09             | 0000 000a   | Receive Hold-1                  | (0 - 1)<br>OFF, ON |

|             |            |                     |                       |
|-------------|------------|---------------------|-----------------------|
| 00 0A       | 0000 000a  | Phase Lock          | (0 - 1)<br>OFF, ON    |
| 00 0B       | 0000 0aaa  | Velocity Curve Type | (0 - 4)<br>OFF, 1 - 4 |
| 00 00 00 0C | Total Size |                     |                       |

## 1-3-6 Performance Part

| Offset Address | Description            |                                   |                                                                          |
|----------------|------------------------|-----------------------------------|--------------------------------------------------------------------------|
| 00 00          | 0000 aaaa              | Receive Channel                   | (0 - 15)<br>1 - 16                                                       |
| 00 01          | 0000 000a              | Receive Switch                    | (0 - 1)<br>OFF, ON                                                       |
| 00 02          | 0000 000a              | Receive MIDI1<*>                  | (0 - 1)<br>OFF, ON                                                       |
| 00 03          | 0000 000a              | Receive MIDI2<*>                  | (0 - 1)<br>OFF, ON                                                       |
| 00 04          | 0aaa aaaa              | Patch Bank Select MSB (CC# 0)     | (0 - 127)                                                                |
| 00 05          | 0aaa aaaa              | Patch Bank Select LSB (CC# 32)    | (0 - 127)                                                                |
| 00 06          | 0aaa aaaa              | Patch Program Number (PC)         | (0 - 127)                                                                |
| 00 07          | 0aaa aaaa              | Part Level (CC# 7)                | (0 - 127)                                                                |
| 00 08          | 0aaa aaaa              | Part Pan (CC# 10)                 | (0 - 127)<br>164 - 63R                                                   |
| 00 09          | 0aaa aaaa              | Part Coarse Tune (RPN# 2)         | (16 - 112)<br>-48 - +48                                                  |
| 00 0A          | 0aaa aaaa              | Part Fine Tune (RPN# 1)           | (14 - 114)<br>-50 - +50                                                  |
| 00 0B          | 0000 00aa              | Part Mono/Poly (MONO ON/POLY ON)  | (0 - 2)<br>MONO, POLY                                                    |
| 00 0C          | 0000 00aa              | Part Legato Switch (CC# 68)       | OFF, ON, PATCH<br>(0 - 2)                                                |
| 00 0D          | 000a aaaa              | Part Pitch Bend Range (RPN# 0)    | 0 - 24, PATCH<br>(0 - 2)                                                 |
| 00 0E          | 0000 00aa              | Part Portamento Switch (CC# 65)   | OFF, ON, PATCH<br>(0 - 1)                                                |
| # 00 0F        | 0000 aaaa<br>0000 bbbb | Part Portamento Time (CC# 5)      | (0 - 128)<br>0 - 127, PATCH                                              |
| 00 11          | 0aaa aaaa              | Part Cutoff Offset (CC# 74)       | (0 - 127)<br>-64 - +63                                                   |
| 00 12          | 0aaa aaaa              | Part Resonance Offset (CC# 71)    | (0 - 127)<br>-64 - +63                                                   |
| 00 13          | 0aaa aaaa              | Part Attack Time Offset (CC# 73)  | (0 - 127)<br>-64 - +63                                                   |
| 00 14          | 0aaa aaaa              | Part Release Time Offset (CC# 72) | (0 - 127)<br>-64 - +63                                                   |
| 00 15          | 0000 0aaa              | Part Octave Shift                 | (61 - 67)<br>-3 - +3                                                     |
| 00 16          | 0aaa aaaa              | Part Velocity Sens Offset         | (1 - 127)<br>-63 - +63                                                   |
| 00 17          | 0aaa aaaa              | Keyboard Range Lower              | (0 - 127)<br>C-1 - UPPER                                                 |
| 00 18          | 0aaa aaaa              | Keyboard Range Upper              | (0 - 127)<br>LOWER - G9                                                  |
| 00 19          | 0aaa aaaa              | Keyboard Fade Width Lower         | (0 - 127)                                                                |
| 00 1A          | 0aaa aaaa              | Keyboard Fade Width Upper         | (0 - 127)                                                                |
| 00 1B          | 0000 000a              | Mute Switch                       | (0 - 1)<br>OFF, MUTE                                                     |
| 00 1C          | 0aaa aaaa              | Part Dry Send Level               | (0 - 127)                                                                |
| 00 1D          | 0aaa aaaa              | Part Chorus Send Level (CC# 93)   | (0 - 127)                                                                |
| 00 1E          | 0aaa aaaa              | Part Reverb Send Level (CC# 91)   | (0 - 127)                                                                |
| 00 1F          | 0000 aaaa              | Part Output Assign                | (0 - 13)<br>MPX, A, B, C<*>, D<*>,<br>1, 2, 3, 4, 5<*>, 6<*>, 7<*>, 8<*> |
| 00 20          | 0000 00aa              | Part Output MPX Select            | PATCH<br>(0 - 2)<br>MPXA, MPXB, MPXC                                     |
| 00 21          | 0aaa aaaa              | Part Decay Time Offset (CC# 75)   | (0 - 127)<br>-64 - +63                                                   |
| 00 22          | 0aaa aaaa              | Part Vibrato Rate (CC# 76)        | (0 - 127)<br>-64 - +63                                                   |
| 00 23          | 0aaa aaaa              | Part Vibrato Depth (CC# 77)       | (0 - 127)<br>-64 - +63                                                   |
| 00 24          | 0aaa aaaa              | Part Vibrato Delay (CC# 78)       | (0 - 127)<br>-64 - +63                                                   |
| 00 25          | 0aaa aaaa              | Part Scale Tune for C             | (0 - 127)<br>-64 - +63                                                   |
| 00 26          | 0aaa aaaa              | Part Scale Tune for C#            | (0 - 127)<br>-64 - +63                                                   |
| 00 27          | 0aaa aaaa              | Part Scale Tune for D             | (0 - 127)<br>-64 - +63                                                   |
| 00 28          | 0aaa aaaa              | Part Scale Tune for D#            | (0 - 127)<br>-64 - +63                                                   |
| 00 29          | 0aaa aaaa              | Part Scale Tune for E             | (0 - 127)<br>-64 - +63                                                   |
| 00 2A          | 0aaa aaaa              | Part Scale Tune for F             | (0 - 127)<br>-64 - +63                                                   |
| 00 2B          | 0aaa aaaa              | Part Scale Tune for F#            | (0 - 127)<br>-64 - +63                                                   |
| 00 2C          | 0aaa aaaa              | Part Scale Tune for G             | (0 - 127)<br>-64 - +63                                                   |
| 00 2D          | 0aaa aaaa              | Part Scale Tune for G#            | (0 - 127)<br>-64 - +63                                                   |
| 00 2E          | 0aaa aaaa              | Part Scale Tune for A             | (0 - 127)<br>-64 - +63                                                   |
| 00 2F          | 0aaa aaaa              | Part Scale Tune for A#            | (0 - 127)<br>-64 - +63                                                   |
| 00 30          | 0aaa aaaa              | Part Scale Tune for B             | (0 - 127)<br>-64 - +63                                                   |
| 00 00 00 31    | Total Size             |                                   |                                                                          |

## 1-4-1-1 Patch Common

| Offset Address | Description |              |                                |
|----------------|-------------|--------------|--------------------------------|
| 00 00          | 0aaa aaaa   | Patch Name 1 | (32 - 127)<br>32 - 127 [ASCII] |
| 00 01          | 0aaa aaaa   | Patch Name 2 | (32 - 127)<br>32 - 127 [ASCII] |
| 00 02          | 0aaa aaaa   | Patch Name 3 | (32 - 127)<br>32 - 127 [ASCII] |
| 00 03          | 0aaa aaaa   | Patch Name 4 | (32 - 127)<br>32 - 127 [ASCII] |
| 00 04          | 0aaa aaaa   | Patch Name 5 | (32 - 127)<br>32 - 127 [ASCII] |
| 00 05          | 0aaa aaaa   | Patch Name 6 | (32 - 127)<br>32 - 127 [ASCII] |
| 00 06          | 0aaa aaaa   | Patch Name 7 | (32 - 127)<br>32 - 127 [ASCII] |
| 00 07          | 0aaa aaaa   | Patch Name 8 | (32 - 127)<br>32 - 127 [ASCII] |

|         |                                     |                                 |                                                                                                                                                                                                                                                                                                                              |
|---------|-------------------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 00 08   | 0aaa aaaa                           | Patch Name 9                    | (32 - 127)<br>32 - 127 [ASCII]                                                                                                                                                                                                                                                                                               |
| 00 09   | 0aaa aaaa                           | Patch Name 10                   | (32 - 127)<br>32 - 127 [ASCII]                                                                                                                                                                                                                                                                                               |
| 00 0A   | 0aaa aaaa                           | Patch Name 11                   | (32 - 127)<br>32 - 127 [ASCII]                                                                                                                                                                                                                                                                                               |
| 00 0B   | 0aaa aaaa                           | Patch Name 12                   | (32 - 127)<br>32 - 127 [ASCII]                                                                                                                                                                                                                                                                                               |
| 00 0C   | 0aaa aaaa                           | Patch Category                  | (0 - 127)                                                                                                                                                                                                                                                                                                                    |
| 00 0D   | 0000 000a                           | Tone Type<*>                    | (0 - 1)<br>4TONES, MULTI-PARTIAL                                                                                                                                                                                                                                                                                             |
| 00 0E   | 0aaa aaaa                           | Patch Level                     | (0 - 127)                                                                                                                                                                                                                                                                                                                    |
| 00 0F   | 0aaa aaaa                           | Patch Pan                       | (0 - 127)<br>L64 - 63R                                                                                                                                                                                                                                                                                                       |
| 00 10   | 0000 000a                           | Patch Priority                  | (0 - 1)<br>LAST, LOUDEST                                                                                                                                                                                                                                                                                                     |
| 00 11   | 0aaa aaaa                           | Patch Coarse Tune               | (16 - 112)<br>-48 - +48                                                                                                                                                                                                                                                                                                      |
| 00 12   | 0aaa aaaa                           | Patch Fine Tune                 | (14 - 114)<br>-50 - +50                                                                                                                                                                                                                                                                                                      |
| 00 13   | 0000 0aaa                           | Octave Shift                    | (61 - 67)<br>-3 - +3                                                                                                                                                                                                                                                                                                         |
| 00 14   | 0000 00aa                           | Stretch Tune Depth              | (0 - 3)<br>OFF, 1 - 3                                                                                                                                                                                                                                                                                                        |
| 00 15   | 0aaa aaaa                           | Analog Feel                     | (0 - 127)                                                                                                                                                                                                                                                                                                                    |
| 00 16   | 0000 000a                           | Mono/Poly                       | (0 - 1)<br>MONO, POLY                                                                                                                                                                                                                                                                                                        |
| 00 17   | 0000 000a                           | Legato Switch                   | (0 - 1)<br>OFF, ON                                                                                                                                                                                                                                                                                                           |
| 00 18   | 0000 000a                           | Legato Retrigger                | (0 - 1)<br>OFF, ON                                                                                                                                                                                                                                                                                                           |
| 00 19   | 0000 000a                           | Portamento Switch               | (0 - 1)<br>OFF, ON                                                                                                                                                                                                                                                                                                           |
| 00 1A   | 0000 000a                           | Portamento Mode                 | (0 - 1)<br>NORMAL, LEGATO                                                                                                                                                                                                                                                                                                    |
| 00 1B   | 0000 000a                           | Portamento Type                 | (0 - 1)<br>RATE, TIME                                                                                                                                                                                                                                                                                                        |
| 00 1C   | 0000 000a                           | Portamento Start                | (0 - 1)<br>PITCH, NOTE                                                                                                                                                                                                                                                                                                       |
| 00 1D   | 0aaa aaaa                           | Portamento Time                 | (0 - 127)                                                                                                                                                                                                                                                                                                                    |
| 00 1E   | 0000 000a                           | Patch Clock Source              | (0 - 1)<br>PATCH, SYSTEM                                                                                                                                                                                                                                                                                                     |
| # 00 1F | 0000 aaaa<br>0000 bbbb<br>0000 000a | Patch Tempo<br>One Shot Mode<*> | (20 - 250)<br>(0 - 1)<br>OFF, ON                                                                                                                                                                                                                                                                                             |
| 00 22   | 0aaa aaaa                           | Cutoff Offset                   | (1 - 127)<br>-63 - +63                                                                                                                                                                                                                                                                                                       |
| 00 23   | 0aaa aaaa                           | Resonance Offset                | (1 - 127)<br>-63 - +63                                                                                                                                                                                                                                                                                                       |
| 00 24   | 0aaa aaaa                           | Attack Time Offset              | (1 - 127)<br>-63 - +63                                                                                                                                                                                                                                                                                                       |
| 00 25   | 0aaa aaaa                           | Release Time Offset             | (1 - 127)<br>-63 - +63                                                                                                                                                                                                                                                                                                       |
| 00 26   | 0aaa aaaa                           | Velocity Sens Offset            | (1 - 127)<br>-63 - +63                                                                                                                                                                                                                                                                                                       |
| 00 27   | 0000 aaaa                           | Patch Output Assign             | (0 - 13)<br>MPX, A, B, C<*>, D<*>,<br>1, 2, 3, 4, 5<*>, 6<*>, 7<*>, 8<*>,<br>TONE                                                                                                                                                                                                                                            |
| 00 28   | 0000 000a                           | TMT Control Switch              | (0 - 1)<br>OFF, ON                                                                                                                                                                                                                                                                                                           |
| 00 29   | 00aa aaaa                           | Pitch Bend Range Up             | (0 - 48)                                                                                                                                                                                                                                                                                                                     |
| 00 2A   | 00aa aaaa                           | Pitch Bend Range Down           | (0 - 48)                                                                                                                                                                                                                                                                                                                     |
| 00 2B   | 0aaa aaaa                           | Matrix Control 1 Source         | (0 - 109)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, APT, SYS1 - SYS4, VELOCITY,<br>KEYFOLLOW, TEMPO, LFO1, LFO2,<br>PIT-ENV, TVF-ENV, TVA-ENV                                                                                                                                                                               |
| 00 2C   | 00aa aaaa                           | Matrix Control 1 Destination 1  | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LFO1, PIT-LFO2,<br>TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2,<br>PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 2D   | 0aaa aaaa                           | Matrix Control 1 Sens 1         | (1 - 127)<br>-63 - +63                                                                                                                                                                                                                                                                                                       |
| 00 2E   | 00aa aaaa                           | Matrix Control 1 Destination 2  | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LFO1, PIT-LFO2,<br>TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2,<br>PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 2F   | 0aaa aaaa                           | Matrix Control 1 Sens 2         | (1 - 127)<br>-63 - +63                                                                                                                                                                                                                                                                                                       |
| 00 30   | 00aa aaaa                           | Matrix Control 1 Destination 3  | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LFO1, PIT-LFO2,<br>TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2,<br>PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 31   | 0aaa aaaa                           | Matrix Control 1 Sens 3         | (1 - 127)<br>-63 - +63                                                                                                                                                                                                                                                                                                       |
| 00 32   | 00aa aaaa                           | Matrix Control 1 Destination 4  | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LFO1, PIT-LFO2,<br>TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2,<br>PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 33   | 0aaa aaaa                           | Matrix Control 1 Sens 4         | (1 - 127)<br>-63 - +63                                                                                                                                                                                                                                                                                                       |
| 00 34   | 0aaa aaaa                           | Matrix Control 2 Source         | (0 - 109)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, APT, SYS1 - SYS4, VELOCITY,<br>KEYFOLLOW, TEMPO, LFO1, LFO2,<br>PIT-ENV, TVF-ENV, TVA-ENV                                                                                                                                                                               |
| 00 35   | 00aa aaaa                           | Matrix Control 2 Destination 1  | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LFO1, PIT-LFO2,<br>TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2,<br>PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |

## MIDI Implementation

|       |           |                                |                                                                                                                                                                                                                                                                                                                              |
|-------|-----------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 00 36 | 0aaa aaaa | Matrix Control 2 Sens 1        | MPX-CTRL3, MPX-CTRL4<br>(1 - 127)<br>-63 +63                                                                                                                                                                                                                                                                                 |
| 00 37 | 00aa aaaa | Matrix Control 2 Destination 2 | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LF01, PIT-LF02,<br>TVF-LF01, TVF-LF02, TVA-LF01, TVA-LF02,<br>PAN-LF01, PAN-LF02, LF01-RATE, LF02-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 38 | 0aaa aaaa | Matrix Control 2 Sens 2        | (1 - 127)<br>-63 +63                                                                                                                                                                                                                                                                                                         |
| 00 39 | 00aa aaaa | Matrix Control 2 Destination 3 | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LF01, PIT-LF02,<br>TVF-LF01, TVF-LF02, TVA-LF01, TVA-LF02,<br>PAN-LF01, PAN-LF02, LF01-RATE, LF02-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 3A | 0aaa aaaa | Matrix Control 2 Sens 3        | (1 - 127)<br>-63 +63                                                                                                                                                                                                                                                                                                         |
| 00 3B | 00aa aaaa | Matrix Control 2 Destination 4 | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LF01, PIT-LF02,<br>TVF-LF01, TVF-LF02, TVA-LF01, TVA-LF02,<br>PAN-LF01, PAN-LF02, LF01-RATE, LF02-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 3C | 0aaa aaaa | Matrix Control 2 Sens 4        | (1 - 127)<br>-63 +63                                                                                                                                                                                                                                                                                                         |
| 00 3D | 0aaa aaaa | Matrix Control 3 Source        | (0 - 109)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, APT, SYS1 - SYS4, VELOCITY,<br>KEYFOLLOW, TEMPO, LF01, LF02,<br>PIT-ENV, TVF-ENV, TVA-ENV                                                                                                                                                                               |
| 00 3E | 00aa aaaa | Matrix Control 3 Destination 1 | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LF01, PIT-LF02,<br>TVF-LF01, TVF-LF02, TVA-LF01, TVA-LF02,<br>PAN-LF01, PAN-LF02, LF01-RATE, LF02-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 3F | 0aaa aaaa | Matrix Control 3 Sens 1        | (1 - 127)<br>-63 +63                                                                                                                                                                                                                                                                                                         |
| 00 40 | 00aa aaaa | Matrix Control 3 Destination 2 | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LF01, PIT-LF02,<br>TVF-LF01, TVF-LF02, TVA-LF01, TVA-LF02,<br>PAN-LF01, PAN-LF02, LF01-RATE, LF02-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 41 | 0aaa aaaa | Matrix Control 3 Sens 2        | (1 - 127)<br>-63 +63                                                                                                                                                                                                                                                                                                         |
| 00 42 | 00aa aaaa | Matrix Control 3 Destination 3 | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LF01, PIT-LF02,<br>TVF-LF01, TVF-LF02, TVA-LF01, TVA-LF02,<br>PAN-LF01, PAN-LF02, LF01-RATE, LF02-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 43 | 0aaa aaaa | Matrix Control 3 Sens 3        | (1 - 127)<br>-63 +63                                                                                                                                                                                                                                                                                                         |
| 00 44 | 00aa aaaa | Matrix Control 3 Destination 4 | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LF01, PIT-LF02,<br>TVF-LF01, TVF-LF02, TVA-LF01, TVA-LF02,<br>PAN-LF01, PAN-LF02, LF01-RATE, LF02-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 45 | 0aaa aaaa | Matrix Control 3 Sens 4        | (1 - 127)<br>-63 +63                                                                                                                                                                                                                                                                                                         |
| 00 46 | 0aaa aaaa | Matrix Control 4 Source        | (0 - 109)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, APT, SYS1 - SYS4, VELOCITY,<br>KEYFOLLOW, TEMPO, LF01, LF02,<br>PIT-ENV, TVF-ENV, TVA-ENV                                                                                                                                                                               |
| 00 47 | 00aa aaaa | Matrix Control 4 Destination 1 | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LF01, PIT-LF02,<br>TVF-LF01, TVF-LF02, TVA-LF01, TVA-LF02,<br>PAN-LF01, PAN-LF02, LF01-RATE, LF02-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 48 | 0aaa aaaa | Matrix Control 4 Sens 1        | (1 - 127)<br>-63 +63                                                                                                                                                                                                                                                                                                         |
| 00 49 | 00aa aaaa | Matrix Control 4 Destination 2 | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LF01, PIT-LF02,<br>TVF-LF01, TVF-LF02, TVA-LF01, TVA-LF02,<br>PAN-LF01, PAN-LF02, LF01-RATE, LF02-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 4A | 0aaa aaaa | Matrix Control 4 Sens 2        | (1 - 127)<br>-63 +63                                                                                                                                                                                                                                                                                                         |
| 00 4B | 00aa aaaa | Matrix Control 4 Destination 3 | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LF01, PIT-LF02,<br>TVF-LF01, TVF-LF02, TVA-LF01, TVA-LF02,<br>PAN-LF01, PAN-LF02, LF01-RATE, LF02-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |
| 00 4C | 0aaa aaaa | Matrix Control 4 Sens 3        | (1 - 127)<br>-63 +63                                                                                                                                                                                                                                                                                                         |
| 00 4D | 00aa aaaa | Matrix Control 4 Destination 4 | (0 - 33)<br>OFF, PCH, CUT, RES, LEV, PAN,<br>DRY, CHO, REV, PIT-LF01, PIT-LF02,<br>TVF-LF01, TVF-LF02, TVA-LF01, TVA-LF02,<br>PAN-LF01, PAN-LF02, LF01-RATE, LF02-RATE,<br>PIT-ATK, PIT-DCY, PIT-REL,<br>TVF-ATK, TVF-DCY, TVF-REL,<br>TVA-ATK, TVA-DCY, TVA-REL,<br>TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br>MPX-CTRL3, MPX-CTRL4 |

