

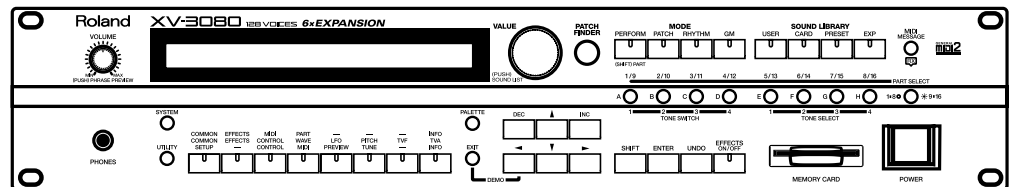
XV-3080

128 VOICES 6x EXPANSION

OWNER'S MANUAL

Thank you, and congratulations on your choice of the Roland XV-3080.

Before using this unit, carefully read the sections entitled: "IMPORTANT SAFETY INSTRUCTIONS" (p. 2), "USING THE UNIT SAFELY" (p. 3), and "IMPORTANT NOTES" (p. 8). 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 and Quick Start should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.



Notation Used in This Owner's Manual

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



Characters and numbers in square brackets [] indicate buttons on the front panel. For example, [PATCH] represents the PATCH button and [ENTER] the ENTER button.

An asterisk (*) at the beginning of a paragraph indicates a note or precaution. (p. **) refers to pages within the manual.

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

* SmartMedia is a trademark of Toshiba Corporation.

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	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
ATTENTION: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR		
<p>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.</p>		



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



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

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


IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS

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

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







For the U.K.

<p>WARNING: THIS APPARATUS MUST BE EARTHED</p> <p>IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE. GREEN-AND-YELLOW: EARTH, BLUE: NEUTRAL, BROWN: LIVE</p> <p>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:</p> <p>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.</p> <p>The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.</p> <p>The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.</p>







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 Quick Start p. 3.) 
- 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. 
- 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! 
- 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, SR-JV80 series; Quick Start p. 11). 

CAUTION

- 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. 
- 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, SR-JV80 series). Remove only the specified screws (Quick Start p. 3). 

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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

Power Supply: Use of Batteries

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

Placement

- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- 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 Memory Card, 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.

Memory Backup

- This unit contains a battery which powers the unit’s memory circuits while the main power is off. When this battery becomes weak, the message shown below will appear in the display. Once you see this message, have the battery replaced with a fresh one as soon as possible to avoid the loss of all data in memory. To have the battery replaced, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the “Information” page.

“Battery Low”

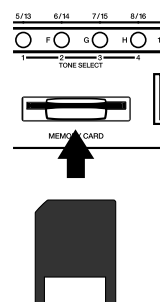
Additional Precautions

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

Before Using Cards

Using DATA Cards

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



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

Main Features

■ 128-Voice Polyphony and 16-Part Multitimbrality

The XV-3080 is a 16-part multitimbral sound generator that produces up to 128 simultaneous polyphonic voices. It provides ample polyphony, even with Patches containing multiple Tones.

■ High-Performance Built-In Effects

Advanced DSP (Digital Signal Processor) technology provides a wide array of studio-quality effects. The XV-3080 offers three internal effect units: Multi-Effects, featuring 63 different effect types, Chorus and Reverb.

■ 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-3080 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.

■ Supports General MIDI system Level 2

The XV-3080 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 (p. 141).

■ Greater Expansion Possibilities with the New-Format Wave Expansion Boards

The XV-3080 accepts up to two of Roland's new-format Wave Expansion Boards (SRX Series, sold separately). In addition, you can add four previous-generation Wave Expansion Boards (SR-JV Series, sold separately). (Quick Start p. 2)

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-3080 provides a Patch Finder function that allows you to quickly find Patches of a specified type or category. (Patch Finder function p. 16)

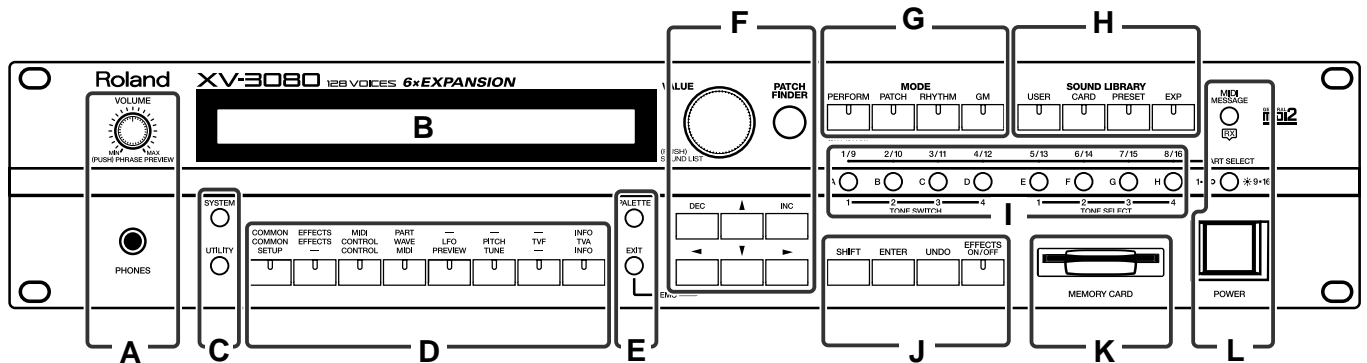
Press the XV-3080's [PHRASE PREVIEW] button to preview the selected Patch with a musically appropriate Phrase. (Phrase Preview function p. 13)

■ 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 are in the XV-3080 itself, on Wave Expansion Boards, or on memory cards. You can register up to 64 Patches in this list. (p. 121)

Front and Rear Panels

Front Panel



A

VOLUME Knob (PHRASE PREVIEW)

This adjusts the volume from the A(MIX) OUTPUT jacks and PHONES jacks. The volume from the OUTPUT B and C jacks cannot be adjusted.

You can press the knob to listen to the XV-3080 without using any external devices. (Phrase Preview function p. 13)

PHONES Jack

Headphones are plugged in here. (Quick Start p. 10)

B

Display

The display presents a variety of information about the operation being performed.

C

[SYSTEM]

Selects System mode.

This allows you to make settings that affect the entire XV-3080.

[UTILITY]

Selects Utility mode.

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

D

Function Select Buttons

The functions of these buttons change depending on the

selected mode.

The blue labels show what the buttons do in Performance mode, orange in Patch/Rhythm Set mode, and gray in System mode. These buttons, in each case, provide access to relevant settings, or "parameters."