|             |            |                        |                                                                                                                                                                                                                                                                             |
|-------------|------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             |            |                        | <p>TVF-LFO1, TVF-LFO2, TVA-LFO1, TVA-LFO2,<br/> PAN-LFO1, PAN-LFO2, LFO1-RATE, LFO2-RATE,<br/> PVA-ATR, PIT-DCY, PIT-REL,<br/> TVF-ATR, TVF-DCY, TVF-REL,<br/> TVA-ATR, TVA-DCY, TVA-REL,<br/> TMT, FXM, MPX-CTRL1, MPX-CTRL2,<br/> MPX-CTRL3, MPX-CTRL4<br/> (1 - 127)</p> |
| 00 0E       | 0aaa aaaa  | Matrix Control 4 Sns 4 | -63 - +63                                                                                                                                                                                                                                                                   |
| 00 00 00 4F | Total Size |                        |                                                                                                                                                                                                                                                                             |

### 1-4-1-2 Patch Common MFX

| Offset Address   |           | Description                                      |                        |
|------------------|-----------|--------------------------------------------------|------------------------|
| 00 00            | 0aaa aaaa | MXF Type                                         | (0 - 127)              |
| 00 01            | 0aaa aaaa | MXF Dry Send Level                               | (0 - 127)              |
| 00 02            | 0aaa aaaa | MXF Chorus Send Level                            | (0 - 127)              |
| 00 03            | 0aaa aaaa | MXF Reverb Send Level                            | (0 - 127)              |
| 00 04            | 0000 00aa | MXF Output Assign                                | (0 - 3)                |
| A, B, C<*>, D<*> |           |                                                  |                        |
| 00 05            | 0aaa aaaa | MXF Control 1 Source                             | (0 - 101)              |
|                  |           | OFF, CC01 - CC31, CC33 - CC95,                   |                        |
| 00 06            | 0aaa aaaa | MXF Control 1 Sens                               | BEND, AFT, SYS1 - SYS4 |
|                  |           |                                                  | (1 - 127)              |
| 00 07            | 0aaa aaaa | MXF Control 2 Source                             | -63 - +63              |
|                  |           | OFF, CC01 - CC31, CC33 - CC95,                   | (0 - 101)              |
| 00 08            | 0aaa aaaa | MXF Control 2 Sens                               | BEND, AFT, SYS1 - SYS4 |
|                  |           |                                                  | (1 - 127)              |
| 00 09            | 0aaa aaaa | MXF Control 3 Source                             | -63 - +63              |
|                  |           | OFF, CC01 - CC31, CC33 - CC95,                   | (0 - 101)              |
| 00 0A            | 0aaa aaaa | MXF Control 3 Sens                               | BEND, AFT, SYS1 - SYS4 |
|                  |           |                                                  | (1 - 127)              |
| 00 0B            | 0aaa aaaa | MXF Control 4 Source                             | -63 - +63              |
|                  |           | OFF, CC01 - CC31, CC33 - CC95,                   | (0 - 101)              |
| 00 0C            | 0aaa aaaa | MXF Control 4 Sens                               | BEND, AFT, SYS1 - SYS4 |
|                  |           |                                                  | (1 - 127)              |
|                  |           |                                                  | -63 - +63              |
| 00 0D            | 000a aaaa | MXF Control Assign 1                             | (0 - 16)               |
| 00 0E            | 000a aaaa | MXF Control Assign 2                             | OFF, 1 - 16            |
| 00 0F            | 000a aaaa | MXF Control Assign 3                             | (0 - 16)               |
|                  |           | OFF, 1 - 16                                      | (0 - 16)               |
| 00 10            | 000a aaaa | MXF Control Assign 4                             | OFF, 1 - 16            |
|                  |           | OFF, 1 - 16                                      | (0 - 16)               |
| #                | 00 11     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 1        |
|                  |           |                                                  | (12768 - 52768)        |
| #                | 00 15     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 2        |
|                  |           |                                                  | -20000 - +20000        |
| #                | 00 19     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 3        |
|                  |           |                                                  | (12768 - 52768)        |
| #                | 00 1D     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 4        |
|                  |           |                                                  | -20000 - +20000        |
| #                | 00 21     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 5        |
|                  |           |                                                  | (12768 - 52768)        |
| #                | 00 25     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 6        |
|                  |           |                                                  | -20000 - +20000        |
| #                | 00 29     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 7        |
|                  |           |                                                  | (12768 - 52768)        |
| #                | 00 2D     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 8        |
|                  |           |                                                  | -20000 - +20000        |
| #                | 00 31     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 9        |
|                  |           |                                                  | (12768 - 52768)        |
| #                | 00 35     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 10       |
|                  |           |                                                  | -20000 - +20000        |
| #                | 00 39     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 11       |
|                  |           |                                                  | (12768 - 52768)        |
| #                | 00 3D     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 12       |
|                  |           |                                                  | -20000 - +20000        |
| #                | 00 41     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 13       |
|                  |           |                                                  | (12768 - 52768)        |
| #                | 00 45     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 14       |
|                  |           |                                                  | -20000 - +20000        |
| #                | 00 49     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 15       |
|                  |           |                                                  | (12768 - 52768)        |
| #                | 00 4D     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MXF Parameter 16       |
|                  |           |                                                  | -20000 - +20000        |
| #                | 00 51     | 0000 aaaa<br>0000 bbbb                           |                        |

|             |       |                                                               |                  |                                    |
|-------------|-------|---------------------------------------------------------------|------------------|------------------------------------|
| #           | 00 55 | 0000 dddd<br>0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MPX Parameter 17 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 59 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 18 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 5D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 19 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 61 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 20 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 65 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 21 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 69 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 22 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 6D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 23 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 71 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 24 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 75 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 25 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 79 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 26 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 7D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 27 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 01 01 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 28 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 01 05 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 29 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 01 09 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 30 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 01 0D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 31 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 01 0D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd              | MPX Parameter 32 | (12768 - 52768)<br>-20000 - +20000 |
| 00 00 01 11 |       | Total Size                                                    |                  |                                    |

## 1-4-1-3 Patch Common Chorus

| Offset | Address | Description                                      |                      |                                             |
|--------|---------|--------------------------------------------------|----------------------|---------------------------------------------|
|        | 00 00   | 0000 aaaa                                        | Chorus Type          | (0 - 3)                                     |
|        | 00 01   | 0aaa aaaa                                        | Chorus Level         | OFF, CHORUS, DELAY, GM2 CHORUS<br>(0 - 127) |
|        | 00 02   | 0000 00aa                                        | Chorus Output Assign | (0 - 3)                                     |
|        | 00 03   | 0000 00aa                                        | Chorus Output Select | A, B, C<*>, D<*><br>(0 - 2)                 |
| #      | 00 04   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 1   | (12768 - 52768)<br>-20000 - +20000          |
| #      | 00 08   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 2   | (12768 - 52768)<br>-20000 - +20000          |
| #      | 00 0C   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 3   | (12768 - 52768)<br>-20000 - +20000          |
| #      | 00 10   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 4   | (12768 - 52768)<br>-20000 - +20000          |
| #      | 00 14   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 5   | (12768 - 52768)<br>-20000 - +20000          |
| #      | 00 18   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 6   | (12768 - 52768)<br>-20000 - +20000          |
| #      | 00 1C   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 7   | (12768 - 52768)<br>-20000 - +20000          |
| #      | 00 20   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 8   | (12768 - 52768)<br>-20000 - +20000          |
| #      | 00 24   | 0000 aaaa<br>0000 bbbb<br>0000 cccc              |                      |                                             |

|             |       |                                                  |                     |                                    |
|-------------|-------|--------------------------------------------------|---------------------|------------------------------------|
| #           | 00 28 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 9  | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 2C | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 10 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 30 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 11 | (12768 - 52768)<br>-20000 - +20000 |
| #           | 00 30 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 12 | (12768 - 52768)<br>-20000 - +20000 |
| 00 00 00 34 |       | Total Size                                       |                     |                                    |

## 1-4-1-4 Patch Common Reverb

| Offset      | Address | Description                                      |                      |                                                                        |
|-------------|---------|--------------------------------------------------|----------------------|------------------------------------------------------------------------|
|             | 00 00   | 0000 aaaa                                        | Reverb Type          | (0 - 5)                                                                |
|             | 00 01   | 0aaa aaaa                                        | Reverb Level         | OFF, REVERB, SRV ROOM, SRV HALL, SRV PLATE,<br>GM2 REVERB<br>(0 - 127) |
|             | 00 02   | 0000 00aa                                        | Reverb Output Assign | (0 - 3)                                                                |
|             |         |                                                  |                      | A, B, C<*>, D<*>                                                       |
| #           | 00 03   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 1   | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 07   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 2   | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 0B   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 3   | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 0F   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 4   | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 13   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 5   | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 17   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 6   | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 1B   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 7   | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 1F   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 8   | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 23   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 9   | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 27   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 10  | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 2B   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 11  | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 2F   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 12  | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 33   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 13  | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 37   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 14  | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 3B   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 15  | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 3F   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 16  | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 43   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 17  | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 47   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 18  | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 4B   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 19  | (12768 - 52768)<br>-20000 - +20000                                     |
| #           | 00 4F   | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 20  | (12768 - 52768)<br>-20000 - +20000                                     |
| 00 00 00 53 |         | Total Size                                       |                      |                                                                        |

# MIDI Implementation

## 1-4-1-5 Patch TMT (Tone Mix Table)

| Offset Address | Description                                                  |
|----------------|--------------------------------------------------------------|
| 00 00          | 0000 aaaa Structure Type 1 & 2 (0 - 9)<br>1 - 10             |
| 00 01          | 0000 00aa Booster 1 & 2 (0 - 3)<br>0, +6, +12, +18 [dB]      |
| 00 02          | 0000 aaaa Structure Type 3 & 4 (0 - 9)<br>1 - 10             |
| 00 03          | 0000 00aa Booster 3 & 4 (0 - 3)<br>0, +6, +12, +18 [dB]      |
| 00 04          | 0000 00aa TMT Velocity Control (0 - 2)<br>OFF, ON, RANDOM    |
| 00 05          | 0000 000a TMT1 Tone Switch (0 - 1)<br>OFF, ON                |
| 00 06          | 0aaa aaaa TMT1 Keyboard Range Lower (0 - 127)<br>C-1 - UPPER |
| 00 07          | 0aaa aaaa TMT1 Keyboard Range Upper (0 - 127)<br>LOWER - G9  |
| 00 08          | 0aaa aaaa TMT1 Keyboard Fade Width Lower (0 - 127)           |
| 00 09          | 0aaa aaaa TMT1 Keyboard Fade Width Upper (0 - 127)           |
| 00 0A          | 0aaa aaaa TMT1 Velocity Range Lower (1 - 127)                |
| 00 0B          | 0aaa aaaa TMT1 Velocity Range Upper (1 - 127)<br>LOWER - 127 |
| 00 0C          | 0aaa aaaa TMT1 Velocity Fade Width Lower (0 - 127)           |
| 00 0D          | 0aaa aaaa TMT1 Velocity Fade Width Upper (0 - 127)           |
| 00 0E          | 0000 000a TMT2 Tone Switch (0 - 1)<br>OFF, ON                |
| 00 0F          | 0aaa aaaa TMT2 Keyboard Range Lower (0 - 127)<br>C-1 - UPPER |
| 00 10          | 0aaa aaaa TMT2 Keyboard Range Upper (0 - 127)<br>LOWER - G9  |
| 00 11          | 0aaa aaaa TMT2 Keyboard Fade Width Lower (0 - 127)           |
| 00 12          | 0aaa aaaa TMT2 Keyboard Fade Width Upper (0 - 127)           |
| 00 13          | 0aaa aaaa TMT2 Velocity Range Lower (1 - 127)                |
| 00 14          | 0aaa aaaa TMT2 Velocity Range Upper (1 - 127)<br>LOWER - 127 |
| 00 15          | 0aaa aaaa TMT2 Velocity Fade Width Lower (0 - 127)           |
| 00 16          | 0aaa aaaa TMT2 Velocity Fade Width Upper (0 - 127)           |
| 00 17          | 0000 000a TMT3 Tone Switch (0 - 1)<br>OFF, ON                |
| 00 18          | 0aaa aaaa TMT3 Keyboard Range Lower (0 - 127)<br>C-1 - UPPER |
| 00 19          | 0aaa aaaa TMT3 Keyboard Range Upper (0 - 127)<br>LOWER - G9  |
| 00 1A          | 0aaa aaaa TMT3 Keyboard Fade Width Lower (0 - 127)           |
| 00 1B          | 0aaa aaaa TMT3 Keyboard Fade Width Upper (0 - 127)           |
| 00 1C          | 0aaa aaaa TMT3 Velocity Range Lower (1 - 127)                |
| 00 1D          | 0aaa aaaa TMT3 Velocity Range Upper (1 - 127)<br>LOWER - 127 |
| 00 1E          | 0aaa aaaa TMT3 Velocity Fade Width Lower (0 - 127)           |
| 00 1F          | 0aaa aaaa TMT3 Velocity Fade Width Upper (0 - 127)           |
| 00 20          | 0000 000a TMT4 Tone Switch (0 - 1)<br>OFF, ON                |
| 00 21          | 0aaa aaaa TMT4 Keyboard Range Lower (0 - 127)<br>C-1 - UPPER |
| 00 22          | 0aaa aaaa TMT4 Keyboard Range Upper (0 - 127)<br>LOWER - G9  |
| 00 23          | 0aaa aaaa TMT4 Keyboard Fade Width Lower (0 - 127)           |
| 00 24          | 0aaa aaaa TMT4 Keyboard Fade Width Upper (0 - 127)           |
| 00 25          | 0aaa aaaa TMT4 Velocity Range Lower (1 - 127)                |
| 00 26          | 0aaa aaaa TMT4 Velocity Range Upper (1 - 127)<br>LOWER - 127 |
| 00 27          | 0aaa aaaa TMT4 Velocity Fade Width Lower (0 - 127)           |
| 00 28          | 0aaa aaaa TMT4 Velocity Fade Width Upper (0 - 127)           |
| 00 00 00 29    | Total Size                                                   |