E

[PALETTE]

Press this button when you wish to use the Palette display to modify Patch or Performance settings.

[EXIT]

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

Hold [EXIT] and press [◀] to hear the XV-3080 demo songs. (Quick Start p. 14)

F

VALUE Dial (SOUND LIST)

Turn this dial to modify a parameter's setting, or "value." If you hold down [SHIFT] as you turn the VALUE dial, 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. (p. 121)

[PATCH FINDER]

You can select a Patch using the Patch Finder function. (p. 16)

[INC]/[DEC]

Use these buttons to modify a parameter's value. If you hold down one button and press the other, values change more quickly. If you press one of these buttons while holding down [SHIFT], the value will change by larger increments.

[◀], [▶]

Move the cursor (underline) with these.

[▲], [▼]

When the left edge of the display shows a  or  symbol, use these buttons to move to other parameter screens.

Hold [EXIT] and press [◀] to hear the demo songs.

G (MODE)

[PERFORM]

Press this button to enter Performance mode. (p. 14)

Press this button while holding down [SHIFT] to switch to Part Play mode, enabling you to make changes to the settings for the Patch and Rhythm Set assigned to each Part (p. 109).

[PATCH]

Press this to enter Patch mode. (p. 14)

[RHYTHM]

Press this to enter Rhythm Set mode. (p. 14)

[GM]

Press this to enter General MIDI 2 mode. (p. 14)

H (SOUND LIBRARY)

[USER]

This selects a sound from the USER library. (p. 15)

[CARD]

This selects a sound from an installed memory card, sold separately. (p. 15)

[PRESET]

This selects a sound from the PRESET library. (p. 15)

[EXP]

This selects a sound from a wave expansion board, sold separately. (p. 15, Quick Start p. 2)

I

PART SELECT [1/9]–[8/16]

This selects a Part whose settings you wish to change. (p. 103)

This switches each Part on or off. (p. 102)

TONESWITCH [1]–[4]

This switches each Tone on or off. (p. 84)

TONESelect [1]–[4]

This selects a Tone whose settings you wish to change. (p. 89)

[A]–[H]

This selects a sound from the SOUND LIBRARY. (p. 15)

J

[SHIFT]

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

[ENTER]

Use this button to finalize a setting value or to execute an operation.

[UNDO]

Use this to restore a modified parameter value to its original setting.

[EFFECTS ON/OFF]

Use this to turn the internal effects (Multi-Effects, Chorus, Reverb) on or off. (p. 21)

K

MEMORY CARD

A commercially available SmartMedia memory card can be inserted here. (p. 125)

L

[MIDI MESSAGE/RX]

MIDI MESSAGE: This will light when a MIDI message is received.

RX: This turns Parts on and off in Performance mode and GM mode. (p. ??)

[1-8/9-16]

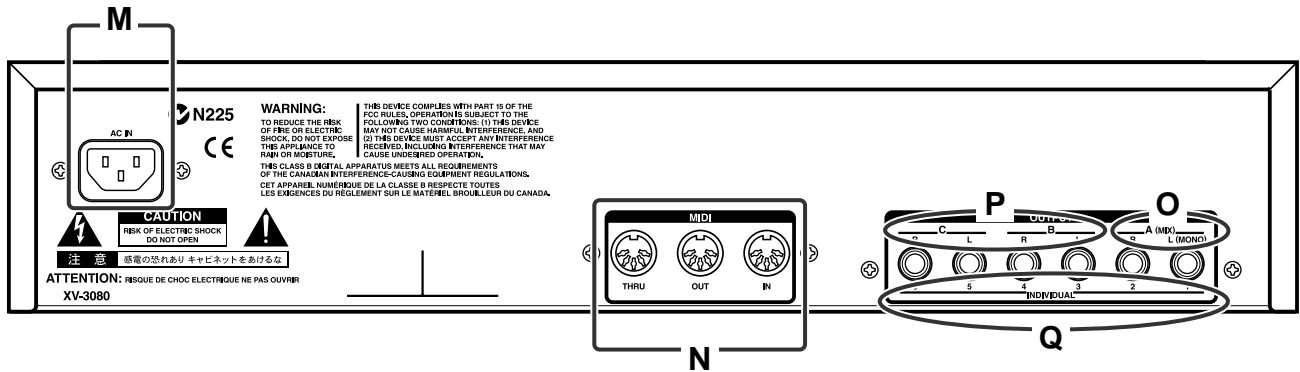
This specifies whether the PART SELECT [1/9]–[8/16] buttons will select Parts 1–8 or Parts 9–16.

When this button is lit, Parts 9–16 can be selected.

Power Switch

This turns the XV-3080's power on and off. (Quick Start p. 11)

Rear Panel



M

AC Inlet

Connect the included power cable here. (Quick Start p. 10)

N (MIDI)

MIDI Connectors (IN, OUT, THRU)

These connectors connect the XV-3080 with other MIDI devices, enabling the sending and receiving of MIDI messages. (Quick Start p. 10)

IN: This connector receives messages from another MIDI device.

Out: This connector transmits messages to a MIDI device.

Thru: MIDI messages received at the MIDI IN connector will be retransmitted from this connector without being changed by the XV-3080.

O (OUTPUT)

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

These jacks send audio signals in stereo (L/R) from the XV-3080 to an amp or mixer. For a mono output, use only the L jack. (Quick Start p. 10)

These jacks are used when the SYSTEM SETUP Mix/Parallel parameter is set to MIX. (p. 73, p. 76, p. 79, p. 81)

* The XV-3080, as shipped from the factory, routes the output of all PRESET Patches to these jacks.

P (OUTPUT)

B, C OUTPUT JACKS (L, R)

These jacks send audio signals in stereo (L/R) from the XV-3080 to an amp or mixer. (Quick Start p. 10)

Q (OUTPUT)

INDIVIDUAL 1-6 OUTPUT JACKS

These jacks output audio signals in mono from the XV-3080 to an amp or mixer. (Quick Start p. 10)

Chapter 1 Selecting and Playing a Sound

Auditioning Sounds on the XV-3080 (Phrase Preview)

The Phrase Preview feature allows you to audition Patches on the XV-3080 even when it's not connected to a MIDI keyboard or sequencer. You can preview a Patch using a Phrase that's appropriate to the Patch's type or category.

1. Press [PATCH] to make its indicator light.
2. Turn the VALUE dial, or press [INC]/[DEC] to select the desired Patch.
3. Press and hold the VOLUME knob.

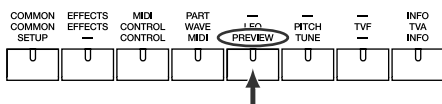
The Patch plays its preview Phrase for as long as the knob is held down.

- * When you preview a Rhythm Set, the XV-3080 plays a percussion Phrase. Phrase Preview also allows you to audition a Performance – when you preview a Performance, you hear a Phrase appropriate to the currently selected Part.
- * A USER Patch or a Patch from an optional Wave Expansion Board (SRX/SR-JV80 series) may not preview in its normal pitch range. If this occurs, press [▲] or [▼] (Octave Shift function p. 20) to select the desired pitch range.
- * If the pitch range of a Phrase is wider than the range of the Tones within a Patch (p. 87, or wider than the range of a Part within a Performance (p. 104), any notes in the Phrase that fall outside that range will not be heard.

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).

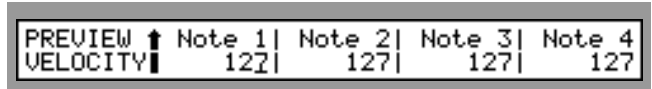
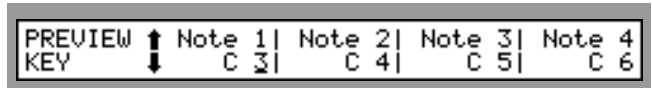
1. Press [SYSTEM] to make its indicator light.
2. Press the [PREVIEW] function select button.



3. Use [▲]/[▼] to choose the setting page for Preview Mode.



Press [▼] to display the setting page for PREVIEW KEY and PREVIEW VELOCITY.



4. Turn the VALUE dial or press [INC]/[DEC] to select the desired setting.
5. Press [EXIT] to return to the PLAY page.

Preview Mode

PHRASE: The Phrase associated with the Patch's type/category is played.

CHORD: The notes specified by PREVIEW KEY will play together as a chord.

SINGLE: The notes specified by PREVIEW KEY will sound one after another.

PREVIEW KEY Note1-4

Specifies the four notes (C -1-G9) that will be heard during a preview when "SINGLE" or "CHORD" is selected for Preview Mode.

- * If "PHRASE" is selected for Preview Mode, these settings will have no effect.

PREVIEW VELOCITY NOTE1-4

Specifies the volume (0-127) of the four notes that will sound when "SINGLE" or "CHORD" is selected for Preview Mode.

- * If "PHRASE" is selected for Preview Mode, these settings will have no effect.

Playing a Patch on the XV-3080 from External MIDI Devices (MIDI Keyboard)

The XV-3080 produces sound in response to MIDI messages that it receives from an external MIDI device such as a MIDI keyboard or sequencer. In order for this to occur, the MIDI transmission channels of the external device must match the MIDI reception channels of the XV-3080.

* For details on setting the MIDI transmission channels of your external MIDI device, refer to its owner's manual.

Setting the XV-3080's MIDI Reception Channels

In Patch mode

In order to play single Patches, set the XV-3080's MIDI reception channel as follows.

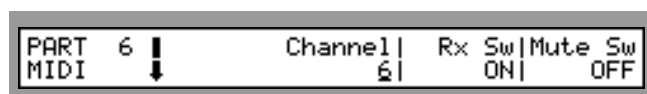
1. Press [SYSTEM] to make its indicator light.
2. Press the [MIDI] function select button.
3. Press [◀] or [▶] to move the cursor to the number underneath Patch/Rhy Rx Ch.
4. Use the VALUE dial or [INC]/[DEC] to select the desired MIDI channel.
5. Press [EXIT].

Parts of a Performance

In order to play any of the 16 Parts in a Performance, you must set the MIDI reception channel for the Part.

1. Select the Performance.
2. Press the [MIDI] function select button.
3. Press one of the [1/9]-[8/16] buttons to select the Part you want to set up. To select Part 9-16, press PART SELECT [1-8/9-16] to light its indicator, and then press the desired [1/9]-[8/16] button.

The button's indicator will light, and the selected Part number will appear at the left in the display.



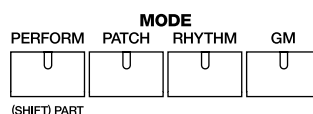
4. Press [◀]/[▶] to move the cursor to "Channel."
5. Use the VALUE dial or [INC]/[DEC] to select the desired MIDI reception channel.

6. Press [EXIT].

Selecting a Mode (Patch, Performance, or Rhythm Set)

In addition to Patch mode, the XV-3080 also features three other modes: Performance mode, Rhythm Set mode, and GM2 mode.

You can easily select any of these modes by pressing the corresponding **MODE** button: PERFORM, PATCH, RHYTHM or GM.



PERFORM (Performance Mode)

In Performance mode, the XV-3080 functions as a multitimbral sound module when used with an external MIDI controller. An entire multitimbral setup is called a "Performance." Performances can be customized as needed, including their effects. Each of the sounds used in a Performance is assigned to one of the Performance's 16 Parts.

PATCH (Patch Mode)

In Patch mode, the entire XV-3080 is dedicated to the playing of a single Patch when controlled by an external MIDI device. You can also modify Patch settings in this mode, as well as their effects.


RHYTHM (Rhythm Set Mode)

In Rhythm Set mode, the entire XV-3080 is dedicated to the playing of a single Rhythm Set when controlled by an external MIDI device. You can also modify Rhythm Sets in this mode, as well as their effects. XV-3080 Rhythm Sets can also be used for any Part in a Performance when in Performance mode.


GM(General MIDI2 Mode)

In this mode, the XV-3080 functions as a General MIDI 2-compatible sound generator.

General MIDI is a set of recommendations which seeks to provide a way to go beyond the limitations of proprietary designs, and standardize the MIDI capabilities of sound generating devices. Sound generating devices and music files that meet the General MIDI standard bear the General MIDI

logo (). Music files bearing the General MIDI logo can be played back using any General MIDI sound generating unit

to produce essentially the same musical performance.

The upwardly compatible General MIDI 2  recommendations pick up where the original General MIDI left off, offering enhanced expressive capabilities, and even greater compatibility.

Issues that were not covered by the original General MIDI recommendations, such as how sounds are to be edited, and how effects should be handled, have now been precisely defined. Moreover, the available sounds have been expanded. General MIDI 2 compliant sound generators are capable of reliably playing back music files that carry either the General MIDI or General MIDI 2 logo. In some cases, the conventional form of General MIDI, which does not include the new enhancements, is referred to as “General MIDI 1” as a way of distinguishing it from General MIDI 2.