## 1-4-1-6 Patch Tone

| Offset Address | Description                                                                                                                                                                               |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 00 00          | 0aaa aaaa Tone Level (0 - 127)                                                                                                                                                            |
| 00 01          | 0aaa aaaa Tone Coarse Tune (16 - 112)<br>-48 - +48                                                                                                                                        |
| 00 02          | 0aaa aaaa Tone Fine Tune (14 - 114)<br>-50 - +50                                                                                                                                          |
| 00 03          | 000a aaaa Tone Random Pitch Depth (0 - 30)<br>0, 1, 2, 3, 4, 5, 6, 7, 8, 9,<br>10, 20, 30, 40, 50, 60, 70, 80,<br>90, 100, 200, 300, 400, 500,<br>600, 700, 800, 900, 1000, 1100,<br>1200 |
| 00 04          | 0aaa aaaa Tone Pan (0 - 127)<br>L64 - 63R                                                                                                                                                 |
| 00 05          | 000a aaaa Tone Pan Keyfollow (54 - 74)<br>-100 - +100                                                                                                                                     |
| 00 06          | 00aa aaaa Tone Random Pan Depth (0 - 63)                                                                                                                                                  |
| 00 07          | 0aaa aaaa Tone Alternate Pan Depth (1 - 127)<br>L63 - 63R                                                                                                                                 |
| 00 08          | 0000 000a Tone Env Mode (0 - 1)<br>NO-SUS, SUSTAIN                                                                                                                                        |
| 00 09          | 0000 00aa Tone Delay Mode (0 - 3)<br>NORMAL, HOLD, KEY-OFF-NORMAL,<br>KEY-OFF-DECAY                                                                                                       |
| # 00 0A        | 0000 aaaa Tone Delay Time (0 - 149)<br>0000 bbbb 0 - 127, MUSICAL-NOTES                                                                                                                   |
| 00 0C          | 0aaa aaaa Tone Dry Send Level (0 - 127)                                                                                                                                                   |
| 00 0D          | 0aaa aaaa Tone Chorus Send Level (MPX) (0 - 127)                                                                                                                                          |
| 00 0E          | 0aaa aaaa Tone Reverb Send Level (MPX) (0 - 127)                                                                                                                                          |
| 00 0F          | 0aaa aaaa Tone Chorus Send Level (non MPX) (0 - 127)                                                                                                                                      |
| 00 10          | 0aaa aaaa Tone Reverb Send Level (non MPX) (0 - 127)                                                                                                                                      |
| 00 11          | 0000 aaaa Tone Output Assign (0 - 12)<br>MPX, A, B, C<*>, D<*>,<br>1, 2, 3, 4, 5<*>, 6<*>, 7<*>, 8<*>                                                                                     |
| 00 12          | 0000 000a Tone Receive Bender (0 - 1)<br>OFF, ON                                                                                                                                          |
| 00 13          | 0000 000a Tone Receive Expression (0 - 1)<br>OFF, ON                                                                                                                                      |
| 00 14          | 0000 000a Tone Receive Hold-1 (0 - 1)<br>OFF, ON                                                                                                                                          |
| 00 15          | 0000 000a Tone Receive Pan Mode (0 - 1)<br>CONTINUOUS, KEY-ON                                                                                                                             |
| 00 16          | 0000 000a Tone Redamper Switch (0 - 1)<br>OFF, ON                                                                                                                                         |
| 00 17          | 0000 00aa Tone Control 1 Switch 1 (0 - 2)<br>OFF, ON, REVERSE                                                                                                                             |
| 00 18          | 0000 00aa Tone Control 1 Switch 2 (0 - 2)<br>OFF, ON, REVERSE                                                                                                                             |

|         |                                                                                                  |
|---------|--------------------------------------------------------------------------------------------------|
| 00 19   | 0000 00aa Tone Control 1 Switch 3 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 1A   | 0000 00aa Tone Control 1 Switch 4 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 1B   | 0000 00aa Tone Control 2 Switch 1 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 1C   | 0000 00aa Tone Control 2 Switch 2 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 1D   | 0000 00aa Tone Control 2 Switch 3 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 1E   | 0000 00aa Tone Control 2 Switch 4 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 1F   | 0000 00aa Tone Control 3 Switch 1 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 20   | 0000 00aa Tone Control 3 Switch 2 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 21   | 0000 00aa Tone Control 3 Switch 3 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 22   | 0000 00aa Tone Control 3 Switch 4 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 23   | 0000 00aa Tone Control 4 Switch 1 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 24   | 0000 00aa Tone Control 4 Switch 2 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 25   | 0000 00aa Tone Control 4 Switch 3 (0 - 2)<br>OFF, ON, REVERSE                                    |
| 00 26   | 0000 00aa Tone Control 4 Switch 4 (0 - 2)<br>OFF, ON, REVERSE                                    |
| # 00 27 | 0000 00aa Wave Group Type (0 - 3)<br>INT, SR-JV80, SRX, SAMPLE<*>                                |
| # 00 28 | 0000 aaaa Wave Group ID (0 - 16384)<br>0000 bbbb OFF, 1 - 16384<br>0000 cccc<br>0000 dddd        |
| # 00 2C | 0000 aaaa Wave Number L (Mono) (0 - 16384)<br>0000 bbbb OFF, 1 - 16384<br>0000 cccc<br>0000 dddd |
| # 00 30 | 0000 aaaa Wave Number R (0 - 16384)<br>0000 bbbb OFF, 1 - 16384<br>0000 cccc<br>0000 dddd        |
| 00 34   | 0000 00aa Wave Gain (0 - 3)<br>-6, 0, +6, +12 [dB]                                               |
| 00 35   | 0000 000a Wave FXM Switch (0 - 1)<br>OFF, ON                                                     |
| 00 36   | 0000 00aa Wave FXM Color (0 - 3)<br>-4                                                           |
| 00 37   | 000a aaaa Wave FXM Depth (0 - 16)                                                                |
| 00 38   | 0000 000a Wave Tempo Sync (0 - 1)<br>OFF, ON                                                     |
| 00 39   | 00aa aaaa Wave Pitch Keyfollow (44 - 84)<br>-200 - +200                                          |
| 00 3A   | 000a aaaa Pitch Env Depth (52 - 76)<br>-12 - +12                                                 |
| 00 3B   | 0aaa aaaa Pitch Env Velocity Sens (1 - 127)<br>-63 - +63                                         |
| 00 3C   | 0aaa aaaa Pitch Env Time 1 Velocity Sens (1 - 127)<br>-63 - +63                                  |
| 00 3D   | 0aaa aaaa Pitch Env Time 4 Velocity Sens (1 - 127)<br>-63 - +63                                  |
| 00 3E   | 000a aaaa Pitch Env Time Keyfollow (54 - 74)<br>-100 - +100                                      |
| 00 3F   | 0aaa aaaa Pitch Env Time 1 (0 - 127)                                                             |
| 00 40   | 0aaa aaaa Pitch Env Time 2 (0 - 127)                                                             |
| 00 41   | 0aaa aaaa Pitch Env Time 3 (0 - 127)                                                             |
| 00 42   | 0aaa aaaa Pitch Env Time 4 (0 - 127)                                                             |
| 00 43   | 0aaa aaaa Pitch Env Level 0 (1 - 127)<br>-63 - +63                                               |
| 00 44   | 0aaa aaaa Pitch Env Level 1 (1 - 127)<br>-63 - +63                                               |
| 00 45   | 0aaa aaaa Pitch Env Level 2 (1 - 127)<br>-63 - +63                                               |
| 00 46   | 0aaa aaaa Pitch Env Level 3 (1 - 127)<br>-63 - +63                                               |
| 00 47   | 0aaa aaaa Pitch Env Level 4 (1 - 127)<br>-63 - +63                                               |
| 00 48   | 0000 0aaa TVF Filter Type (0 - 6)<br>OFF, LPF, BPF, HPF, PKG, LPF2,<br>LPF3                      |
| 00 49   | 0aaa aaaa TVF Cutoff Frequency (0 - 127)                                                         |
| 00 4A   | 00aa aaaa TVF Cutoff Keyfollow (44 - 84)<br>-200 - +200                                          |
| 00 4B   | 0000 0aaa TVF Cutoff Velocity Curve (0 - 7)<br>FIXED, 1 - 7                                      |
| 00 4C   | 0aaa aaaa TVF Cutoff Velocity Sens (1 - 127)<br>-63 - +63                                        |
| 00 4D   | 0aaa aaaa TVF Resonance (0 - 127)                                                                |
| 00 4E   | 0aaa aaaa TVF Resonance Velocity Sens (1 - 127)<br>-63 - +63                                     |
| 00 4F   | 0aaa aaaa TVF Env Depth (1 - 127)<br>-63 - +63                                                   |
| 00 50   | 0000 0aaa TVF Env Velocity Curve (0 - 7)<br>FIXED, 1 - 7                                         |
| 00 51   | 0aaa aaaa TVF Env Velocity Sens (1 - 127)<br>-63 - +63                                           |
| 00 52   | 0aaa aaaa TVF Env Time 1 Velocity Sens (1 - 127)<br>-63 - +63                                    |
| 00 53   | 0aaa aaaa TVF Env Time 4 Velocity Sens (1 - 127)<br>-63 - +63                                    |
| 00 54   | 000a aaaa TVF Env Time Keyfollow (54 - 74)<br>-100 - +100                                        |
| 00 55   | 0aaa aaaa TVF Env Time 1 (0 - 127)                                                               |
| 00 56   | 0aaa aaaa TVF Env Time 2 (0 - 127)                                                               |
| 00 57   | 0aaa aaaa TVF Env Time 3 (0 - 127)                                                               |
| 00 58   | 0aaa aaaa TVF Env Time 4 (0 - 127)                                                               |
| 00 59   | 0aaa aaaa TVF Env Level 0 (0 - 127)                                                              |
| 00 5A   | 0aaa aaaa TVF Env Level 1 (0 - 127)                                                              |
| 00 5B   | 0aaa aaaa TVF Env Level 2 (0 - 127)                                                              |
| 00 5C   | 0aaa aaaa TVF Env Level 3 (0 - 127)                                                              |
| 00 5D   | 0aaa aaaa TVF Env Level 4 (0 - 127)                                                              |
| 00 5E   | 000a aaaa Bias Level (54 - 74)<br>-100 - +100                                                    |
| 00 5F   | 0aaa aaaa Bias Position (0 - 127)<br>C-1 - G9                                                    |
| 00 60   | 0000 00aa Bias Direction (0 - 3)<br>LOWER, UPPER, LOWER&UPPER, ALL                               |
| 00 61   | 0000 0aaa TVA Level Velocity Curve (0 - 7)<br>FIXED, 1 - 7                                       |
| 00 62   | 0aaa aaaa TVA Level Velocity Sens (1 - 127)<br>-63 - +63                                         |
| 00 63   | 0aaa aaaa TVA Env Time 1 Velocity Sens (1 - 127)<br>-63 - +63                                    |
| 00 64   | 0aaa aaaa TVA Env Time 4 Velocity Sens (1 - 127)<br>-63 - +63                                    |
| 00 65   | 000a aaaa TVA Env Time Keyfollow (54 - 74)<br>-100 - +100                                        |
| 00 66   | 0aaa aaaa TVA Env Time 1 (0 - 127)                                                               |
| 00 67   | 0aaa aaaa TVA Env Time 2 (0 - 127)                                                               |
| 00 68   | 0aaa aaaa TVA Env Time 3 (0 - 127)                                                               |
| 00 69   | 0aaa aaaa TVA Env Time 4 (0 - 127)                                                               |

# MIDI Implementation

|   |       |                        |                           |                                                                                      |
|---|-------|------------------------|---------------------------|--------------------------------------------------------------------------------------|
|   | 00 6A | 0aaa aaaa              | TVA Env Level 1           | (0 - 127)                                                                            |
|   | 00 6B | 0aaa aaaa              | TVA Env Level 2           | (0 - 127)                                                                            |
|   | 00 6C | 0aaa aaaa              | TVA Env Level 3           | (0 - 127)                                                                            |
| # | 00 6D | 0000 aaaa              | LFO1 Wave Form            | (0 - 10)<br>SIN, TRI, SAW-UP, SAW-DW, SQR,<br>RND, BEND-UP, BEND-DW, TRP, S&H<br>CHS |
|   | 00 6E | 0000 aaaa<br>0000 bbbb | LFO1 Rate                 | (0 - 149)<br>0 - 127, MUSICAL-NOTES                                                  |
|   | 00 70 | 0000 0aaa              | LFO1 Offset               | (0 - 4)<br>-100, -50, 0, +50, +100                                                   |
|   | 00 71 | 0aaa aaaa              | LFO1 Rate Detune          | (0 - 127)                                                                            |
|   | 00 72 | 0aaa aaaa              | LFO1 Delay Time           | (0 - 127)                                                                            |
|   | 00 73 | 000a aaaa              | LFO1 Delay Time Keyfollow | (54 - 74)<br>-100 - +100                                                             |
|   | 00 74 | 0000 00aa              | LFO1 Fade Mode            | (0 - 3)<br>ON-IN, ON-OUT, OFF-IN, OFF-OUT                                            |
|   | 00 75 | 0aaa aaaa              | LFO1 Fade Time            | (0 - 127)                                                                            |
|   | 00 76 | 0000 000a              | LFO1 Key Trigger          | (0 - 1)<br>OFF, ON                                                                   |
|   | 00 77 | 0aaa aaaa              | LFO1 Pitch Depth          | (1 - 127)                                                                            |
|   | 00 78 | 0aaa aaaa              | LFO1 TVF Depth            | (1 - 127)                                                                            |
|   | 00 79 | 0aaa aaaa              | LFO1 TVA Depth            | (1 - 127)                                                                            |
|   | 00 7A | 0aaa aaaa              | LFO1 Pan Depth            | (1 - 127)                                                                            |
|   |       |                        |                           | (-63 - +63)                                                                          |
|   | 00 7B | 0000 aaaa              | LFO2 Wave Form            | (0 - 10)<br>SIN, TRI, SAW-UP, SAW-DW, SQR,<br>RND, BEND-UP, BEND-DW, TRP, S&H<br>CHS |
|   | 00 7C | 0000 aaaa<br>0000 bbbb | LFO2 Rate                 | (0 - 149)<br>0 - 127, MUSICAL-NOTES                                                  |

## 1-4-2-1 Rhythm Common

| Offset<br>Address | Description                                                                                                              |
|-------------------|--------------------------------------------------------------------------------------------------------------------------|
| 00 00             | 0aaa aaaa Rhythm Name 1 (32 - 127)                                                                                       |
| 00 01             | 0aaa aaaa Rhythm Name 2 (32 - 127)                                                                                       |
| 00 02             | 0aaa aaaa Rhythm Name 3 (32 - 127)                                                                                       |
| 00 03             | 0aaa aaaa Rhythm Name 4 (32 - 127)                                                                                       |
| 00 04             | 0aaa aaaa Rhythm Name 5 (32 - 127)                                                                                       |
| 00 05             | 0aaa aaaa Rhythm Name 6 (32 - 127)                                                                                       |
| 00 06             | 0aaa aaaa Rhythm Name 7 (32 - 127)                                                                                       |
| 00 07             | 0aaa aaaa Rhythm Name 8 (32 - 127)                                                                                       |
| 00 08             | 0aaa aaaa Rhythm Name 9 (32 - 127)                                                                                       |
| 00 09             | 0aaa aaaa Rhythm Name 10 (32 - 127)                                                                                      |
| 00 0A             | 0aaa aaaa Rhythm Name 11 (32 - 127)                                                                                      |
| 00 0B             | 0aaa aaaa Rhythm Name 12 (32 - 127)                                                                                      |
| #                 | 00 0C 0aaa aaaa Rhythm Level (0 - 127)                                                                                   |
|                   | 00 0D 0000 000a Rhythm Clock Source (0 - 1)<br>RHYTHM, SYSTEM                                                            |
|                   | 00 0E 0000 aaaa Rhythm Tempo (20 - 250)                                                                                  |
|                   | 00 10 0000 000a One Shot Mode<*> (0 - 1)<br>OFF, ON                                                                      |
|                   | 00 11 0000 aaaa Rhythm Output Assign (0 - 13)<br>MF, X, A, B, C<*>, D<*>,<br>1, 2, 3, 4, 5<*>, 6<*>, 7<*>, 8<*>,<br>TONE |
| 00 00 00 12       | Total Size                                                                                                               |

## 1-4-2-2 Rhythm Common MFX

| Offset<br>Address | Description                                                                                          |
|-------------------|------------------------------------------------------------------------------------------------------|
| 00 00             | 0aaa aaaa MFX Type (0 - 127)                                                                         |
| 00 01             | 0aaa aaaa MFX Dry Send Level (0 - 127)                                                               |
| 00 02             | 0aaa aaaa MFX Chorus Send Level (0 - 127)                                                            |
| 00 03             | 0aaa aaaa MFX Reverb Send Level (0 - 127)                                                            |
| 00 04             | 0000 00aa MFX Output Assign (0 - 3)<br>A, B, C<*>, D<*>                                              |
| 00 05             | 0aaa aaaa MFX Control 1 Source (0 - 101)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, AFT, SYS1 - SYS4 |
| 00 06             | 0aaa aaaa MFX Control 1 Sens (1 - 127)<br>-63 - +63                                                  |
| 00 07             | 0aaa aaaa MFX Control 2 Source (0 - 101)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, AFT, SYS1 - SYS4 |
| 00 08             | 0aaa aaaa MFX Control 2 Sens (1 - 127)<br>-63 - +63                                                  |
| 00 09             | 0aaa aaaa MFX Control 3 Source (0 - 101)<br>OFF, CC01 - CC31, CC33 - CC95,<br>BEND, AFT, SYS1 - SYS4 |
| 00 0A             | 0aaa aaaa MFX Control 3 Sens (1 - 127)<br>-63 - +63                                                  |
| 00 0B             | 0aaa aaaa MFX Control 4 Source (0 - 101)<br>OFF, CC01 - CC31, CC33 - CC95,                           |

|   |       |                                                  |                      |                                                  |
|---|-------|--------------------------------------------------|----------------------|--------------------------------------------------|
|   | 00 0C | 0aaa aaaa                                        | MFX Control 4 Sens   | BEND, AFT, SYS1 - SYS4<br>(1 - 127)<br>-63 - +63 |
|   | 00 0D | 000a aaaa                                        | MFX Control Assign 1 | (0 - 16)<br>OFF, 1 - 16                          |
|   | 00 0E | 000a aaaa                                        | MFX Control Assign 2 | (0 - 16)<br>OFF, 1 - 16                          |
|   | 00 0F | 000a aaaa                                        | MFX Control Assign 3 | (0 - 16)<br>OFF, 1 - 16                          |
|   | 00 10 | 000a aaaa                                        | MFX Control Assign 4 | (0 - 16)<br>OFF, 1 - 16                          |
| # | 00 11 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 1      | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 15 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 2      | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 19 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 3      | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 1D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 4      | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 21 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 5      | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 25 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 6      | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 29 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 7      | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 2D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 8      | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 31 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 9      | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 35 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 10     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 39 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 11     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 3D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 12     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 41 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 13     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 45 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 14     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 49 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 15     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 4D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 16     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 51 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 17     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 55 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 18     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 59 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 19     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 5D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 20     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 61 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 21     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 65 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 22     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 69 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 23     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 6D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 24     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 71 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | MFX Parameter 25     | (12768 - 52768)<br>-20000 - +20000               |
| # | 00 75 | 0000 aaaa                                        |                      |                                                  |

# MIDI Implementation

|             |       |            |                  |                                    |
|-------------|-------|------------|------------------|------------------------------------|
| #           | 00 79 | 0000 bbbb  | MPX Parameter 26 | (12768 - 52768)<br>-20000 - +20000 |
|             |       | 0000 cccc  |                  |                                    |
|             |       | 0000 dddd  |                  |                                    |
|             |       |            |                  |                                    |
| #           | 00 7D | 0000 aaaa  | MPX Parameter 27 | (12768 - 52768)<br>-20000 - +20000 |
|             |       | 0000 bbbb  |                  |                                    |
|             |       | 0000 cccc  |                  |                                    |
|             |       | 0000 dddd  |                  |                                    |
| #           | 01 01 | 0000 aaaa  | MPX Parameter 28 | (12768 - 52768)<br>-20000 - +20000 |
|             |       | 0000 bbbb  |                  |                                    |
|             |       | 0000 cccc  |                  |                                    |
|             |       | 0000 dddd  |                  |                                    |
| #           | 01 05 | 0000 aaaa  | MPX Parameter 29 | (12768 - 52768)<br>-20000 - +20000 |
|             |       | 0000 bbbb  |                  |                                    |
|             |       | 0000 cccc  |                  |                                    |
|             |       | 0000 dddd  |                  |                                    |
| #           | 01 09 | 0000 aaaa  | MPX Parameter 30 | (12768 - 52768)<br>-20000 - +20000 |
|             |       | 0000 bbbb  |                  |                                    |
|             |       | 0000 cccc  |                  |                                    |
|             |       | 0000 dddd  |                  |                                    |
| #           | 01 0D | 0000 aaaa  | MPX Parameter 31 | (12768 - 52768)<br>-20000 - +20000 |
|             |       | 0000 bbbb  |                  |                                    |
|             |       | 0000 cccc  |                  |                                    |
|             |       | 0000 dddd  |                  |                                    |
|             |       |            | MPX Parameter 32 | (12768 - 52768)<br>-20000 - +20000 |
| 00 00 01 11 |       | Total Size |                  |                                    |