Patches, Rhythm Sets and Performances can be stored in the following memory locations within each library group.

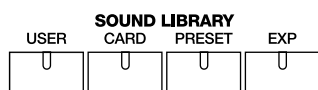
	PATCH	RHYTHM	PERFORM
USER	1-128	1, 2, 3, 4	1-64
CARD	*	*	*
PR-A	1-128	1, 2	1-32
PR-B	1-128	1, 2	1-32
PR-C	1-128	1, 2	---
PR-D	1-128	1, 2	---
PR-E	1-128	1, 2	---
PR-F	1-128	1, 2	---
PR-G	---	---	---
PR-H	1-256	1-9	---
XP-A	*	*	---
:	:	:	:
XP-F	*	*	---

–: None *: Differs by type

Choosing a Sound Library

XV-3080 Sound data is stored in the SOUND LIBRARY. The SOUND LIBRARY is divided into four “groups”: USER, CARD, PRESET, and EXP. The PRESET and EXP groups are further divided into “banks.”

You can select any of the groups by pressing the corresponding **SOUND LIBRARY** button: USER, CARD, PRESET or EXP.



USER

You can store your own Patches, Rhythm Sets and Performances in the SOUND LIBRARY’s USER group. When shipped from the factory, this group contains Patches with modified octave settings from the PRESET group’s Bank E (PR-E).

CARD

This library uses sounds from a commercially available memory card (SmartMedia) inserted into the MEMORY CARD slot.

When saving a file to the card, you can directly select Tones contained on the card – even without loading the files into the USER memory – by specifying the group (CD-A through CD-H). (Transmitting to a Memory Card (Save) p. 125)

PRESET

The PRESET library group contains the sounds that are permanently stored in the XV-3080’s memory. You can modify PRESET sounds and save them in the USER or CARD groups. PRESET Banks A and B (PR-A, PR-B) contain all of the XV-3080’s built-in Performances.

EXP (Expansion)

This group contains sounds from any wave expansion boards – SRX and SR-JV80 series, sold separately – installed in slots EXP A-F. You cannot alter the contents of the EXP group, though you can modify its sounds and save them as new sounds in the USER or CARD group. The number of Patches and Rhythm Sets in the EXP group depends on the specific wave expansion boards installed. The EXP group contains no Performances. (Precautions When Installing Wave Expansion Board (Quick Start p. 2))

- * *It is not possible to select an EXP Patch unless a wave expansion board is inserted into the corresponding slot.*
- * *CARD sounds can be selected only if a SmartMedia card is inserted into the MEMORY CARD slot.*

Selecting a Patch

Basic Procedure for Selecting a Patch

Turn the VALUE dial or press [INC]/[DEC] to select the desired Patch.

VALUE Dial

To move quickly through the available Patches:

Turn the VALUE dial while pressing it or, if you prefer, turn the VALUE dial while pressing [SHIFT].

[INC]/[DEC]

To move quickly upward through the available Patches:

Hold down [INC] and press [DEC] or, if you prefer, hold down [SHIFT] and press [INC].

To move quickly downward through the available Patches:

Hold down [DEC] and press [INC] or, if you prefer, hold down [SHIFT] and press [DEC].



When you hold down [INC] or [DEC], you may eventually arrive at the beginning (001) of the selected group or bank. To continue selecting Patches, release and then press the desired [INC] or [DEC] button again.

Selecting Patches by Category (Patch Finder)

The XV-3080'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.

On the display, the Patch's number is replaced by its category.



3. Use [▲]/[▼] to select the desired category.
4. Turn the VALUE dial or press [INC]/[DEC] to choose a Patch in the currently selected category.
5. Press [PATCH FINDER] to return to the PATCH PLAY page.

* If you press VALUE dial after Step 3, the CATEGORY SELECT page appears.

- You can change the selected category by holding down [SHIFT] and pressing [INC]/[DEC].
- Turn VALUE dial or press [INC]/[DEC] to select a category, and then press [ENTER] to confirm the selection. To find the desired Patch, follow Steps 4 and 5 above.

The following categories can be selected.

Category	Group	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 & 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

Selecting Patches and Rhythm Sets from an External MIDI Device

You can select XV-3080 Patches and Rhythm Sets – including those used by Parts in a Performance – from an external MIDI device.

In Patch or Rhythm Set modes

1. Press [PATCH] – or [RHYTHM] if you wish to select a Rhythm Set – to make the button's indicator light.
2. Set the transmission channel of your external MIDI device to match Patch/Rhy Rx Ch, the XV-3080's MIDI reception channel.
3. Transmit a Bank Select MSB (Controller #0) message to the XV-3080 with a value corresponding to the group in which the desired Patch – or Rhythm Set – is stored.

If the value is "87," a Patch is selected. If the value is "86," a Rhythm Set is selected.

4. Transmit a Bank Select LSB (Controller #32) message to the XV-3080 with a value corresponding to the bank in which the desired Patch – or Rhythm Set – is stored.
5. Transmit the Program Change value corresponding to the Patch or Rhythm Set.

The desired Patch or Rhythm Set will be selected on the XV-3080.

- * *When the XV-3080 receives only Program Change messages without receiving Bank Select messages, it will switch to the corresponding Patch or Rhythm Set from the currently selected group or bank.*

Chapter 1 Selecting and Playing a Sound

The Patches and Rhythm Sets in each library correspond to Bank Select numbers as follows.

Patch

Patch group	Patch number	Bank Select Number		Program number
		MSB	LSB	
USER	001-128	87	00	001-128
PR-A	001-128	87	64	001-128
PR-B	001-128	87	65	001-128
PR-C	001-128	87	66	001-128
PR-D	001-128	87	67	001-128
PR-E	001-128	87	68	001-128
PR-F	001-128	87	69	001-128
CD-A	001-128	87	32	001-128
:	:	:	:	:
CD-H	001-128	87	39	001-128
XP-A	*1	*1	*1	*1
:	:	:	:	:
XP-F	*1	*1	*1	*1

SR-JV80 Series	Patch number	Bank Select number	
		MSB	LSB
SR-JV80-01	001-128	89	00
SR-JV80-01	129-256	89	01
SR-JV80-02	001-128	89	02
SR-JV80-02	129-256	89	03
:	:	:	:
SR-JV80-65	001-128	91	00
SR-JV80-65	129-256	91	01

*1 Depends on the Wave Expansion Board installed.
Fixed Bank Select numbers are assigned to the Wave Expansion Board itself.

* For more about SRX series, refer to the Owner's Manual of SRX.

Rhythm Set

Rhythm Set group	Rhythm Set number	Bank Select Number		Program number
		MSB	LSB	
USER	1, 2, 3, 4	86	00	1, 2, 3, 4
PR-A	001, 002	86	64	001, 002
PR-B	001, 002	86	65	001, 002
PR-C	001, 002	86	66	001, 002
PR-D	001, 002	86	67	001, 002
PR-E	001, 002	86	68	001, 002
PR-F	001, 002	86	69	001, 002
CD-A	1, 2, 3, 4	86	32	1, 2, 3, 4
:	:	:	:	:
CD-H	1, 2, 3, 4	86	39	1, 2, 3, 4
XP-A	*1	*1	*1	*1
:	:	:	:	:
XP-F	*1	*1	*1	*1

SR-JV80 Series	Rhythm Set number	Bank Select number	
		MSB	LSB
SR-JV80-01	001-128	88	00
SR-JV80-01	129-256	88	01
SR-JV80-02	001-128	88	02
SR-JV80-02	129-256	88	03
:	:	:	:
SR-JV80-65	001-128	90	00
SR-JV80-65	129-256	90	01

*1 Depends on the Wave Expansion Board installed.
Fixed Bank Select numbers are assigned to the Wave Expansion Board itself.

* For more about SRX series, refer to the Owner's Manual of SRX.

In Performance mode

1. Press [PERFORM] to make its indicator light.
2. Set the transmission channel on the external MIDI device to match the Performance Ctrl Ch(p. 131) setting on the XV-3080.

To learn about the MIDI settings of your external MIDI device, see its owner's manual.

3. Transmit the appropriate Bank Select MSB (Controller #0) value to the XV-3080.
4. Transmit the appropriate Bank Select LSB (Controller #32) value to the XV-3080.
5. Transmit the Program Change message value corresponding to the Performance.

The desired Performance will be selected.

- * *When the XV-3080 receives a Program Change message without Bank Select messages, the corresponding Performance in the currently selected group or bank will be chosen.*

MEMO

You can select any Performance Part's Patch or Rhythm Set via MIDI. To learn how, refer to "Assigning a different Patch to Part (P. 25)" in the XV-3080 QUICK START.

The Performances in each group correspond to the Bank Select numbers as follows.

Performance

Performance group	Performance number	Bank Select Number		Program number
		MSB	LSB	
USER	001-064	85	00	001-064
PR-A	001-032	85	64	001-032
PR-B	001-032	85	65	001-032
CD-A	001-064	85	32	001-064
:	:	:	:	:
CD-H	001-064	85	39	001-064

- * *When Patch/Rhy Rx Ch and Perform Ctrl Ch are set to the same channel, both Bank Select and Program Change are sent, making it possible to switch among Patches, Rhythm Sets, and Performances.*

Using MIDI to Switch between Patch, Performance and General MIDI 2 Modes

You can switch between Patch, Performance, and General MIDI 2 modes by transmitting the appropriate System Exclusive (Sys Ex) message to the XV-3080, as listed below. (Sys Ex messages are constructed using hexadecimal notation.)

Sys Ex message for switching to Patch mode

```
F0 41 10 00 10 12 00 00 00 00 01 7F F7
```

Sys Ex message for switching to Performance mode

```
F0 41 10 00 10 12 00 00 00 00 00 00 F7
```

Sys Ex message for switching to General MIDI 2 mode

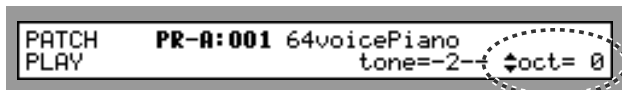
```
F0 41 10 00 10 12 00 00 00 00 03 7F F7
```

- * *The third byte of the MIDI message indicates the device ID number, and the factory setting is "10". (This is "10" in hexadecimal notation; in decimal this would be 16.) (This device ID number will appear as 17 in the display of the XV-3080. The transmitted messages will use a value of one less than this (16).) If you have modified the device ID number (p. 132), modify the third byte to the appropriate value when transmitting the above exclusive message.*

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

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

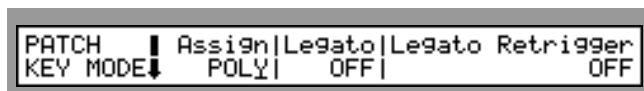
Each time you press [▲]/[▼], the pitch will change in one-octave steps. You can adjust a Patch's pitch by as much as +/- 3 octaves.



Selecting How a Patch Will Play (Polyphonic/Monophonic)

You can set whether a Patch will play multiple notes at the same time (Polyphonic) – for example, when you play a chord or legato line – or whether only the last-played note will be heard (Monophonic).

1. Select the Patch you wish to set up. (p. 16)
2. Press the [CONTROL] function select button.
3. Use [▲]/[▼] to select the PATCH KEY MODE page.



4. Press [◀]/[▶] to move the cursor beneath "Assign."
5. Press [INC] to select "POLY" (Polyphonic) or [DEC] to select "MONO" (Monophonic).
6. Press [EXIT].

Chapter 2 Using the XV-3080 Effects

The XV-3080 has three built-in effect units: Multi-Effects, Chorus and Reverb. You can independently edit each unit's settings.

Multi-Effects (MFX)

The Multi-Effects unit offers 63 effects ranging from single effects – such as distortion and delay – to powerful combination effects. The Multi-Effects unit also includes its own chorus and reverb effects independent of the dedicated Chorus and Reverb effects described below.

Chorus

Chorus adds depth and spaciousness to the sound.

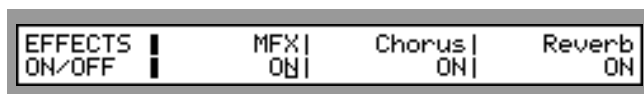
Reverb

Reverb adds ambience – such as the sound of a concert hall or auditorium – to sounds.

Turning Effects On/Off

You can turn any of the XV-3080's effect units – Multi-effects, Chorus and Reverb – on or off using a single procedure.