## 1-4-2-3 Rhythm Common Chorus

| Offset<br>Address | Description                                      |                      |                                           |
|-------------------|--------------------------------------------------|----------------------|-------------------------------------------|
| 00 00             | 0000 aaaa                                        | Chorus Type          | (0 - 3)<br>OFF, CHORUS, DELAY, GM2 CHORUS |
| 00 01             | 0aaa aaaa                                        | Chorus Level         | (0 - 127)                                 |
| 00 02             | 0000 00aa                                        | Chorus Output Assign | (0 - 3)<br>A, B, C<*>, D<*>               |
| 00 03             | 0000 00aa                                        | Chorus Output Select | (0 - 2)<br>MAIN, REV, MAIN+REV            |
| # 00 04           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 1   | (12768 - 52768)<br>-20000 - +20000        |
| # 00 08           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 2   | (12768 - 52768)<br>-20000 - +20000        |
| # 00 0C           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 3   | (12768 - 52768)<br>-20000 - +20000        |
| # 00 10           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 4   | (12768 - 52768)<br>-20000 - +20000        |
| # 00 14           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 5   | (12768 - 52768)<br>-20000 - +20000        |
| # 00 18           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 6   | (12768 - 52768)<br>-20000 - +20000        |
| # 00 1C           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 7   | (12768 - 52768)<br>-20000 - +20000        |
| # 00 20           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 8   | (12768 - 52768)<br>-20000 - +20000        |
| # 00 24           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 9   | (12768 - 52768)<br>-20000 - +20000        |
| # 00 28           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 10  | (12768 - 52768)<br>-20000 - +20000        |
| # 00 2C           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 11  | (12768 - 52768)<br>-20000 - +20000        |
| # 00 30           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Chorus Parameter 12  | (12768 - 52768)<br>-20000 - +20000        |
| 00 00 00 34       |                                                  | Total Size           |                                           |

## 1-4-2-4 Rhythm Common Reverb

| Offset<br>Address | Description                                      |                      |                                                        |
|-------------------|--------------------------------------------------|----------------------|--------------------------------------------------------|
| 00 00             | 0000 aaaa                                        | Reverb Type          | (0 - 5)<br>OFF, REVERB, SRV ROOM, SRV HALL, GM2 REVERB |
| 00 01             | 0aaa aaaa                                        | Reverb Level         | (0 - 127)                                              |
| 00 02             | 0000 00aa                                        | Reverb Output Assign | (0 - 3)<br>A, B, C<*>, D<*>                            |
| # 00 03           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 1   | (12768 - 52768)<br>-20000 - +20000                     |
| # 00 07           | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 2   | (12768 - 52768)                                        |

|             |                                                  |                     |                                    |
|-------------|--------------------------------------------------|---------------------|------------------------------------|
| # 00 0B     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 3  | (12768 - 52768)<br>-20000 - +20000 |
| # 00 0F     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 4  | (12768 - 52768)<br>-20000 - +20000 |
| # 00 13     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 5  | (12768 - 52768)<br>-20000 - +20000 |
| # 00 17     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 6  | (12768 - 52768)<br>-20000 - +20000 |
| # 00 1B     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 7  | (12768 - 52768)<br>-20000 - +20000 |
| # 00 1F     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 8  | (12768 - 52768)<br>-20000 - +20000 |
| # 00 23     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 9  | (12768 - 52768)<br>-20000 - +20000 |
| # 00 27     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 10 | (12768 - 52768)<br>-20000 - +20000 |
| # 00 2B     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 11 | (12768 - 52768)<br>-20000 - +20000 |
| # 00 2F     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 12 | (12768 - 52768)<br>-20000 - +20000 |
| # 00 33     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 13 | (12768 - 52768)<br>-20000 - +20000 |
| # 00 37     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 14 | (12768 - 52768)<br>-20000 - +20000 |
| # 00 3B     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 15 | (12768 - 52768)<br>-20000 - +20000 |
| # 00 3F     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 16 | (12768 - 52768)<br>-20000 - +20000 |
| # 00 43     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 17 | (12768 - 52768)<br>-20000 - +20000 |
| # 00 47     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 18 | (12768 - 52768)<br>-20000 - +20000 |
| # 00 4B     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 19 | (12768 - 52768)<br>-20000 - +20000 |
| # 00 4F     | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Reverb Parameter 20 | (12768 - 52768)<br>-20000 - +20000 |
| 00 00 00 53 |                                                  | Total Size          |                                    |

## 1-4-2-5 Rhythm Tone

| Offset<br>Address | Description |                         |                                           |
|-------------------|-------------|-------------------------|-------------------------------------------|
| 00 00             | 0aaa aaaa   | Tone Name 1             | (32 - 127)<br>32 - 127 [ASCII]            |
| 00 01             | 0aaa aaaa   | Tone Name 2             | (32 - 127)<br>32 - 127 [ASCII]            |
| 00 02             | 0aaa aaaa   | Tone Name 3             | (32 - 127)<br>32 - 127 [ASCII]            |
| 00 03             | 0aaa aaaa   | Tone Name 4             | (32 - 127)<br>32 - 127 [ASCII]            |
| 00 04             | 0aaa aaaa   | Tone Name 5             | (32 - 127)<br>32 - 127 [ASCII]            |
| 00 05             | 0aaa aaaa   | Tone Name 6             | (32 - 127)<br>32 - 127 [ASCII]            |
| 00 06             | 0aaa aaaa   | Tone Name 7             | (32 - 127)<br>32 - 127 [ASCII]            |
| 00 07             | 0aaa aaaa   | Tone Name 8             | (32 - 127)<br>32 - 127 [ASCII]            |
| 00 08             | 0aaa aaaa   | Tone Name 9             | (32 - 127)<br>32 - 127 [ASCII]            |
| 00 09             | 0aaa aaaa   | Tone Name 10            | (32 - 127)<br>32 - 127 [ASCII]            |
| 00 0A             | 0aaa aaaa   | Tone Name 11            | (32 - 127)<br>32 - 127 [ASCII]            |
| 00 0B             | 0aaa aaaa   | Tone Name 12            | (32 - 127)<br>32 - 127 [ASCII]            |
| 00 0C             | 0000 000a   | Assign Type             | (0 - 1)<br>MULTI, SINGLE                  |
| 00 0D             | 000a aaaa   | Mute Group              | (0 - 31)<br>OFF, 1 - 31                   |
| 00 0E             | 0aaa aaaa   | Tone Level              | (0 - 127)                                 |
| 00 0F             | 0aaa aaaa   | Tone Coarse Tune        | (0 - 127)<br>C-1 - G9                     |
| 00 10             | 0aaa aaaa   | Tone Fine Tune          | (14 - 114)<br>-50 - +50                   |
| 00 11             | 000a aaaa   | Tone Random Pitch Depth | (0 - 30)<br>0, 1, 2, 3, 4, 5, 6, 7, 8, 9, |

|   |       |                                                  |                                                                                                            |                                                                          |
|---|-------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
|   |       |                                                  | 10, 20, 30, 40, 50, 60, 70, 80,<br>90, 100, 200, 300, 400, 500,<br>600, 700, 800, 900, 1000, 1100,<br>1200 |                                                                          |
|   | 00 12 | 0aaa aaaa                                        | Tone Pan                                                                                                   | (0 - 127)<br>L64 - 63R                                                   |
|   | 00 13 | 00aa aaaa                                        | Tone Random Pan Depth                                                                                      | (0 - 63)                                                                 |
|   | 00 14 | 0aaa aaaa                                        | Tone Alternate Pan Depth                                                                                   | (1 - 127)                                                                |
|   | 00 15 | 0000 000a                                        | Tone Env Mode                                                                                              | (0 - 1)<br>NO-SUS, SUSTAIN                                               |
|   | 00 16 | 0aaa aaaa                                        | Tone Dry Send Level                                                                                        | (0 - 127)                                                                |
|   | 00 17 | 0aaa aaaa                                        | Tone Chorus Send Level                                                                                     | (0 - 127)                                                                |
|   | 00 18 | 0aaa aaaa                                        | Tone Reverb Send Level                                                                                     | (0 - 127)                                                                |
|   | 00 19 | 0aaa aaaa                                        | Tone Chorus Send Level (non MPX)                                                                           | (0 - 127)                                                                |
|   | 00 1A | 0aaa aaaa                                        | Tone Reverb Send Level (non MPX)                                                                           | (0 - 127)                                                                |
|   | 00 1B | 0000 aaaa                                        | Tone Output Assign                                                                                         | (0 - 12)<br>MPX, A, B, C<*>, D<*>,<br>1, 2, 3, 4, 5<*>, 6<*>, 7<*>, 8<*> |
|   | 00 1C | 00aa aaaa                                        | Tone Pitch Bend Range                                                                                      | (0 - 48)                                                                 |
|   | 00 1D | 0000 000a                                        | Tone Receive Expression                                                                                    | (0 - 1)<br>OFF, ON                                                       |
|   | 00 1E | 0000 000a                                        | Tone Receive Hold-1                                                                                        | (0 - 1)<br>OFF, ON                                                       |
|   | 00 1F | 0000 000a                                        | Tone Receive Pan Mode                                                                                      | (0 - 1)<br>CONTINUOUS, KEY-ON                                            |
|   | 00 20 | 0000 00aa                                        | WMT Velocity Control                                                                                       | (0 - 2)<br>OFF, ON, RANDOM                                               |
|   | 00 21 | 0000 000a                                        | WMT1 Wave Switch                                                                                           | (0 - 1)<br>OFF, ON                                                       |
|   | 00 22 | 0000 00aa                                        | WMT1 Wave Group Type                                                                                       | (0 - 3)<br>INT, SR-JV80, SRX, SAMPLE<*>                                  |
| # | 00 23 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | WMT1 Wave Group ID                                                                                         | (0 - 16384)<br>OFF, 1 - 16384                                            |
| # | 00 27 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | WMT1 Wave Number L (Mono)                                                                                  | (0 - 16384)<br>OFF, 1 - 16384                                            |
| # | 00 2B | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | WMT1 Wave Number R                                                                                         | (0 - 16384)<br>OFF, 1 - 16384                                            |
|   | 00 2F | 0000 00aa                                        | WMT1 Wave Gain                                                                                             | (0 - 3)<br>-6, 0, +6, +12 [dB]                                           |
|   | 00 30 | 0000 000a                                        | WMT1 Wave FXM Switch                                                                                       | (0 - 1)<br>OFF, ON                                                       |
|   | 00 31 | 0000 00aa                                        | WMT1 Wave FXM Color                                                                                        | (0 - 3)<br>1 - 4                                                         |
|   | 00 32 | 000a aaaa                                        | WMT1 Wave FXM Depth                                                                                        | (0 - 16)                                                                 |
|   | 00 33 | 0000 000a                                        | WMT1 Wave Tempo Sync                                                                                       | (0 - 1)<br>OFF, ON                                                       |
|   | 00 34 | 0aaa aaaa                                        | WMT1 Wave Coarse Tune                                                                                      | (16 - 112)<br>-48 - +48                                                  |
|   | 00 35 | 0aaa aaaa                                        | WMT1 Wave Fine Tune                                                                                        | (14 - 114)<br>-50 - +50                                                  |
|   | 00 36 | 0aaa aaaa                                        | WMT1 Wave Pan                                                                                              | (0 - 127)<br>L64 - 63R                                                   |
|   | 00 37 | 0000 000a                                        | WMT1 Wave Random Pan Switch                                                                                | (0 - 1)<br>OFF, ON                                                       |
|   | 00 38 | 0000 00aa                                        | WMT1 Wave Alternate Pan Switch                                                                             | (0 - 2)<br>OFF, ON, REVERSE                                              |
|   | 00 39 | 0aaa aaaa                                        | WMT1 Wave Level                                                                                            | (0 - 127)                                                                |
|   | 00 3A | 0aaa aaaa                                        | WMT1 Velocity Range Lower                                                                                  | (1 - 127)<br>1 - UPPER                                                   |
|   | 00 3B | 0aaa aaaa                                        | WMT1 Velocity Range Upper                                                                                  | (1 - 127)<br>LOWER - 127                                                 |
|   | 00 3C | 0aaa aaaa                                        | WMT1 Velocity Fade Width Lower                                                                             | (0 - 127)                                                                |
|   | 00 3D | 0aaa aaaa                                        | WMT1 Velocity Fade Width Upper                                                                             | (0 - 127)                                                                |
|   | 00 3E | 0000 000a                                        | WMT2 Wave Switch                                                                                           | (0 - 1)<br>OFF, ON                                                       |
|   | 00 3F | 0000 00aa                                        | WMT2 Wave Group Type                                                                                       | (0 - 3)<br>INT, SR-JV80, SRX, SAMPLE<*>                                  |
| # | 00 40 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | WMT2 Wave Group ID                                                                                         | (0 - 16384)<br>OFF, 1 - 16384                                            |
| # | 00 44 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | WMT2 Wave Number L (Mono)                                                                                  | (0 - 16384)<br>OFF, 1 - 16384                                            |
| # | 00 48 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | WMT2 Wave Number R                                                                                         | (0 - 16384)<br>OFF, 1 - 16384                                            |
|   | 00 4C | 0000 00aa                                        | WMT2 Wave Gain                                                                                             | (0 - 3)<br>-6, 0, +6, +12 [dB]                                           |
|   | 00 4D | 0000 000a                                        | WMT2 Wave FXM Switch                                                                                       | (0 - 1)<br>OFF, ON                                                       |
|   | 00 4E | 0000 00aa                                        | WMT2 Wave FXM Color                                                                                        | (0 - 3)<br>1 - 4                                                         |
|   | 00 4F | 000a aaaa                                        | WMT2 Wave FXM Depth                                                                                        | (0 - 16)                                                                 |
|   | 00 50 | 0000 000a                                        | WMT2 Wave Tempo Sync                                                                                       | (0 - 1)<br>OFF, ON                                                       |
|   | 00 51 | 0aaa aaaa                                        | WMT2 Wave Coarse Tune                                                                                      | (16 - 112)<br>-48 - +48                                                  |
|   | 00 52 | 0aaa aaaa                                        | WMT2 Wave Fine Tune                                                                                        | (14 - 114)<br>-50 - +50                                                  |
|   | 00 53 | 0aaa aaaa                                        | WMT2 Wave Pan                                                                                              | (0 - 127)<br>L64 - 63R                                                   |
|   | 00 54 | 0000 000a                                        | WMT2 Wave Random Pan Switch                                                                                | (0 - 1)<br>OFF, ON                                                       |
|   | 00 55 | 0000 00aa                                        | WMT2 Wave Alternate Pan Switch                                                                             | (0 - 2)<br>OFF, ON, REVERSE                                              |
|   | 00 56 | 0aaa aaaa                                        | WMT2 Wave Level                                                                                            | (0 - 127)                                                                |
|   | 00 57 | 0aaa aaaa                                        | WMT2 Velocity Range Lower                                                                                  | (1 - 127)<br>1 - UPPER                                                   |
|   | 00 58 | 0aaa aaaa                                        | WMT2 Velocity Range Upper                                                                                  | (1 - 127)<br>LOWER - 127                                                 |
|   | 00 59 | 0aaa aaaa                                        | WMT2 Velocity Fade Width Lower                                                                             | (0 - 127)                                                                |
|   | 00 5A | 0aaa aaaa                                        | WMT2 Velocity Fade Width Upper                                                                             | (0 - 127)                                                                |
|   | 00 5B | 0000 000a                                        | WMT3 Wave Switch                                                                                           | (0 - 1)<br>OFF, ON                                                       |
| # | 00 5C | 0000 00aa                                        | WMT3 Wave Group Type                                                                                       | (0 - 3)<br>INT, SR-JV80, SRX, SAMPLE<*>                                  |
| # | 00 5D | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | WMT3 Wave Group ID                                                                                         | (0 - 16384)<br>OFF, 1 - 16384                                            |
| # | 00 61 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | WMT3 Wave Number L (Mono)                                                                                  | (0 - 16384)<br>OFF, 1 - 16384                                            |

|   |       |                                                  |                                |                                                   |
|---|-------|--------------------------------------------------|--------------------------------|---------------------------------------------------|
|   | 00 65 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | WMT3 Wave Number R             | (0 - 16384)<br>OFF, 1 - 16384                     |
|   | 00 69 | 0000 00aa                                        | WMT3 Wave Gain                 | (0 - 3)<br>-6, 0, +6, +12 [dB]                    |
|   | 00 6A | 0000 000a                                        | WMT3 Wave FXM Switch           | (0 - 1)<br>OFF, ON                                |
|   | 00 6B | 0000 00aa                                        | WMT3 Wave FXM Color            | (0 - 3)<br>1 - 4                                  |
|   | 00 6C | 000a aaaa                                        | WMT3 Wave FXM Depth            | (0 - 16)                                          |
|   | 00 6D | 0000 000a                                        | WMT3 Wave Tempo Sync           | (0 - 1)<br>OFF, ON                                |
|   | 00 6E | 0aaa aaaa                                        | WMT3 Wave Coarse Tune          | (16 - 112)<br>-48 - +48                           |
|   | 00 6F | 0aaa aaaa                                        | WMT3 Wave Fine Tune            | (14 - 114)<br>-50 - +50                           |
|   | 00 70 | 0aaa aaaa                                        | WMT3 Wave Pan                  | (0 - 127)<br>L64 - 63R                            |
|   | 00 71 | 0000 000a                                        | WMT3 Wave Random Pan Switch    | (0 - 1)<br>OFF, ON                                |
|   | 00 72 | 0000 00aa                                        | WMT3 Wave Alternate Pan Switch | (0 - 2)<br>OFF, ON, REVERSE                       |
|   | 00 73 | 0aaa aaaa                                        | WMT3 Wave Level                | (0 - 127)                                         |
|   | 00 74 | 0aaa aaaa                                        | WMT3 Velocity Range Lower      | (1 - 127)<br>1 - UPPER                            |
|   | 00 75 | 0aaa aaaa                                        | WMT3 Velocity Range Upper      | (1 - 127)<br>LOWER - 127                          |
|   | 00 76 | 0aaa aaaa                                        | WMT3 Velocity Fade Width Lower | (0 - 127)                                         |
|   | 00 77 | 0aaa aaaa                                        | WMT3 Velocity Fade Width Upper | (0 - 127)                                         |
|   | 00 78 | 0000 000a                                        | WMT4 Wave Switch               | (0 - 1)<br>OFF, ON                                |
|   | 00 79 | 0000 00aa                                        | WMT4 Wave Group Type           | (0 - 3)<br>INT, SR-JV80, SRX, SAMPLE<*>           |
| # | 00 7A | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | WMT4 Wave Group ID             | (0 - 16384)<br>OFF, 1 - 16384                     |
| # | 00 7E | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | WMT4 Wave Number L (Mono)      | (0 - 16384)<br>OFF, 1 - 16384                     |
| # | 01 02 | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | WMT4 Wave Number R             | (0 - 16384)<br>OFF, 1 - 16384                     |
|   | 01 06 | 0000 00aa                                        | WMT4 Wave Gain                 | (0 - 3)<br>-6, 0, +6, +12 [dB]                    |
|   | 01 07 | 0000 000a                                        | WMT4 Wave FXM Switch           | (0 - 1)<br>OFF, ON                                |
|   | 01 08 | 0000 00aa                                        | WMT4 Wave FXM Color            | (0 - 3)<br>1 - 4                                  |
|   | 01 09 | 000a aaaa                                        | WMT4 Wave FXM Depth            | (0 - 16)                                          |
|   | 01 0A | 0000 000a                                        | WMT4 Wave Tempo Sync           | (0 - 1)<br>OFF, ON                                |
|   | 01 0B | 0aaa aaaa                                        | WMT4 Wave Coarse Tune          | (16 - 112)<br>-48 - +48                           |
|   | 01 0C | 0aaa aaaa                                        | WMT4 Wave Fine Tune            | (14 - 114)<br>-50 - +50                           |
|   | 01 0D | 0aaa aaaa                                        | WMT4 Wave Pan                  | (0 - 127)<br>L64 - 63R                            |
|   | 01 0E | 0000 000a                                        | WMT4 Wave Random Pan Switch    | (0 - 1)<br>OFF, ON                                |
|   | 01 0F | 0000 00aa                                        | WMT4 Wave Alternate Pan Switch | (0 - 2)<br>OFF, ON, REVERSE                       |
|   | 01 10 | 0aaa aaaa                                        | WMT4 Wave Level                | (0 - 127)                                         |
|   | 01 11 | 0aaa aaaa                                        | WMT4 Velocity Range Lower      | (1 - 127)<br>1 - UPPER                            |
|   | 01 12 | 0aaa aaaa                                        | WMT4 Velocity Range Upper      | (1 - 127)<br>LOWER - 127                          |
|   | 01 13 | 0aaa aaaa                                        | WMT4 Velocity Fade Width Lower | (0 - 127)                                         |
|   | 01 14 | 0aaa aaaa                                        | WMT4 Velocity Fade Width Upper | (0 - 127)                                         |
|   | 01 15 | 000a aaaa                                        | Pitch Env Depth                | (52 - 76)<br>-12 - +12                            |
|   | 01 16 | 0aaa aaaa                                        | Pitch Env Velocity Sens        | (1 - 127)<br>-63 - +63                            |
|   | 01 17 | 0aaa aaaa                                        | Pitch Env Time 1 Velocity Sens | (1 - 127)<br>-63 - +63                            |
|   | 01 18 | 0aaa aaaa                                        | Pitch Env Time 4 Velocity Sens | (1 - 127)<br>-63 - +63                            |
|   | 01 19 | 0aaa aaaa                                        | Pitch Env Time 1               | (0 - 127)                                         |
|   | 01 1A | 0aaa aaaa                                        | Pitch Env Time 2               | (0 - 127)                                         |
|   | 01 1B | 0aaa aaaa                                        | Pitch Env Time 3               | (0 - 127)                                         |
|   | 01 1C | 0aaa aaaa                                        | Pitch Env Time 4               | (0 - 127)                                         |
|   | 01 1D | 0aaa aaaa                                        | Pitch Env Level 0              | (1 - 127)<br>-63 - +63                            |
|   | 01 1E | 0aaa aaaa                                        | Pitch Env Level 1              | (1 - 127)<br>-63 - +63                            |
|   | 01 1F | 0aaa aaaa                                        | Pitch Env Level 2              | (1 - 127)<br>-63 - +63                            |
|   | 01 20 | 0aaa aaaa                                        | Pitch Env Level 3              | (1 - 127)<br>-63 - +63                            |
|   | 01 21 | 0aaa aaaa                                        | Pitch Env Level 4              | (1 - 127)<br>-63 - +63                            |
|   | 01 22 | 0000 0aaa                                        | TVF Filter Type                | (0 - 6)<br>OFF, LPF, BPF, HPF, PKG, LFP2,<br>LFP3 |
|   | 01 23 | 0aaa aaaa                                        | TVF Cutoff Frequency           | (0 - 127)                                         |
|   | 01 24 | 0000 0aaa                                        | TVF Cutoff Velocity Curve      | (0 - 7)<br>FIXED, 1 - 7                           |
|   | 01 25 | 0aaa aaaa                                        | TVF Cutoff Velocity Sens       | (1 - 127)<br>-63 - +63                            |
|   | 01 26 | 0aaa aaaa                                        | TVF Resonance                  | (0 - 127)                                         |
|   | 01 27 | 0aaa aaaa                                        | TVF Resonance Velocity Sens    | (1 - 127)<br>-63 - +63                            |
|   | 01 28 | 0aaa aaaa                                        | TVF Env Depth                  | (1 - 127)<br>-63 - +63                            |
|   | 01 29 | 0000 0aaa                                        | TVF Env Velocity Curve Type    | (0 - 7)<br>FIXED, 1 - 7                           |
|   | 01 2A | 0aaa aaaa                                        | TVF Env Velocity Sens          | (1 - 127)<br>-63 - +63                            |
|   | 01 2B | 0aaa aaaa                                        | TVF Env Time 1 Velocity Sens   | (1 - 127)<br>-63 - +63                            |
|   | 01 2C | 0aaa aaaa                                        | TVF Env Time 4 Velocity Sens   | (1 - 127)<br>-63 - +63                            |
|   | 01 2D | 0aaa aaaa                                        | TVF Env Time 1                 | (0 - 127)                                         |
|   | 01 2E | 0aaa aaaa                                        | TVF Env Time 2                 | (0 - 127)                                         |
|   | 01 2F | 0aaa aaaa                                        | TVF Env Time 3                 | (0 - 127)                                         |
|   | 01 30 | 0aaa aaaa                                        | TVF Env Time 4                 | (0 - 127)                                         |
|   | 01 31 | 0aaa aaaa                                        | TVF Env Level 0                | (0 - 127)                                         |
|   | 01 32 | 0aaa aaaa                                        | TVF Env Level 1                | (0 - 127)                                         |
|   | 01 33 | 0aaa aaaa                                        | TVF Env Level 2                | (0 - 127)                                         |
|   | 01 34 | 0aaa aaaa                                        | TVF Env Level 3                | (0 - 127)                                         |
|   | 01 35 | 0aaa aaaa                                        | TVF Env Level 4                | (0 - 127)                                         |
|   | 01 36 | 0000 0aaa                                        | TVA Level Velocity Curve       | (0 - 7)<br>FIXED, 1 - 7                           |
|   | 01 37 | 0aaa aaaa                                        | TVA Level Velocity Sens        | (1 - 127)<br>-63 - +63                            |
|   | 01 38 | 0aaa aaaa                                        | TVA Env Time 1 Velocity Sens   | (1 - 127)<br>-63 - +63                            |

# MIDI Implementation

|             |            |                              |                        |
|-------------|------------|------------------------------|------------------------|
| 01 39       | 0aaa aaaa  | TVA Env Time 4 Velocity Sens | (1 - 127)<br>-63 - +63 |
| 01 3A       | 0aaa aaaa  | TVA Env Time 1               | (0 - 127)              |
| 01 3B       | 0aaa aaaa  | TVA Env Time 2               | (0 - 127)              |
| 01 3C       | 0aaa aaaa  | TVA Env Time 3               | (0 - 127)              |
| 01 3D       | 0aaa aaaa  | TVA Env Time 4               | (0 - 127)              |
| 01 3E       | 0aaa aaaa  | TVA Env Level 1              | (0 - 127)              |
| 01 3F       | 0aaa aaaa  | TVA Env Level 2              | (0 - 127)              |
| 01 40       | 0aaa aaaa  | TVA Env Level 3              | (0 - 127)              |
| 00 00 01 41 | Total Size |                              |                        |

## ■GS (Model ID = 42H)

### System Parameter

| Start Address | Description                                      |                  |                                                |
|---------------|--------------------------------------------------|------------------|------------------------------------------------|
| # 40 00 00    | 0000 aaaa<br>0000 bbbb<br>0000 cccc<br>0000 dddd | Master Tune      | (24 - 2024)                                    |
| 40 00 04      | 0aaa aaaa                                        | Master Volume    | -100.0 - 100.0 [cent]                          |
| 40 00 05      | 0aaa aaaa                                        | Master Key Shift | (0 - 127)<br>(40 - 88)                         |
| 40 00 06      | 0aaa aaaa                                        | Master Pan       | -24 - +24 [semitone]<br>(1 - 127)<br>L63 - 63R |
| 40 00 7F      | 0aaa aaaa                                        | Mode Set         | (0, 127)<br>GS-RESET, GS-EXIT                  |

### Common Parameter

| Start Address | Description |                                |           |
|---------------|-------------|--------------------------------|-----------|
| 40 01 10      | 0aaa aaaa   | Voice Reserve 1                | (0 - 24)  |
| 40 01 11      | 0aaa aaaa   | Voice Reserve 2                | (0 - 24)  |
| 40 01 12      | 0aaa aaaa   | Voice Reserve 3                | (0 - 24)  |
| 40 01 13      | 0aaa aaaa   | Voice Reserve 4                | (0 - 24)  |
| 40 01 14      | 0aaa aaaa   | Voice Reserve 5                | (0 - 24)  |
| 40 01 15      | 0aaa aaaa   | Voice Reserve 6                | (0 - 24)  |
| 40 01 16      | 0aaa aaaa   | Voice Reserve 7                | (0 - 24)  |
| 40 01 17      | 0aaa aaaa   | Voice Reserve 8                | (0 - 24)  |
| 40 01 18      | 0aaa aaaa   | Voice Reserve 9                | (0 - 24)  |
| 40 01 19      | 0aaa aaaa   | Voice Reserve 10               | (0 - 24)  |
| 40 01 1A      | 0aaa aaaa   | Voice Reserve 11               | (0 - 24)  |
| 40 01 1B      | 0aaa aaaa   | Voice Reserve 12               | (0 - 24)  |
| 40 01 1C      | 0aaa aaaa   | Voice Reserve 13               | (0 - 24)  |
| 40 01 1D      | 0aaa aaaa   | Voice Reserve 14               | (0 - 24)  |
| 40 01 1E      | 0aaa aaaa   | Voice Reserve 15               | (0 - 24)  |
| 40 01 1F      | 0aaa aaaa   | Voice Reserve 16               | (0 - 24)  |
| 40 01 30      | 0aaa aaaa   | Reverb Macro                   | (0 - 7)   |
| 40 01 31      | 0aaa aaaa   | Reverb Character               | (0 - 7)   |
| 40 01 32      | 0aaa aaaa   | Reverb Pre-LPF                 | (0 - 7)   |
| 40 01 33      | 0aaa aaaa   | Reverb Level                   | (0 - 127) |
| 40 01 34      | 0aaa aaaa   | Reverb Time                    | (0 - 127) |
| 40 01 35      | 0aaa aaaa   | Reverb Delay Feedback          | (0 - 127) |
| 40 01 36      | 0aaa aaaa   | Reverb Send Level to Chorus<*> | (0 - 127) |
| 40 01 38      | 0aaa aaaa   | Chorus Macro                   | (0 - 7)   |
| 40 01 39      | 0aaa aaaa   | Chorus Pre-LPF                 | (0 - 7)   |
| 40 01 3A      | 0aaa aaaa   | Chorus Level                   | (0 - 127) |
| 40 01 3B      | 0aaa aaaa   | Chorus Feedback                | (0 - 127) |
| 40 01 3C      | 0aaa aaaa   | Chorus Delay                   | (0 - 127) |
| 40 01 3D      | 0aaa aaaa   | Chorus Rate                    | (0 - 127) |
| 40 01 3E      | 0aaa aaaa   | Chorus Depth                   | (0 - 127) |
| 40 01 3F      | 0aaa aaaa   | Chorus Send Level to Reverb    | (0 - 127) |

### Part Parameter

| Start Address | Description            |                         |                                              |
|---------------|------------------------|-------------------------|----------------------------------------------|
| # 40 1x 00    | 0aaa aaaa              | Tone Number CC#00 Value | (0 - 127)                                    |
|               | 0aaa aaaa              | Tone Number CC Value    | (0 - 127)                                    |
| 40 1x 02      | 0aaa aaaa              | Rx. Channel             | (0 - 16)<br>1 - 16, OFF                      |
| 40 1x 03      | 0000 000a              | Rx. Pitch Bend          | (0 - 1)<br>OFF, ON                           |
| 40 1x 04      | 0000 000a              | Rx. Channel Pressure    | (0 - 1)<br>OFF, ON                           |
| 40 1x 05      | 0000 000a              | Rx. Program Change      | (0 - 1)<br>OFF, ON                           |
| 40 1x 06      | 0000 000a              | Rx. Control Change      | (0 - 1)<br>OFF, ON                           |
| 40 1x 07      | 0000 000a              | Rx. Poly Pressure       | (0 - 1)<br>OFF, ON                           |
| 40 1x 08      | 0000 000a              | Rx. Note Message        | (0 - 1)<br>OFF, ON                           |
| 40 1x 09      | 0000 000a              | Rx. RPN                 | (0 - 1)<br>OFF, ON                           |
| 40 1x 0A      | 0000 000a              | Rx. NRPN                | (0 - 1)<br>OFF, ON                           |
| 40 1x 0B      | 0000 000a              | Rx. Modulation          | (0 - 1)<br>OFF, ON                           |
| 40 1x 0C      | 0000 000a              | Rx. Volume              | (0 - 1)<br>OFF, ON                           |
| 40 1x 0D      | 0000 000a              | Rx. Panpot              | (0 - 1)<br>OFF, ON                           |
| 40 1x 0E      | 0000 000a              | Rx. Expression          | (0 - 1)<br>OFF, ON                           |
| 40 1x 0F      | 0000 000a              | Rx. Hold-1              | (0 - 1)<br>OFF, ON                           |
| 40 1x 10      | 0000 000a              | Rx. Portamento          | (0 - 1)<br>OFF, ON                           |
| 40 1x 11      | 0000 000a              | Rx. Sostenuato          | (0 - 1)<br>OFF, ON                           |
| 40 1x 12      | 0000 000a              | Rx. Soft                | (0 - 1)<br>OFF, ON                           |
| 40 1x 13      | 0aaa aaaa              | Mono / Poly Mode        | (0 - 1)<br>MODE, POLY                        |
| 40 1x 14      | 0aaa aaaa              | Assign Mode<*>          | (0 - 2)<br>SINGLE, LIMITED-MULTI, FULL-MULTI |
| 40 1x 15      | 0aaa aaaa              | Use for Rhythm Part     | (0 - 2)<br>OFF, MAP1, MAP2                   |
| 40 1x 16      | 0aaa aaaa              | Pitch Key Shift         | (40 - 88)<br>-24 - +24 [semitone]            |
| # 40 1x 17    | 0000 aaaa<br>0000 bbbb | Pitch Offset Fine       | (8 - 248)                                    |
| 40 1x 19      | 0aaa aaaa              | Part Level (CC# 7)      | -12.0 - +12.0 [Hz]<br>(0 - 127)              |