1. Press [EFFECTS ON/OFF] to make its indicator light.

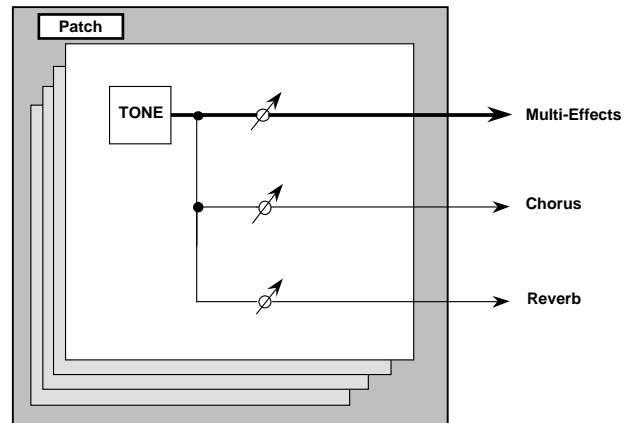


2. Use [◀]/[▶] to move the cursor beneath the effect that you wish to turn on/ or off.
3. Pressing [INC] turns the selected effect unit on, while pressing [DEC] turns it off.

You might, for example, want to turn effects off when creating a new Patch so that you can hear what it sounds like without effects. You may also want to turn off the XV-3080's effects when you wish to use external effect devices instead of the built-in effects.

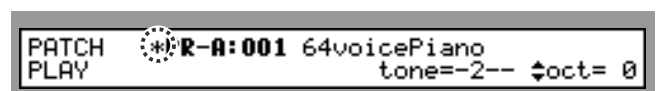
Adjusting Effect Settings in Patch mode ([PATCH]-[EFFECTS])

The Multi-Effects, Chorus and Reverb effects can be set up individually for each Patch. You can adjust the amount of effect to be applied to the Tones in a Patch by adjusting their Send Levels to each of the effect units.



Setting Procedure:

1. Select the Patch you wish to work with.
 2. Press [EFFECTS] to make its indicator light.
 3. Press [▲] / [▼] to select the page you wish to display.
 4. Press [◀] / [▶] to move the cursor to the parameter that you wish to adjust.
 5. Turn the VALUE dial or press [INC] / [DEC] to select the desired value.
 - * If you make a mistake when setting a parameter's value, or you don't like the change you have made, just press [UNDO] to restore the parameter to its original value.
 6. Repeat Steps 3 to 5 to set the Effect.
 7. Press [EXIT] to return to the PATCH PLAY page.
- A "*" symbol will appear at the left of the Patch name, indicating that its settings have been modified.



- * If you turn off the power or select another Patch while the "*" symbol is displayed, your new Patch settings will be lost. If you wish to preserve them, save the modified Patch using the Write operation. (p. 122)

Routing Tones to Effects

Output (Tone Output)

This page allows you to route each Tone to the Multi-Effects or to the desired rear-panel output jacks. It also lets you set its output level and its send level to the Chorus and Reverb.

Output Assign

MFX: The Tone is sent into the Multi-Effects. The Multi-Effects unit has its own settings that route its output to OUTPUT jacks.

OUTPUT A–C: The Tone is sent to one of the three output-jack stereo pairs, OUTPUTS A–C.

INDIVIDUAL 1–6: The Tone is sent to the INDIVIDUAL mono output jacks 1–6.

Chorus (Chorus Send Level) 0–127

This sets how much of the Tone is sent to the Chorus.

Reverb (Reverb Send Level) 0–127

This sets how much of the Tone is sent to the Reverb.

Making Multi-Effects Settings

This page allows you to establish various settings for the Multi-Effects unit, including its parameters and output-jack assignment.

PATCH MFX TYPE

Use this parameter to select from among the 63 available Multi-Effects. For a description of these effects, check out “Parameters for Each Multi-Effect (MFX TYPE)” (p. 36).

PATCH MFX PRM (Patch MFX Parameter)

These parameters allow you to customize the selected Multi-Effect. For a description of the parameters, check out “Parameters for Each Multi-Effect (MFX TYPE)” p. 36.

* *You cannot select this page when “Type” on the PATCH MFX TYPE page is set to THROUGH.*

PATCH MFX CTRL (Patch MFX Control)

Select the Control Source to be used for changing the Multi-Effects parameters, and set the Sens and parameters to be changed by that Control Source.

* *You cannot select this page when “Type” on the PATCH MFX TYPE page is set to THROUGH.*

Control 1–4 (MFX Control 1–4 Source)

OFF: No controller is used.

CC01–95: Controller numbers 1–95 (except for 32)

BENDER: Pitch Bend

AFTERTOUC: Aftertouch

SYS-CTRL 1–4: System control (Control 1–4)

Destination

This selects the Multi-Effects parameter to be controlled using the MFX Control 1–4 source.

Sens (MFX Control Sens) -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.

PATCH MFX OUT (Patch MFX Output)

Output (Output Assign) A/B/C

This setting specifies the stereo pair of OUTPUT jacks to which the stereo output of the Multi-Effects unit is routed.

Dry (Dry Output Level) 0–127

This sets the Multi-Effects unit’s output level to the selected jacks.

Chorus (Chorus Send Level) 0–127

This sets the amount of the Multi-Effect unit’s output to be sent to the Chorus.

Reverb (Reverb Send Level) 0–127

This sets the amount of the Multi-Effect unit’s output to be sent to the Reverb.

Making Chorus Settings

The XV-3080's Chorus effect unit can also be used as a stereo delay unit.

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

PATCH CHO TYPE (Patch Chorus Type)

This selects either Chorus or Delay.

Type

OFF: Neither Chorus or Delay is used.

CHORUS: Chorus is used.

DELAY: Delay is used.

PATCH CHO PRM (Patch Chorus Parameter)

●For Chorus

Rate (Chorus Rate) 0.05–10.00 Hz

This specifies the modulation frequency of the chorus effect.

Depth (Chorus Depth) 0–127

This specifies the modulation depth of the chorus effect.

Pre Dly (Chorus Pre Delay) 0.0–100 ms

This specifies the delay between when the original sound is heard and when chorusing begins.

Fbk (Chorus Feedback) 0–127

This specifies the amount of the chorus effect's output to be returned – fed back – to its input. Higher settings create more complex chorusing.

Phase 0–180 degree

This specifies the spaciousness of the chorus effect.

Filter Type

This specifies the type of filter to be used by the chorus effect.

OFF: No filter is used.

LPF: Frequencies higher than the selected cutoff frequency value are eliminated.

HPF: Frequencies lower than the selected cutoff frequency value are eliminated.

Cutoff Freq (Cutoff Frequency) *1

This sets the cutoff frequency at which the LPF or HPF begin to work.

*1 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz

●For Delay

Delay C (Delay Center) 200–1000 ms

This sets the delay time for the delay located at the center of the stereo field.