|          |           |                                      |                                   |
|----------|-----------|--------------------------------------|-----------------------------------|
| 40 1x 1A | 0aaa aaaa | Velocity Sens Depth                  | (0 - 127)<br>-64 - +63            |
| 40 1x 1B | 0aaa aaaa | Velocity Sens Offset                 | (0 - 127)<br>-64 - +63            |
| 40 1x 1C | 0aaa aaaa | Part Panpot (CC# 10)                 | (0 - 127)<br>RANDOM, L63 - 63R    |
| 40 1x 1D | 0aaa aaaa | Keyboard Range Low                   | (0 - 127)                         |
| 40 1x 1E | 0aaa aaaa | Keyboard Range High                  | (0 - 127)                         |
| 40 1x 1F | 0aaa aaaa | CC1 Controller Number                | (0 - 95)                          |
| 40 1x 20 | 0aaa aaaa | CC2 Controller Number                | (0 - 95)                          |
| 40 1x 21 | 0aaa aaaa | Chorus Send Level (CC# 93)           | (0 - 127)                         |
| 40 1x 22 | 0aaa aaaa | Reverb Send Level (CC# 93)           | (0 - 127)                         |
| 40 1x 23 | 0000 000a | Rx. Bank Select<*>                   | (0 - 1)<br>OFF, ON                |
| 40 1x 24 | 0000 000a | Rx. Bank Select LSB<*>               | (0 - 1)<br>OFF, ON                |
| 40 1x 30 | 0aaa aaaa | Tone Modify 1 (Vibrato Rate)         | (0 - 127)<br>-64 - +63            |
| 40 1x 31 | 0aaa aaaa | Tone Modify 2 (Vibrato Depth)        | (0 - 127)<br>-64 - +63            |
| 40 1x 32 | 0aaa aaaa | Tone Modify 3 (TVF Cutoff Freq.)     | (0 - 127)<br>-64 - +63            |
| 40 1x 33 | 0aaa aaaa | Tone Modify 4 (TVF Resonance)        | (0 - 127)<br>-64 - +63            |
| 40 1x 34 | 0aaa aaaa | Tone Modify 5 (TVF&TVA Env. Attack)  | (0 - 127)<br>-64 - +63            |
| 40 1x 35 | 0aaa aaaa | Tone Modify 6 (TVF&TVA Env. Decay)   | (0 - 127)<br>-64 - +63            |
| 40 1x 36 | 0aaa aaaa | Tone Modify 7 (TVF&TVA Env. Release) | (0 - 127)<br>-64 - +63            |
| 40 1x 37 | 0aaa aaaa | Tone Modify 8 (Vibrato Delay)        | (0 - 127)<br>-64 - +63            |
| 40 1x 40 | 0aaa aaaa | Scale Tuning C                       | (0 - 127)<br>-64 - +63 [cent]     |
| 40 1x 41 | 0aaa aaaa | Scale Tuning C#                      | (0 - 127)<br>-64 - +63 [cent]     |
| 40 1x 42 | 0aaa aaaa | Scale Tuning D                       | (0 - 127)<br>-64 - +63 [cent]     |
| 40 1x 43 | 0aaa aaaa | Scale Tuning D#                      | (0 - 127)<br>-64 - +63 [cent]     |
| 40 1x 44 | 0aaa aaaa | Scale Tuning E                       | (0 - 127)<br>-64 - +63 [cent]     |
| 40 1x 45 | 0aaa aaaa | Scale Tuning F                       | (0 - 127)<br>-64 - +63 [cent]     |
| 40 1x 46 | 0aaa aaaa | Scale Tuning F#                      | (0 - 127)<br>-64 - +63 [cent]     |
| 40 1x 47 | 0aaa aaaa | Scale Tuning G                       | (0 - 127)<br>-64 - +63 [cent]     |
| 40 1x 48 | 0aaa aaaa | Scale Tuning G#                      | (0 - 127)<br>-64 - +63 [cent]     |
| 40 1x 49 | 0aaa aaaa | Scale Tuning A                       | (0 - 127)<br>-64 - +63 [cent]     |
| 40 1x 4A | 0aaa aaaa | Scale Tuning A#                      | (0 - 127)<br>-64 - +63 [cent]     |
| 40 1x 4B | 0aaa aaaa | Scale Tuning B                       | (0 - 127)<br>-64 - +63 [cent]     |
| 40 2x 00 | 0aaa aaaa | Mod Pitch Control                    | (40 - 88)<br>-24 - +24 [semitone] |
| 40 2x 01 | 0aaa aaaa | Mod TVF Cutoff Control               | (0 - 127)<br>-9600 - +9600 [cent] |
| 40 2x 02 | 0aaa aaaa | Mod Amplitude Control                | (0 - 127)<br>-100.0 - +100.0 [%]  |
| 40 2x 03 | 0aaa aaaa | Mod LFO1 Rate Control                | (0 - 127)<br>-10.0 - +10.0 [Hz]   |
| 40 2x 04 | 0aaa aaaa | Mod LFO1 Pitch Control               | (0 - 127)<br>0 - 600 [cent]       |
| 40 2x 05 | 0aaa aaaa | Mod LFO1 TVF Depth                   | (0 - 127)<br>0 - 2400 [cent]      |
| 40 2x 06 | 0aaa aaaa | Mod LFO1 TVA Depth                   | (0 - 127)<br>0 - 100.0 [%]        |
| 40 2x 07 | 0aaa aaaa | Mod LFO2 Rate Control                | (0 - 127)<br>-10.0 - +10.0 [Hz]   |
| 40 2x 08 | 0aaa aaaa | Mod LFO2 Pitch Control               | (0 - 127)<br>0 - 600 [cent]       |
| 40 2x 09 | 0aaa aaaa | Mod LFO2 TVF Depth                   | (0 - 127)<br>0 - 2400 [cent]      |
| 40 2x 0A | 0aaa aaaa | Mod LFO2 TVA Depth                   | (0 - 127)<br>0 - 100.0 [%]        |
| 40 2x 10 | 0aaa aaaa | Bend Pitch Control                   | (64 - 88)<br>0 - 24 [semitone]    |
| 40 2x 11 | 0aaa aaaa | Bend TVF Cutoff Control              | (0 - 127)<br>-9600 - +9600 [cent] |
| 40 2x 12 | 0aaa aaaa | Bend Amplitude Control               | (0 - 127)<br>-100.0 - +100.0 [%]  |
| 40 2x 13 | 0aaa aaaa | Bend LFO1 Rate Control               | (0 - 127)<br>-10.0 - +10.0 [Hz]   |
| 40 2x 14 | 0aaa aaaa | Bend LFO1 Pitch Control              | (0 - 127)<br>0 - 600 [cent]       |
| 40 2x 15 | 0aaa aaaa | Bend LFO1 TVF Depth                  | (0 - 127)<br>0 - 2400 [cent]      |
| 40 2x 16 | 0aaa aaaa | Bend LFO1 TVA Depth                  | (0 - 127)<br>0 - 100.0 [%]        |
| 40 2x 17 | 0aaa aaaa | Bend LFO2 Rate Control               | (0 - 127)<br>-10.0 - +10.0 [Hz]   |
| 40 2x 18 | 0aaa aaaa | Bend LFO2 Pitch Control              | (0 - 127)<br>0 - 600 [cent]       |
| 40 2x 19 | 0aaa aaaa | Bend LFO2 TVF Depth                  | (0 - 127)<br>0 - 2400 [cent]      |
| 40 2x 1A | 0aaa aaaa | Bend LFO2 TVA Depth                  | (0 - 127)<br>0 - 100.0 [%]        |
| 40 2x 20 | 0aaa aaaa | CAF Pitch Control                    | (40 - 88)<br>-24 - +24 [semitone] |
| 40 2x 21 | 0aaa aaaa | CAF TVF Cutoff Control               | (0 - 127)<br>-9600 - +9600 [cent] |
| 40 2x 22 | 0aaa aaaa | CAF Amplitude Control                | (0 - 127)<br>-100.0 - +100.0 [%]  |
| 40 2x 23 | 0aaa aaaa | CAF LFO1 Rate Control                | (0 - 127)<br>-10.0 - +10.0 [Hz]   |
| 40 2x 24 | 0aaa aaaa | CAF LFO1 Pitch Control               | (0 - 127)<br>0 - 600 [cent]       |
| 40 2x 25 | 0aaa aaaa | CAF LFO1 TVF Depth                   | (0 - 127)<br>0 - 2400 [cent]      |
| 40 2x 26 | 0aaa aaaa | CAF LFO1 TVA Depth                   | (0 - 127)<br>0 - 100.0 [%]        |
| 40 2x 27 | 0aaa aaaa | CAF LFO2 Rate Control                | (0 - 127)<br>-10.0 - +10.0 [Hz]   |
| 40 2x 28 | 0aaa aaaa | CAF LFO2 Pitch Control               | (0 - 127)<br>0 - 600 [cent]       |
| 40 2x 29 | 0aaa aaaa | CAF LFO2 TVF Depth                   | (0 - 127)<br>0 - 2400 [cent]      |
| 40 2x 2A | 0aaa aaaa | CAF LFO2 TVA Depth                   | (0 - 127)<br>0 - 100.0 [%]        |
| 40 2x 30 | 0aaa aaaa | PAF Pitch Control                    | (40 - 88)<br>-24 - +24 [semitone] |
| 40 2x 31 | 0aaa aaaa | PAF TVF Cutoff Control               | (0 - 127)<br>-9600 - +9600 [cent] |
| 40 2x 32 | 0aaa aaaa | PAF Amplitude Control                | (0 - 127)<br>-100.0 - +100.0 [%]  |
| 40 2x 33 | 0aaa aaaa | PAF LFO1 Rate Control                | (0 - 127)<br>-10.0 - +10.0 [Hz]   |
| 40 2x 34 | 0aaa aaaa | PAF LFO1 Pitch Control               | (0 - 127)<br>0 - 600 [cent]       |

|          |           |                        |                                   |
|----------|-----------|------------------------|-----------------------------------|
| 40 2x 35 | 0aaa aaaa | PAf LFO1 TVF Depth     | (0 - 127)<br>0 - 2400 [cent]      |
| 40 2x 36 | 0aaa aaaa | PAf LFO1 TVA Depth     | (0 - 127)<br>0 - 100.0 [%]        |
| 40 2x 37 | 0aaa aaaa | PAf LFO2 Rate Control  | (0 - 127)<br>-10.0 - +10.0 [Hz]   |
| 40 2x 38 | 0aaa aaaa | PAf LFO2 Pitch Control | (0 - 127)<br>0 - 600 [cent]       |
| 40 2x 39 | 0aaa aaaa | PAf LFO2 TVF Depth     | (0 - 127)<br>0 - 2400 [cent]      |
| 40 2x 3A | 0aaa aaaa | PAf LFO2 TVA Depth     | (0 - 127)<br>0 - 100.0 [%]        |
| 40 2x 40 | 0aaa aaaa | CC1 Pitch Control      | (40 - 88)<br>-24 - +24 [semitone] |
| 40 2x 41 | 0aaa aaaa | CC1 TVF Cutoff Control | (0 - 127)<br>-9600 - +9600 [cent] |
| 40 2x 42 | 0aaa aaaa | CC1 Amplitude Control  | (0 - 127)<br>-100.0 - +100.0 [%]  |
| 40 2x 43 | 0aaa aaaa | CC1 LFO1 Rate Control  | (0 - 127)<br>-10.0 - +10.0 [Hz]   |
| 40 2x 44 | 0aaa aaaa | CC1 LFO1 Pitch Control | (0 - 127)<br>0 - 600 [cent]       |
| 40 2x 45 | 0aaa aaaa | CC1 LFO1 TVF Depth     | (0 - 127)<br>0 - 2400 [cent]      |
| 40 2x 46 | 0aaa aaaa | CC1 LFO1 TVA Depth     | (0 - 127)<br>0 - 100.0 [%]        |
| 40 2x 47 | 0aaa aaaa | CC1 LFO2 Rate Control  | (0 - 127)<br>-10.0 - +10.0 [Hz]   |
| 40 2x 48 | 0aaa aaaa | CC1 LFO2 Pitch Control | (0 - 127)<br>0 - 600 [cent]       |
| 40 2x 49 | 0aaa aaaa | CC1 LFO2 TVF Depth     | (0 - 127)<br>0 - 2400 [cent]      |
| 40 2x 4A | 0aaa aaaa | CC1 LFO2 TVA Depth     | (0 - 127)<br>0 - 100.0 [%]        |
| 40 2x 50 | 0aaa aaaa | CC2 Pitch Control      | (40 - 88)<br>-24 - +24 [semitone] |
| 40 2x 51 | 0aaa aaaa | CC2 TVF Cutoff Control | (0 - 127)<br>-9600 - +9600 [cent] |
| 40 2x 52 | 0aaa aaaa | CC2 Amplitude Control  | (0 - 127)<br>-100.0 - +100.0 [%]  |
| 40 2x 53 | 0aaa aaaa | CC2 LFO1 Rate Control  | (0 - 127)<br>-10.0 - +10.0 [Hz]   |
| 40 2x 54 | 0aaa aaaa | CC2 LFO1 Pitch Control | (0 - 127)<br>0 - 600 [cent]       |
| 40 2x 55 | 0aaa aaaa | CC2 LFO1 TVF Depth     | (0 - 127)<br>0 - 2400 [cent]      |
| 40 2x 56 | 0aaa aaaa | CC2 LFO1 TVA Depth     | (0 - 127)<br>0 - 100.0 [%]        |
| 40 2x 57 | 0aaa aaaa | CC2 LFO2 Rate Control  | (0 - 127)<br>-10.0 - +10.0 [Hz]   |
| 40 2x 58 | 0aaa aaaa | CC2 LFO2 Pitch Control | (0 - 127)<br>0 - 600 [cent]       |
| 40 2x 59 | 0aaa aaaa | CC2 LFO2 TVF Depth     | (0 - 127)<br>0 - 2400 [cent]      |
| 40 2x 5A | 0aaa aaaa | CC2 LFO2 TVA Depth     | (0 - 127)<br>0 - 100.0 [%]        |

x: BLOCK NUMBER (0-F)

Part 1 (MIDI ch = 1) x = 1  
 Part 2 (MIDI ch = 2) x = 2  
 : :  
 Part 9 (MIDI ch = 9) x = 9  
 Part10 (MIDI ch = 10) x = 0  
 Part11 (MIDI ch = 11) x = A  
 Part12 (MIDI ch = 12) x = B  
 : :  
 Part16 (MIDI ch = 16) x = F

### Drum Setup Parameter

| Start Address |           | Description         |                                |
|---------------|-----------|---------------------|--------------------------------|
| 41 m0 00      | 0aaa aaaa | Drum Map Name 1     | (32 - 127)<br>32 - 127 [ASCII] |
| 41 m0 01      | 0aaa aaaa | Drum Map Name 2     | (32 - 127)<br>32 - 127 [ASCII] |
| 41 m0 02      | 0aaa aaaa | Drum Map Name 3     | (32 - 127)<br>32 - 127 [ASCII] |
| 41 m0 03      | 0aaa aaaa | Drum Map Name 4     | (32 - 127)<br>32 - 127 [ASCII] |
| 41 m0 04      | 0aaa aaaa | Drum Map Name 5     | (32 - 127)<br>32 - 127 [ASCII] |
| 41 m0 05      | 0aaa aaaa | Drum Map Name 6     | (32 - 127)<br>32 - 127 [ASCII] |
| 41 m0 06      | 0aaa aaaa | Drum Map Name 7     | (32 - 127)<br>32 - 127 [ASCII] |
| 41 m0 07      | 0aaa aaaa | Drum Map Name 8     | (32 - 127)<br>32 - 127 [ASCII] |
| 41 m0 08      | 0aaa aaaa | Drum Map Name 9     | (32 - 127)<br>32 - 127 [ASCII] |
| 41 m0 09      | 0aaa aaaa | Drum Map Name 10    | (32 - 127)<br>32 - 127 [ASCII] |
| 41 m0 0A      | 0aaa aaaa | Drum Map Name 11    | (32 - 127)<br>32 - 127 [ASCII] |
| 41 m0 0B      | 0aaa aaaa | Drum Map Name 12    | (32 - 127)<br>32 - 127 [ASCII] |
| 41 m1 rr      | 0aaa aaaa | Play Note Number    | (0 - 127)                      |
| 41 m2 rr      | 0aaa aaaa | Level               | (0 - 127)                      |
| 41 m3 rr      | 0aaa aaaa | Assign Group Number | (0 - 127)                      |
| 41 m4 rr      | 0aaa aaaa | Panpot              | NON, 1 - 127<br>(0 - 127)      |
| 41 m5 rr      | 0aaa aaaa | Reverb Send Level   | RANDOM, L63 - 63R<br>(0 - 127) |
| 41 m6 rr      | 0aaa aaaa | Chorus Send Level   | 0.0 - 1.0<br>(0 - 127)         |
| 41 m7 rr      | 0000 000a | Rx. Note Off        | 0.0 - 1.0<br>(0 - 1)           |
| 41 m8 rr      | 0000 000a | Rx. Note On         | OFF, ON<br>(0 - 1)<br>OFF, ON  |

m: Map number (0 = MAP1, 1 = MAP2)

rr: drum part note number (00H-7FH)

## Decimal and Hexadecimal Table

(An "H" is appended to the end of numbers in hexadecimal notation.)

In MIDI documentation, data values and addresses/sizes of Exclusive messages, etc. are expressed as hexadecimal values for each 7 bits.

The following table shows how these correspond to decimal numbers.

| D  | H   | D  | H   | D  | H   | D   | H   |
|----|-----|----|-----|----|-----|-----|-----|
| 0  | 00H | 32 | 20H | 64 | 40H | 96  | 60H |
| 1  | 01H | 33 | 21H | 65 | 41H | 97  | 61H |
| 2  | 02H | 34 | 22H | 66 | 42H | 98  | 62H |
| 3  | 03H | 35 | 23H | 67 | 43H | 99  | 63H |
| 4  | 04H | 36 | 24H | 68 | 44H | 100 | 64H |
| 5  | 05H | 37 | 25H | 69 | 45H | 101 | 65H |
| 6  | 06H | 38 | 26H | 70 | 46H | 102 | 66H |
| 7  | 07H | 39 | 27H | 71 | 47H | 103 | 67H |
| 8  | 08H | 40 | 28H | 72 | 48H | 104 | 68H |
| 9  | 09H | 41 | 29H | 73 | 49H | 105 | 69H |
| 10 | 0AH | 42 | 2AH | 74 | 4AH | 106 | 6AH |
| 11 | 0BH | 43 | 2BH | 75 | 4BH | 107 | 6BH |
| 12 | 0CH | 44 | 2CH | 76 | 4CH | 108 | 6CH |
| 13 | 0DH | 45 | 2DH | 77 | 4DH | 109 | 6DH |
| 14 | 0EH | 46 | 2EH | 78 | 4EH | 110 | 6EH |
| 15 | 0FH | 47 | 2FH | 79 | 4FH | 111 | 6FH |
| 16 | 10H | 48 | 30H | 80 | 50H | 112 | 70H |
| 17 | 11H | 49 | 31H | 81 | 51H | 113 | 71H |
| 18 | 12H | 50 | 32H | 82 | 52H | 114 | 72H |
| 19 | 13H | 51 | 33H | 83 | 53H | 115 | 73H |
| 20 | 14H | 52 | 34H | 84 | 54H | 116 | 74H |
| 21 | 15H | 53 | 35H | 85 | 55H | 117 | 75H |
| 22 | 16H | 54 | 36H | 86 | 56H | 118 | 76H |
| 23 | 17H | 55 | 37H | 87 | 57H | 119 | 77H |
| 24 | 18H | 56 | 38H | 88 | 58H | 120 | 78H |
| 25 | 19H | 57 | 39H | 89 | 59H | 121 | 79H |
| 26 | 1AH | 58 | 3AH | 90 | 5AH | 122 | 7AH |
| 27 | 1BH | 59 | 3BH | 91 | 5BH | 123 | 7BH |
| 28 | 1CH | 60 | 3CH | 92 | 5CH | 124 | 7CH |
| 29 | 1DH | 61 | 3DH | 93 | 5DH | 125 | 7DH |
| 30 | 1EH | 62 | 3EH | 94 | 5EH | 126 | 7EH |
| 31 | 1FH | 63 | 3FH | 95 | 5FH | 127 | 7FH |

D: decimal

H: hexadecimal

- \* Decimal values such as MIDI channel, bank select, and program change are listed as one greater than the values given in the above table.
- \* A 7-bit byte can express data in the range of 128 steps. For data where greater precision is required, we must use two or more bytes. For example, two hexadecimal numbers aa bbH expressing two 7-bit bytes would indicate a value of aa x 128+bb.
- \* In the case of values which have a +/- sign, 00H = -64, 40H = +/-0, and 7FH = +63, so that the decimal expression would be 64 less than the value given in the above chart. In the case of two types, 00 00H = -8192, 40 00H = +/-0, and 7F 7FH = +8191. For example, if aa bbH were expressed as decimal, this would be aa bbH - 40 00H = aa x 128+bb - 64 x 128.
- \* Data marked "Use nibbled data" is expressed in hexadecimal in 4-bit units. A value expressed as a 2-byte nibble 0a 0bH has the value of a x 16+b.

<Example1> What is the decimal expression of 5AH?

From the preceding table, 5AH = 90

<Example2> What is the decimal expression of the value 12 34H given as hexadecimal for each 7 bits?

From the preceding table, since 12H = 18 and 34H = 52

18 x 128+52 = 2356

<Example3> What is the decimal expression of the nibbled value 0A 03 09 0D?

From the preceding table, since 0AH = 10, 03H = 3, 09H = 9, 0DH = 13

((10 x 16+3) x 16+9) x 16+13 = 41885

<Example4> What is the nibbled expression of the decimal value 1258?

```

16) 1258
 78 ...10

16) 4 ...14
 0 ... 4

```

Since from the preceding table, 0 = 00H, 4 = 04H, 14 = 0EH, 10 = 0AH, the result is: 00 04 0E 0AH.

# MIDI Implementation

## ■ Examples of Actual MIDI Messages

<Example1> 92 3E 5F

9n is the Note-on status, and n is the MIDI channel number. Since 2H = 2, 3EH = 62, and 5FH = 95, this is a Note-on message with MIDI CH = 3, note number 62 (note name is D4), and velocity 95.

<Example2> CE 49

CnH is the Program Change status, and n is the MIDI channel number. Since EH = 14 and 49H = 73, this is a Program Change message with MIDI CH = 15, program number 74.

<Example3> EA 00 28

EnH is the Pitch Bend Change status, and n is the MIDI channel number. The 2nd byte (00H = 0) is the LSB and the 3rd byte (28H = 40) is the MSB, but Pitch Bend Value is a signed number in which 40 00H (= 64 x 12+80 = 8192) is 0, so this Pitch Bend Value is 28 00H - 40 00H = 40 x 12+80 - (64 x 12+80) = 5120 - 8192 = -3072

If the Pitch Bend Sensitivity is set to 2 semitones, -8192 (00 00H) will cause the pitch to change -200 cents, so in this case -200 x (-3072) (-8192) = -75 cents of Pitch Bend is being applied to MIDI channel 11.

<Example4> B3 64 00 65 00 06 0C 26 00 64 7F 65 7F

BnH is the Control Change status, and n is the MIDI channel number. For Control Changes, the 2nd byte is the control number, and the 3rd byte is the value. In a case in which two or more messages consecutive messages have the same status, MIDI has a provision called "running status" which allows the status byte of the second and following messages to be omitted. Thus, the above messages have the following meaning.

|      |       |                                                 |     |
|------|-------|-------------------------------------------------|-----|
| B3   | 64 00 | MIDI ch.4, lower byte of RPN parameter number:  | 00H |
| (B3) | 65 00 | (MIDI ch.4) upper byte of RPN parameter number: | 00H |
| (B3) | 06 0C | (MIDI ch.4) upper byte of parameter value:      | 0CH |
| (B3) | 26 00 | (MIDI ch.4) lower byte of parameter value:      | 00H |
| (B3) | 64 7F | (MIDI ch.4) lower byte of RPN parameter number: | 7FH |
| (B3) | 65 7F | (MIDI ch.4) upper byte of RPN parameter number: | 7FH |

In other words, the above messages specify a value of 0C 00H for RPN parameter number 00 00H on MIDI channel 4, and then set the RPN parameter number to 7F 7FH.

RPN parameter number 00 00H is Pitch Bend Sensitivity, and the MSB of the value indicates semitone units, so a value of 0CH = 12 sets the maximum pitch bend range to +/-12 semitones (1 octave). (On GS sound generators the LSB of Pitch Bend Sensitivity is ignored, but the LSB should be transmitted anyway (with a value of 0) so that operation will be correct on any device.)

Once the parameter number has been specified for RPN or NRPN, all Data Entry messages transmitted on that same channel will be valid, so after the desired value has been transmitted, it is a good idea to set the parameter number to 7F 7FH to prevent accidents. This is the reason for the (B3) 64 7F (B3) 65 7F at the end.

It is not desirable for performance data (such as Standard MIDI File data) to contain many events with running status as given in <Example 4>. This is because if playback is halted during the song and then rewound or fast-forwarded, the sequencer may not be able to transmit the correct status, and the sound generator will then misinterpret the data. Take care to give each event its own status.

It is also necessary that the RPN or NRPN parameter number setting and the value setting be done in the proper order. On some sequencers, events occurring in the same (or consecutive) clock may be transmitted in an order different than the order in which they were received. For this reason it is a good idea to slightly skew the time of each event (about 1 tick for TPQN = 96, and about 5 ticks for TPQN = 480).

\* TPQN: Ticks Per Quarter Note

## ■ Example of an Exclusive Message and Calculating a Checksum

Roland Exclusive messages (RQ1, DT1) are transmitted with a checksum at the end (before F7) to make sure that the message was correctly received. The value of the checksum is determined by the address and data (or size) of the transmitted Exclusive message.

### ● How to calculate the checksum

(hexadecimal numbers are indicated by "H")

The checksum is a value derived by adding the address, size, and checksum itself and inverting the lower 7 bits.

Here is an example of how the checksum is calculated. We will assume that in the Exclusive message we are transmitting, the address is aabbccddH and the data or size is eeffH.

aa + bb + cc + dd + ee + ff = sum

sum ÷ 128 = quotient ... remainder

128 - remainder = checksum

<Example1> Setting CHORUS TYPE of PERFORMANCE COMMON to DELAY (DT1)

According to the "Parameter Address Map" (p. 162), the start address of Temporary Performance is 10 00 00 00H, the offset address of CHORUS at PERFORMANCE COMMON is 04 00H, and the address of CHORUS TYPE is 00 00H. Therefore the address of CHORUS TYPE of PERFORMANCE COMMON is;

|       |    |     |     |
|-------|----|-----|-----|
| 10    | 00 | 00  | 00H |
| +     | 04 | 00H |     |
| ----- |    |     |     |
| 10    | 00 | 04  | 00H |

DELAY has the value of 02H.

So the system exclusive message should be sent is;

|     |     |     |       |     |             |      |          |     |
|-----|-----|-----|-------|-----|-------------|------|----------|-----|
| F0  | 41  | 10  | 00 10 | 12  | 10 00 04 00 | 02   | ??       | F7  |
| (1) | (2) | (3) | (4)   | (5) | address     | data | checksum | (6) |

|                        |                      |                      |
|------------------------|----------------------|----------------------|
| (1) Exclusive Status   | (2) ID (Roland)      | (3) Device ID (17)   |
| (4) Model ID (XV-5050) | (5) Command ID (DT1) | (6) End of Exclusive |

Then calculate the checksum.

10H + 00H + 04H + 00H + 02H = 16 + 0 + 4 + 0 + 2 = 22 (sum)

22 (sum) ÷ 128 = 0 (quotient) ... 22 (remainder)

checksum = 128 - 22 (remainder) = 106 = 6AH

This means that F0 41 10 00 10 12 10 00 04 00 02 6A F7 is the message should be sent.

<Example2> Getting the data (RQ1) of Performance Part 3 in USER:03

According to the "Parameter Address Map" (p. 162), the start address of USER:03 is 20 02 00 00H, and the offset address of Performance Part 3 is 00 22 00H.

Therefore the start address of Performance Part 3 in USER:03 is;

|       |    |    |     |
|-------|----|----|-----|
| 20    | 02 | 00 | 00H |
| +     | 00 | 22 | 00H |
| ----- |    |    |     |
| 20    | 02 | 22 | 00H |

As the size of Performance Part is 00 00 00 31H, the system exclusive message should be sent is;

|     |     |     |       |     |             |             |          |     |
|-----|-----|-----|-------|-----|-------------|-------------|----------|-----|
| F0  | 41  | 10  | 00 10 | 11  | 20 02 22 00 | 00 00 00 31 | ??       | F7  |
| (1) | (2) | (3) | (4)   | (5) | address     | data        | checksum | (6) |

|                        |                      |                      |
|------------------------|----------------------|----------------------|
| (1) Exclusive Status   | (2) ID (Roland)      | (3) Device ID (17)   |
| (4) Model ID (XV-5050) | (5) Command ID (RQ1) | (6) End of Exclusive |

Then calculate the checksum.

20H + 02H + 22H + 00H + 00H + 00H + 00H + 31H = 32 + 2 + 34 + 0 + 0 + 0 + 0 + 49 = 117 (sum)

117 (sum) ÷ 128 = 0 (quotient) ... 117 (remainder)

checksum = 128 - 117 (remainder) = 11 = 0BH

This means that F0 41 10 00 10 11 20 02 22 00 00 00 00 31 0B F7 is the message should be sent.

<Example3> Getting Temporary Performance data (RQ1)

cf.) This operation is the same as Data Transfer function in Utility mode with “PERFORM” (Type parameter) and “TEMP: -PATCH” (Source parameter) options.

According to the “Parameter Address Map” (p. 162), the start address of Temporary Performance is assigned as following:

```
10 00 00 00H Temporary Performance Common
:
10 00 20 00H Temporary Performance Part 1
:
10 00 2F 00H Temporary Performance Part 16
```

As the data size of Performance Controller is 00 00 00 31H, summation of the size and the start address of Temporary Performance Part 16 will be;

```
10 00 2F 00H
+) 00 00 00 31H
10 00 2F 31H
```

And the size that have to be got should be;

```
10 00 2F 31H
-) 10 00 00 00H
00 00 2F 31H
```

Therefore the system exclusive message should be sent is;

```
F0 41 10 00 10 11 10 00 00 00 00 2F 31 ?? F7
(1) (2) (3) (4) (5) address data checksum (6)
```

(1) Exclusive Status (2) ID (Roland) (3) Device ID (17)  
(4) Model ID (XV-5050) (5) Command ID (RQ1) (6) End of Exclusive

Calculating the checksum as shown in <Example 2>, we get a message of F0 41 10 6A 11 10 00 00 00 00 2F 31 10 F7 to be transmitted.

<Example4> Getting data (RQ1) at once;

Temporary Performance data,  
Temporary Patch data of whole part in Performance mode,  
Temporary Rhythm data of whole part in Performance mode.

cf.) This operation is the same as Data Transfer function in Utility mode with “PERFORM” (Type parameter) and “TEMP: +PATCH” (Source parameter) options.

According to the “Parameter Address Map” (p. 162), the start address of the above all parameters is assigned as following:

```
10 00 00 00H Temporary Performance
11 00 00 00H Temporary Patch (Performance Mode Part 1)
11 10 00 00H Temporary Rhythm (Performance Mode Part 1)
:
14 60 00 00H Temporary Patch (Performance Mode Part 16)
14 70 00 00H Temporary Rhythm (Performance Mode Part 16)
```

The offset address of Rhythm is also assigned as follows:

```
00 00 00H Rhythm Common
:
00 10 00H Rhythm Tone (Key # 21)
:
01 3E 00H Rhythm Tone (Key # 108)
```

As the data size of Rhythm Tone is 00 00 01 41H, summation of the size and the start address of Temporary Rhythm Tone #108 in Performance mode will be;

```
14 70 00 00H
01 3E 00H
+) 00 00 01 41H
14 71 3F 41H
```

And the size that have to be got should be;

```
14 71 3F 41H
-) 10 00 00 00H
04 71 3F 41H
```

Therefore the system exclusive message should be sent is;

```
F0 41 10 00 10 11 10 00 00 00 04 71 3F 41 ?? F7
(1) (2) (3) (4) (5) address data checksum (6)
```

(1) Exclusive Status (2) ID (Roland) (3) Device ID (17)  
(4) Model ID (XV-5050) (5) Command ID (RQ1) (6) End of Exclusive

Calculating the checksum as shown in <Example 2>, we get a message of F0 41 10 00 10 11 10 00 00 00 04 71 3F 41 7B F7 to be transmitted.

## ■The Scale Tune Feature (address: 40 1x 40)

The scale Tune feature allows you to finely adjust the individual pitch of the notes from C through B. Though the settings are made while working with one octave, the fine adjustments will affect all octaves. By making the appropriate Scale Tune settings, you can obtain a complete variety of tuning methods other than equal temperament. As examples, three possible types of scale setting are explained below.

### ○Equal Temperament

This method of tuning divides the octave into 12 equal parts. It is currently the most widely used form of tuning, especially in occidental music. On the XV-5050, the default settings for the Scale Tune feature produce equal temperament.

### ○Just Temperament (Tonic of C)

The principal triads resound much more beautifully than with equal temperament, but this benefit can only be obtained in one key. If transposed, the chords tend to become ambiguous. The example given involves settings for a key in which C is the keynote.

### ○Arabian Scale

By altering the setting for Scale Tune, you can obtain a variety of other tunings suited for ethnic music. For example, the settings introduced below will set the unit to use the Arabian Scale.

Example Settings

| Note name | Equal Temperament | Just Temperament (Key-tone 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           |

The values in the table are given in cents. Convert these values to hexadecimal, and transmit them as Exclusive data.

For example, to set the tune (C-B) of the Part 1 Arabian Scale, send the following data:

F0 41 10 42 12 40 11 40 3A 6D 3E 34 0D 38 6B 3C 6F 40 36 0F 76 F7

## ■ASCII Code Table

Patch Name and Performance Name, etc., of MIDI data are described the ASCII code in the table below.

| D  | H   | Char | D  | H   | Char | D   | H   | Char |
|----|-----|------|----|-----|------|-----|-----|------|
| 32 | 20H | SP   | 64 | 40H | @    | 96  | 60H | `    |
| 33 | 21H | !    | 65 | 41H | A    | 97  | 61H | a    |
| 34 | 22H | "    | 66 | 42H | B    | 98  | 62H | b    |
| 35 | 23H | #    | 67 | 43H | C    | 99  | 63H | c    |
| 36 | 24H | \$   | 68 | 44H | D    | 100 | 64H | d    |
| 37 | 25H | %    | 69 | 45H | E    | 101 | 65H | e    |
| 38 | 26H | &    | 70 | 46H | F    | 102 | 66H | f    |
| 39 | 27H | '    | 71 | 47H | G    | 103 | 67H | g    |
| 40 | 28H | (    | 72 | 48H | H    | 104 | 68H | h    |
| 41 | 29H | )    | 73 | 49H | I    | 105 | 69H | i    |
| 42 | 2AH | *    | 74 | 4AH | J    | 106 | 6AH | j    |
| 43 | 2BH | +    | 75 | 4BH | K    | 107 | 6BH | k    |
| 44 | 2CH | ,    | 76 | 4CH | L    | 108 | 6CH | l    |
| 45 | 2DH | -    | 77 | 4DH | M    | 109 | 6DH | m    |
| 46 | 2EH | .    | 78 | 4EH | N    | 110 | 6EH | n    |
| 47 | 2FH | /    | 79 | 4FH | O    | 111 | 6FH | o    |
| 48 | 30H | 0    | 80 | 50H | P    | 112 | 70H | p    |
| 49 | 31H | 1    | 81 | 51H | Q    | 113 | 71H | q    |
| 50 | 32H | 2    | 82 | 52H | R    | 114 | 72H | r    |
| 51 | 33H | 3    | 83 | 53H | S    | 115 | 73H | s    |
| 52 | 34H | 4    | 84 | 54H | T    | 116 | 74H | t    |
| 53 | 35H | 5    | 85 | 55H | U    | 117 | 75H | u    |
| 54 | 36H | 6    | 86 | 56H | V    | 118 | 76H | v    |
| 55 | 37H | 7    | 87 | 57H | W    | 119 | 77H | w    |
| 56 | 38H | 8    | 88 | 58H | X    | 120 | 78H | x    |
| 57 | 39H | 9    | 89 | 59H | Y    | 121 | 79H | y    |
| 58 | 3AH | :    | 90 | 5AH | Z    | 122 | 7AH | z    |
| 59 | 3BH | ;    | 91 | 5BH | [    | 123 | 7BH | {    |
| 60 | 3CH | <    | 92 | 5CH | \    | 124 | 7CH |      |
| 61 | 3DH | =    | 93 | 5DH | ]    | 125 | 7DH | }    |
| 62 | 3EH | >    | 94 | 5EH | ^    |     |     |      |
| 63 | 3FH | ?    | 95 | 5FH | _    |     |     |      |

D: decimal

H: hexadecimal

\* “SP” is space.

## MIDI Implementation Chart

| Function...                  |                         | Transmitted                                                                                                                                   | Recognized        | Remarks                                  |
|------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------------------------------|
| Basic Channel                | Default                 | X                                                                                                                                             | 1-16              |                                          |
|                              | Changed                 | X                                                                                                                                             | 1-16              |                                          |
| Mode                         | Default                 | X                                                                                                                                             | Mode 3            | * 2                                      |
|                              | Messages Altered        | X<br>*****                                                                                                                                    | Mode 3, 4 (M = 1) |                                          |
| Note Number : True Voice     |                         | X<br>*****                                                                                                                                    | 0-127<br>0-127    |                                          |
| Velocity                     | Note On                 | X                                                                                                                                             | O                 |                                          |
|                              | Note Off                | X                                                                                                                                             | O                 |                                          |
| After Touch                  | Key's                   | X                                                                                                                                             | O                 | *1                                       |
|                              | Channel's               | O                                                                                                                                             | O                 | *1                                       |
| Pitch Bend                   |                         | O                                                                                                                                             | O                 | *1                                       |
| Control Change               | 0, 32                   | O                                                                                                                                             | O                 | Bank select                              |
|                              | 1                       | O                                                                                                                                             | O                 | Modulation                               |
|                              | 2                       | O                                                                                                                                             | O                 | Breath type                              |
|                              | 4                       | O                                                                                                                                             | O                 | Foot type                                |
|                              | 5                       | O                                                                                                                                             | O                 | Portamento time                          |
|                              | 6, 38                   | O                                                                                                                                             | O                 | Data entry                               |
|                              | 7                       | O                                                                                                                                             | O                 | Volume                                   |
|                              | 8                       | X                                                                                                                                             | O                 | Balance                                  |
|                              | 10                      | O                                                                                                                                             | O                 | Panpot                                   |
|                              | 11                      | X                                                                                                                                             | O                 | Expression                               |
|                              | 64                      | X                                                                                                                                             | O                 | Hold 1                                   |
|                              | 65                      | O                                                                                                                                             | O                 | Portamento                               |
|                              | 66                      | X                                                                                                                                             | O                 | Sostenuto                                |
|                              | 67                      | X                                                                                                                                             | O                 | Soft                                     |
|                              | 68                      | X                                                                                                                                             | O                 | Legato Foot Switch                       |
|                              | 69                      | X                                                                                                                                             | O                 | Hold 2                                   |
|                              | 71                      | O                                                                                                                                             | O                 | Resonance                                |
|                              | 72                      | O                                                                                                                                             | O                 | Release Time                             |
|                              | 73                      | O                                                                                                                                             | O                 | Attack Time                              |
|                              | 74                      | O                                                                                                                                             | O                 | Cutoff                                   |
|                              | 75                      | O                                                                                                                                             | O                 | Decay Time                               |
|                              | 76                      | O                                                                                                                                             | O                 | Vibrato Rate                             |
|                              | 77                      | O                                                                                                                                             | O                 | Vibrato Depth                            |
|                              | 78                      | O                                                                                                                                             | O                 | Vibrato Delay                            |
|                              | 80                      | X                                                                                                                                             | O (Tone 1 Level)  | General Purpose Controller 5             |
|                              | 81                      | X                                                                                                                                             | O (Tone 2 Level)  | General Purpose Controller 6             |
|                              | 82                      | X                                                                                                                                             | O (Tone 3 Level)  | General Purpose Controller 7             |
|                              | 83                      | X                                                                                                                                             | O (Tone 4 Level)  | General Purpose Controller 8             |
|                              | 84                      | X                                                                                                                                             | O                 | Portamento control                       |
|                              | 91                      | O                                                                                                                                             | O (Reverb)        | General purpose effects 1                |
|                              | 93                      | O                                                                                                                                             | O (Chorus)        | General purpose effects 3                |
|                              | 1-5, 7-31, 64-95 *3     | X                                                                                                                                             | O                 | CC1, 2 (General purpose controller 1, 2) |
|                              | 1-5, 7-31, 64-95 *3     | X                                                                                                                                             | O                 | CC3, 4 (General purpose controller 3, 4) |
|                              | 98, 99                  | X                                                                                                                                             | X                 | NRPN LSB, MSB                            |
|                              | 100, 101                | O                                                                                                                                             | O                 | RPN LSB, MSB                             |
| Program Change : True Number |                         | O<br>*****                                                                                                                                    | O<br>0-127        | *1<br>Program No. 1-128                  |
| System Exclusive             |                         | O                                                                                                                                             | O                 | *5<br>*1                                 |
| System Common                | : Song Position         | X                                                                                                                                             | X                 |                                          |
|                              | : Song Select           | X                                                                                                                                             | X                 |                                          |
|                              | : Tune Request          | X                                                                                                                                             | X                 |                                          |
| System Real Time             | : Clock                 | X                                                                                                                                             | O                 |                                          |
|                              | : Commands              | X                                                                                                                                             | X                 |                                          |
| Aux Messages                 | : All Sound Off         | X                                                                                                                                             | O (120, 126, 127) |                                          |
|                              | : Reset All Controllers | X                                                                                                                                             | O                 |                                          |
|                              | : Local On/Off          | X                                                                                                                                             | X                 |                                          |
|                              | : All Notes Off         | X                                                                                                                                             | O (123-127)       |                                          |
|                              | : Active Sensing        | O                                                                                                                                             | O                 |                                          |
|                              | : System Reset          | X                                                                                                                                             | X                 |                                          |
| Notes                        |                         | * 1 O X is selectable.<br>* 2 Recognized as M=1 even if M≠1.<br>* 3 Can be changed settings.<br>* 4 Transmits when Data Transfer is excuted . |                   |                                          |
|                              |                         | * 5 Transmits when Data Transfer is excuted or RQ1 received.                                                                                  |                   |                                          |

# Specifications

## XV-5050: 64-Voice Sound Module (conforms to General MIDI 2 System)

### Parts

16

### Maximum Polyphony

64 voices

### Wave Memory

64 M Bytes (16-bit linear equivalent)

Wave forms: 1083

### Expansion Slot

Wave Expansion Board SRX Series: 2 slots

### Preset Memory

Patches: 1024 (128 x 8 banks) + 256 (General MIDI 2 Patches)

Rhythm Sets: 16 (2 x 8 banks) + 9 (General MIDI 2 Rhythm Sets)

Performances: 64 (32 x 2 banks)

### User Memory

Patches: 128

Rhythm Sets: 4

Performances: 64

### Effects

Multi-effects: 90 types

\* Three different multi-effects (only 50 types) can be used simultaneously in Performance mode.