Delay L (Delay Left) 200–1000 ms

This sets the delay time for the delay located at the left side of the stereo field.

Delay R (Delay Right) 200–1000 ms

This sets the delay time for the delay located at the right side of the stereo field.

Fbk (Feedback) -98– +98%

This adjusts the amount of delay feedback, controlling the number of times the delay repeats. Higher values result in more repeats. With negative (-) values, the phase of the repeated delays is inverted.

Level C (Delay Center Level) 0–127

This sets the volume level of the delay located at the center of the stereo field.

Level L (Delay Left Level) 0–127

This sets the volume level of the delay located at the left side of the stereo field.

Level R (Delay Right Level) 0–127

This sets the volume level of the delay located at the right side of the stereo field.

HF Damp *1

This allows you to reduce, or “damp,” the high-frequency content of the repeated feedback delays – frequencies above the selected value will be damped. If you do not wish to damp the high-frequency content of the feedback delays, set this parameter to BYPASS.

*1 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

PATCH CHO OUT (Patch Chorus Output)

Output Assign (Chorus Output Assign) A/B/C

This setting selects the pair of OUTPUT jacks to which the Chorus unit's stereo output is routed when Chorus Output Select is set to "MAIN" or "MAIN+R."

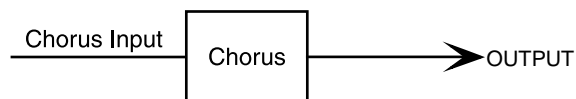
Level (Chorus Level) 0-127

This setting determines the Chorus output level.

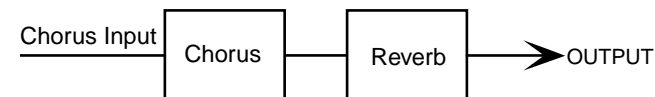
Select (Chorus Output Select)

This parameter allows you to send the Chorus output directly to the currently selected OUTPUT jacks, to the Reverb, or to both.

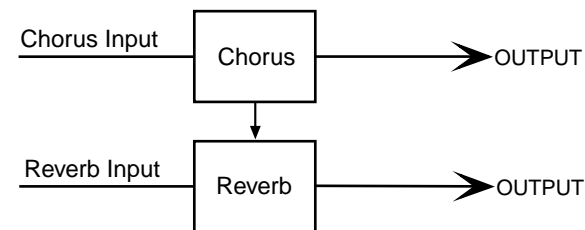
MAIN: The Chorus output is sent only to the OUTPUT jacks.



REV: The Chorus output is sent only to the Reverb.



MAIN+R: The Chorus output is sent to the OUTPUT jacks and to the Reverb.



Making Reverb Settings

These settings allow you to select the desired type of Reverb, its characteristics, and the pair of OUTPUT jacks to which the Reverb unit's stereo output is routed.

PATCH REV TYPE (Patch Reverb Type)

You can choose from a variety of reverb types.

Type (Reverb Type)

REVERB: Normal Reverb

BRIGHT ROOM: This reverb simulates typical room acoustic reflections.

BRIGHT HALL: This reverb simulates typical concert hall acoustic reflections.

BRIGHT PLATE: This reverb simulates a reverb plate, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate. You can also achieve unusual metallic-sounding reverbs using BRIGHT PLATE.

PATCH REV PRM (Patch Reverb Parameter)

For REVERB

Type (Reverb/Delay Type)

This selects a type of reverb or delay.

ROOM1: This is a short reverb with high density

ROOM2: This is a short reverb with low density.

STAGE1: This is a long reverb.

STAGE2: This is a reverb with strong early reflections.

HALL1: This is a very clear-sounding reverb.

HALL2: This is a rich reverb.

DELAY: This is a conventional delay effect.

PAN-DLY: This is a delay effect with echoes that pan left and right.

Time (Reverb/Delay Time)

When the Type setting is ROOM1-HALL2, this adjusts the length of reverberation. When the Type setting is DELAY or PAN-DLY, this adjusts the delay time.

Higher settings produce a more spacious ambience.

HF damp (Reverb/Delay HF Damp) *1

This specifies the frequency above which the high-frequency content of the reverb sound will be cut, or "damped."

Lower values cause a greater range of high frequencies to be cut, producing a softer reverb sound.

If you do not want to damp the high frequencies, set this parameter to BYPASS.

Fbk

When the Type setting is DELAY or PAN-DLY, this adjust the amount of delay feedback, controlling the number of delay repeats.

Higher values result in more repeats.

**1 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS*

**For BRIGHT ROOM/BRIGHT HALL/
BRIGHT PLATE****Pre Delay (Pre Delay Time) 0.0–100 ms**

This specifies the time between when the original sound is heard and the moment at which the reverb is first heard.

Time (Reverb Time) 0–127

This sets the reverb length.

Size 1–8

This adjusts the size of the simulated room or hall. The size becomes bigger as the value increases.

High Cut (High Cut Frequency) *1

This sets the frequency above which the high-frequency content of the reverb will be reduced. If you do not want to reduce the brightness of the reverb, set this parameter to BYPASS.

Density (Reverb Density) 0–127

This adjusts the density of reverb. Higher values result in greater density.

Diffusion (Reverb Diffusion) 0–127

This 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 Frequency *2

This specifies the frequency below which the low-frequency content of the reverb sound will be reduced, or “damped.”

LF Damp Gain -36–0 dB

This adjusts the amount of damping applied to the frequency range selected with LF Damp. With a setting of “0,” there will be no reduction of the reverb’s low-frequency content.

HF Damp Frequency *3

This specifies the frequency above which the high-frequency content of the reverb sound will be reduced, or “damped.”

HF Damp Gain -36–0 dB

This adjusts the amount of damping applied to the frequency range selected with HF Damp. With a setting of “0,” there will be no reduction of the reverb’s high-frequency content.

**1 160, 200, 250, 320, 400, 500, 640, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000, 5000, 6400, 8000, 10000, 12500 Hz, BYPASS*

**2 50, 64, 80, 100, 125, 160, 200, 250, 320, 400, 500, 640, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000 Hz*

**3 4000, 5000, 6400, 8000, 10000, 12500 Hz*

PATCH REV OUT (Patch Reverb Output)**Output Assign (Reverb Output Assign) A/B/C**

This setting allows you to specify the pair of OUTPUT jacks to which the stereo output of the Reverb is routed.

Level (Reverb Level) 0–127

This specifies the output level of the Reverb.