Chorus: 3 types

Reverb: 5 types

System Equalizer: 2 bands per each 4 outputs

### Display

20 characters, 2 lines (backlit LCD)

### Connectors

Headphones Jack

USB Connector

A (MIX) Output Jack (L/MONO, R)

B Output Jack (L, R) (or Individual Jacks 1-4)

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

9 W (AC 117 V)

11 W (AC 230 V, AC 240 V)

### Dimensions

482 (W) x 220 (D) x 44 (H) mm

19 (W) x 8-11/16 (D) x 1-3/4 (H) inches

(EIA-1U Rack Mount Type)

### Weight

2.6 kg

5 lbs 12 oz

### Accessories

Owner's Manual

CD-ROM (USB Driver)

Power Cord

Rack Mount Washer x 4

### Options

Wave Expansion Board: SRX Series

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

# Index

## Numerics

|                    |     |
|--------------------|-----|
| 2V PCH SHIFT ..... | 81  |
| 3 TAP DELAY .....  | 80  |
| 3D AUTO SPIN ..... | 101 |
| 3D CHORUS .....    | 90  |
| 3D DELAY .....     | 87  |
| 3D DELAY 2 .....   | 93  |
| 3D Effects .....   | 102 |
| 3D FLANGER .....   | 91  |
| 3D MANUAL .....    | 101 |
| 3V PCH SHIFT ..... | 87  |
| 4 TAP DELAY .....  | 80  |

## A

|                     |         |
|---------------------|---------|
| Analog Feel .....   | 40      |
| Arabian Scale ..... | 66, 110 |
| AUTO PAN .....      | 91      |
| AUTO WAH .....      | 77, 92  |

## B

|                  |     |
|------------------|-----|
| Bank .....       | 21  |
| BASS MULTI ..... | 100 |
| BIAS .....       | 48  |
| Booster .....    | 42  |
| Bulk Dump .....  | 106 |

## C

|                        |                  |
|------------------------|------------------|
| Category .....         | 21–22            |
| CHO -> FLANGER .....   | 84               |
| CHO/FLANGER .....      | 85               |
| Chorus .....           | 69, 74, 102, 112 |
| CHORUS -> DELAY .....  | 84               |
| CHORUS/DELAY .....     | 84               |
| CL GTR MLT A .....     | 99               |
| CL GTR MLT B .....     | 100              |
| Clock Source .....     | 40, 55, 107      |
| Coarse Tune .....      | 40               |
| COMMON .....           | 39, 55, 64       |
| COMPRESSOR .....       | 77               |
| CONTROL .....          | 51, 61, 107      |
| Controller .....       | 107              |
| CTRL Rx MIDI .....     | 51               |
| Cutoff Frequency ..... | 46, 59           |

## D

|                       |        |
|-----------------------|--------|
| DIST -> CHORUS .....  | 83     |
| DIST -> DELAY .....   | 83     |
| DIST -> FLANGER ..... | 83     |
| DISTORTION .....      | 76, 97 |
| DISTORTION 2 .....    | 89     |

## E

|                         |                           |
|-------------------------|---------------------------|
| EFFECTS .....           | 71, 73, 112               |
| ENH -> CHORUS .....     | 83                        |
| ENH -> DELAY .....      | 83                        |
| ENH -> FLANGER .....    | 83                        |
| ENHANCER .....          | 76                        |
| Envelope .....          | 38, 45, 47, 49, 54, 59–61 |
| EQ .....                | 69, 109                   |
| Equal Temperament ..... | 66, 110                   |
| Equalizer .....         | 69                        |
| Exclusive Protect ..... | 105                       |
| Expansion Board .....   | 120                       |

## F

|                                  |        |
|----------------------------------|--------|
| Factory Reset .....              | 15     |
| FAVORITE LIST .....              | 33     |
| FB PCH SHIFT .....               | 81     |
| Fine Tune .....                  | 40     |
| FLANGER .....                    | 79     |
| FLG/DELAY .....                  | 84     |
| FORMANT FLTR .....               | 86     |
| Frequency Cross Modulation ..... | 44     |
| Frequency cross modulation ..... | 58     |
| FXM .....                        | 44, 58 |

## G

|                           |         |
|---------------------------|---------|
| GATE .....                | 89      |
| GATED REVERB .....        | 82      |
| GENERAL .....             | 107     |
| General MIDI .....        | 111     |
| General MIDI 2 Mode ..... | 23      |
| GM .....                  | 23, 111 |
| GTR AMP SIM .....         | 97      |
| GTR MULTI A .....         | 98      |
| GTR MULTI B .....         | 98      |
| GTR MULTI C .....         | 99      |

**H**

HEXA-CHORUS ..... 78

**I**

INFO ..... 110  
 INIT ..... 105  
 INITIALIZE ..... 105  
 Internal Write Protect ..... 104–105  
 ISOLATOR ..... 90  
 ISOLATOR 2 ..... 101

**J**

JD MULTI ..... 95

**K**

Key Range ..... 64  
 KEYBD MULTI ..... 94  
 Keyfollow ..... 45, 47–48  
 KEYSYNC FLG ..... 85

**L**

Layer ..... 25  
 LCD Contrast ..... 107  
 LFO ..... 38, 50, 115  
 LIMITER ..... 77  
 LOFI COMP ..... 88  
 LOFI NOISE ..... 88  
 Low Frequency Oscillator ..... 38

**M**

Master Key Shift ..... 110  
 Master Tune ..... 110  
 Matrix Control ..... 114, 118  
 MATRIX CTR1–4 ..... 115  
 MATRIX CTRL ..... 52  
 MFX ..... 69, 74  
 MIDI ..... 67, 113  
 MIDI&USB ..... 108–109  
 MLT TAP DLY ..... 86  
 MOD DELAY ..... 80  
 Mode ..... 23  
 Multi-Effects ..... 69, 74

**N**

Note Range ..... 29

**O**

Ocatve Shift ..... 40  
 Octave Shift ..... 23  
 OD -> CHORUS ..... 82  
 OD -> DELAY ..... 82  
 OD -> FLANGER ..... 82  
 Output Asgn ..... 40  
 Output Assign ..... 40  
 OVERDRIVE ..... 76, 97  
 OVERDRIVE 2 ..... 88

**P**

PAN MODULATE ..... 48  
 PART ..... 65–66  
 PATCH ..... 23  
 Patch ..... 36, 38  
 Patch Category ..... 40  
 Patch Finder ..... 21  
 PATCH MFX CTRL ..... 114  
 Patch Mode ..... 23  
 Patch Name Copy ..... 53  
 Patch Tempo ..... 40  
 Patch Tone Copy ..... 53  
 PATCH WRITE ..... 104  
 PERFORM ..... 23  
 Performance ..... 24, 36  
 Performance Mode ..... 23  
 Performance Name Copy ..... 68  
 Performance Part Copy ..... 68  
 PHASER ..... 76, 85, 91  
 Phrase Preview ..... 18  
 PITCH ..... 45, 59  
 PITCH ENVELOPE ..... 45, 59  
 Pitch Shifter ..... 81, 87  
 PORTAMENTO ..... 51  
 Portamento ..... 66, 113  
 PREVIEW ..... 19, 109  
 preview ..... 109  
 Priority ..... 40  
 PROTECT ..... 105  
 Pure Temperament ..... 66, 110

## R

|                       |                  |
|-----------------------|------------------|
| Resonance .....       | 46, 60           |
| REVERB .....          | 81–82            |
| Reverb .....          | 69, 74, 103, 113 |
| REVERSE DLY .....     | 86               |
| REVERSE DLY2 .....    | 92               |
| RHODES MULTI .....    | 95               |
| RHYTHM .....          | 23               |
| Rhythm Set .....      | 24               |
| Rhythm Set Mode ..... | 23               |
| RING MOD .....        | 86               |
| Ring Modulator .....  | 42, 86           |
| ROTARY .....          | 77               |
| ROTARY 2 .....        | 93               |
| ROTARY MULTI .....    | 94               |
| RPN .....             | 117              |

## S

|                    |         |
|--------------------|---------|
| Scale Tune .....   | 66, 110 |
| SHUFFLE DLY .....  | 87      |
| SHUFFLE DLY2 ..... | 93      |
| SLICER .....       | 90      |
| SPACE-D .....      | 78      |
| SPEAKER SIM .....  | 88      |
| SPECTRUM .....     | 76, 101 |
| Split .....        | 28      |
| St AUTO WAH .....  | 92      |
| St CHORUS .....    | 78      |
| St DELAY .....     | 79      |
| St FLANGER .....   | 79      |
| ST FORMN FLT ..... | 92      |
| St LIMITER .....   | 89      |
| St LOFI COMP ..... | 96      |
| St LOFI NOIZ ..... | 96      |
| St PHASER .....    | 85      |
| St PHASER 2 .....  | 91      |
| St SPECTRUM .....  | 101     |
| Stack .....        | 108     |
| STEP FLANGER ..... | 79      |
| STEREO COMP .....  | 89      |
| STEREO DIST .....  | 97      |
| STEREO EQ .....    | 76      |
| STEREO OD .....    | 97      |
| Stretch Tune ..... | 40      |
| Structure .....    | 41      |
| System Tempo ..... | 107     |

## T

|                              |                |
|------------------------------|----------------|
| Tempo .....                  | 40, 55, 107    |
| Time Variant Amplifier ..... | 38, 48, 54, 61 |
| Time Variant Filter .....    | 38, 46, 54, 59 |
| TM CTRL DLY .....            | 81             |
| TMT .....                    | 41, 118        |
| TMT CONTROL .....            | 52             |
| Tone Delay .....             | 44             |
| Tone Mix Table .....         | 41             |
| TREMOLO .....                | 91             |
| TREMOLO CHO .....            | 78             |
| TUNE .....                   | 110            |
| Tuning .....                 | 110            |
| TVA .....                    | 38, 48, 54, 61 |
| TVA ENVELOPE .....           | 49, 61         |
| TVF .....                    | 38, 46, 54, 59 |
| TVF ENVELOPE .....           | 47, 60         |
| TVF VELOCITY .....           | 47             |

## U

|                       |              |
|-----------------------|--------------|
| USB .....             | 35, 109, 124 |
| USB MIDI Driver ..... | 124          |

## V

|                      |    |
|----------------------|----|
| Voice Priority ..... | 40 |
|----------------------|----|

## W

|                      |        |
|----------------------|--------|
| WAVE .....           | 44, 57 |
| Wave Generator ..... | 38, 54 |
| Wave Mix Table ..... | 57     |
| WG .....             | 38, 54 |
| WMT .....            | 57     |
| WRITE .....          | 104    |

## X

|            |     |
|------------|-----|
| XFER ..... | 106 |
|------------|-----|

**MEMO**

# 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 E1 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,  
Johannesburg, SOUTH AFRICA

P.O.Box 32918, Braamfontein 2017  
Johannesburg, 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

**Roland Shanghai Electronics Co.,Ltd.**

5F. No.1500 Pingliang Road  
Shanghai 200090, CHINA  
TEL: (021) 5580-0800

**Roland Shanghai Electronics Co.,Ltd.**

(BEIJING OFFICE)  
10F. No.18 Anhuaxili  
Chaoyang District, Beijing 100011  
CHINA  
TEL: (010) 6426-5050

**Roland Shanghai Electronics Co.,Ltd.**

(GUANGZHOU OFFICE)  
2/F. No.30 Si You Nan Er Jie Yi  
Xiang, Wu Yang Xin Cheng,  
Guangzhou 510600, CHINA  
TEL: (020) 8736-0428

### HONG KONG

**Tom Lee Music Co., Ltd.**

Service Division  
22-32 Pun Shan Street, Tsuen  
Wan, New Territories,  
HONG KONG  
TEL: 2415 0911

**Parsons Music Ltd.**

8th Floor, Railway Plaza, 39  
Chatham Road South, T.S.T.,  
Kowloon, HONG KONG  
TEL: 2333 1863

### INDIA

**Rivera Digitec (India) Pvt. Ltd.**  
409, Nirman Kendra Mahalaxmi  
Flats Compound Off. Dr. Edwin  
Moses Road, Mumbai-400011,  
INDIA  
TEL: (022) 2493 9051

### INDONESIA

**PT Citra IntiRama**  
J1. 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: 6846-3676

**CRISTOFORI MUSIC PTE LTD**

Blk 3014, Bedok Industrial Park E,  
#02-2148, SINGAPORE 489980  
TEL: 6243-9555

### 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 Verng NakornKasem, Soi 2,  
Bangkok 10100, THAILAND  
TEL: (02) 2248821

### VIETNAM

**Saigon Music**  
Suite DP-8  
40 Ba Huyen Thanh Quan Street  
Hochiminh City, VIETNAM  
Tel: (08) 930-1969

## 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  
Natanil 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: (55) 5668-6699

### 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

### URUGUAY

**Todo Musica S.A.**  
Francisco Acuna de Figueroa 1771  
C.P.: 11.800  
Montevideo, URUGUAY  
TEL: (02) 924-2335

### VENEZUELA

**Musidical 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: 3916 6200

### FRANCE

**Roland France SA**  
4, Rue Paul Henri SPAAK,  
Parc de l'Esplanade, F 77 462 St.  
Thibault, Lagny Cedex FRANCE  
TEL: 01 600 73 500

### FINLAND

**Roland Scandinavia As,  
Filial Finland**  
Elannontie 5  
FIN-01510 Vantaa, FINLAND  
TEL: (09) 68 24 020

### 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: 2610 435400

### HUNGARY

**Roland East Europe Ltd.**  
Warehouse Area 'DEPO' Pf.83  
H-2046 Torokbalint, HUNGARY  
TEL: (23) 511011

### IRELAND

**Roland Ireland**  
G2 Calmount Park, Calmount  
Avenue, Dublin 12  
Republic of IRELAND  
TEL: (01) 4294444

### 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: 2273 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 Gheorgheni  
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: (0)8 702 00 20

### SWITZERLAND

**Roland (Switzerland) AG**  
Landstrasse 5, Postfach,  
CH-4452 Itingen,  
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, WANSSEA  
SA7 9FJ,  
UNITED KINGDOM  
TEL: (01792) 702701

## 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: (022) 66-9426

### IRAN

**MOCO, INC.**  
No.41 Nike St., Dr.Shariyati Ave.,  
Roberoye Cerahe Mirdamad  
Tehran, IRAN  
TEL: (021) 285-4169

### ISRAEL

**Halilit 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 11118, JORDAN  
TEL: (06) 464-1200

### KUWAIT

**Easa Husain Al Yousifi Est.**  
Abdullah Salem Street,  
Safat, KUWAIT  
TEL: 243-6399

### LEBANON

**Chahine S.A.L.**  
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

**aDawlah 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**  
Khaled Ebn Al Walid St.  
Bldg. No. 47, P.O.BOX 13520,  
Damascus, SYRIA  
TEL: (011) 223-5384

### 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: (604) 270 6626

**Roland Canada Music Ltd.**  
(Toronto Office)

170 Admiral Boulevard  
Mississauga On L5T 2N6  
CANADA  
TEL: (905) 362 9707

### U. S. A.

**Roland Corporation U.S.**  
5100 S. Eastern Avenue  
Los Angeles, CA 90040-2938,  
U. S. A.  
TEL: (323) 890 3700

- \* GS () is a registered trademark of Roland Corporation.
- \* Windows is registered trademarks of Microsoft Corporation.
- \* Windows® 98 is known officially as: "Microsoft® Windows® 98 operating system."
- \* Windows® 2000 is known officially as: "Microsoft® Windows® 2000 operating system."
- \* Windows® Me is known officially as: "Microsoft® Windows® Millennium Edition operating system."
- \* Screen shots in this documents are reprinted with permission from Microsoft Corporation.
- \* Macintosh is registered trademark of Apple Computer, Inc.
- \* All product names mentioned in this document are trademarks or registered trademarks of their respective owners.
- \* OMS is a registered trademark of Opcode Systems, Inc.
- \* FreeMIDI is a trademark of Mark of the Unicorn, Inc.



This product complies with the requirements of European Directives EMC 89/336/EEC and LVD 73/23/EEC.

For EU Countries

## 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 the USA

## NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

## AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

For Canada