Adjusting Effects Settings in Performance Mode ([PERFORM]-[EFFECTS])

Each Part can use the Multi-Effects, Chorus and Reverb programmed for the Performance. You can control the amount of effect applied to each Part by adjusting the Part's Send Level to the effect units. (Fig. 1)

The Send Level setting for each Tone can also influence effect intensity (Fig. 2).

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

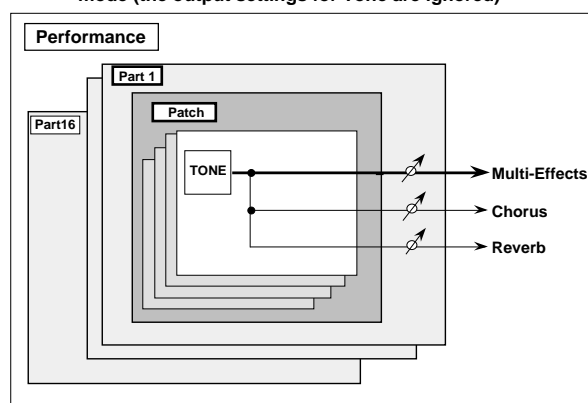
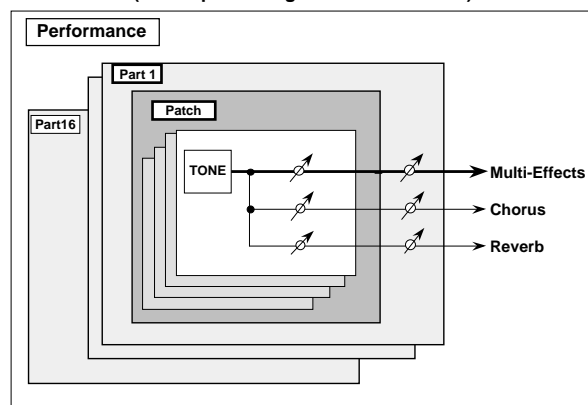


Fig.2 – When Output Assign is set to “PATCH” in the Performance mode (the output settings for Tone are valid)



Setting Procedure:

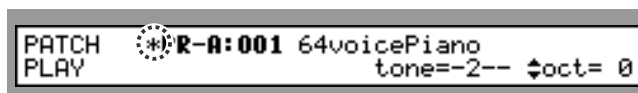
1. Select the Performance you wish to work with.
2. Press [EFFECTS] to make its indicator light.
3. Press [▲] / [▼] to select the page you wish to display.
4. Press [◀] / [▶] to move the cursor to the parameter that you wish to adjust.
5. Turn the VALUE dial or press [INC] / [DEC] to select the desired value.

* If you make a mistake when setting a parameter's value, or you don't like the change you have made, just press [UNDO] to

restore the parameter to its original value.

6. Repeat Steps 3 to 5 to set the Effect.
7. Press [EXIT] to return to the PERFORM PLAY page.

A “*” symbol will appear at the left of the Performance name, indicating that its settings have been modified.



* If you turn off the power or select another Performance while the “*” symbol is displayed, your new Performance settings will be lost. If you wish to preserve them, save the modified Performance using the Write operation. (p. 122)

Routing Part Outputs

PART OUTPUT

You can set the output destination and level for each Performance Part. You can also set its send level to the Chorus and Reverb.

Output Assign

MFX: The Part's sound is sent into the Multi-Effects. The sound's final destination is determined by the Multi-Effects output setting.

OUTPUT A-C: The sound is sent to one of the three output-jack pairs, OUTPUTs A-C.

INDIVIDUAL 1-6: The sound is sent to one of the six INDIVIDUAL 1-6 jacks.

PATCH: The output routing is determined by the settings of the Patch or Rhythm Set assigned to the Part.

Chorus (Chorus Send Level) 0-127

This sets how much of the Part's sound is sent to the Chorus.

Reverb (Reverb Send Level) 0-127

This sets how much of the Part's sound is sent to the Reverb.

Adjusting Multi-Effects Settings

PERFORM MFX TYPE

Type (MFX Type)

Use this parameter to select from among the 63 available Multi-Effects. For a description of these effects, check out “Parameters for Each Multi-Effect (MFX TYPE)” (p. 36).

Source (MFX Source)

Select the MFX parameter settings that will be used by the Performance. If you wish to use the MFX parameter settings of the Performance, select PERFORM. If you wish to use the MFX parameter settings of the Patch assigned to one of the Parts, select the Part number.

PERFORM MFX PRM

These parameters allow you to customize the selected Multi-Effect. For a description of the parameters, check out “Parameters for Each Multi-Effect (MFX TYPE)” (p. 36).

* *You cannot select this page when “Type” on the PERFORM MFX TYPE page is set to THROUGH.*

PERFORM MFX CTRL

Select the Control Source to be used for changing the Multi-Effects parameters, and set the Sens and parameters to be changed by that Control Source.

* *You cannot select this page when “Type” on the PERFORM MFX TYPE page is set to THROUGH.*

Control 1–4 (MFX Control 1–4 Source)

OFF: No controller is used.

CC01–95: Controller numbers 1–95 (except for 32)

BENDER: Pitch Bend

AFTERTOUC: Aftertouch

SYS-CTRL 1–4: System control (Control 1–4)

Destination

This selects the Multi-Effects parameter to be controlled using the MFX Control 1–4 source.

Sens (MFX Control Sens) -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.

PERFORM MFX OUT

These parameters allow you to route the output of the Multi-Effects to the desired OUTPUT jacks, and to set the final level of the Multi-Effects.

Output (MFX Output Assign) A/B/C

This selects the pair of OUTPUT jacks to which the Multi-Effects stereo output is routed.

Dry (MFX Dry Send Level) 0–127

This sets the Multi-Effects unit’s output level to the selected OUTPUT jacks.

Chorus (MFX Chorus Send Level) 0–127

This sets the amount of the Multi-Effects output to be sent to the Chorus.

Reverb (MFX Reverb Send Level) 0–127

This sets the amount of the Multi-Effects output to be sent to the Reverb.

Making Chorus Settings

The XV-3080's Chorus effect unit can also be used as a stereo delay unit.

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

PERFORM CHO TYPE (Performance Chorus Type)

This selects either Chorus or Delay.

Type (Chorus Type)

OFF: Neither Chorus or Delay is used.

CHORUS: Chorus is used.

DELAY: Delay is used.

Source (Chorus Source) PERFORM/PART 1-16

Set this when assigning chorus settings that are used by another part. Select PERFORM when using the Performance's chorus settings. When using the chorus settings assigned to one of the parts, select the part number.

PERFORM CHO PRM (Performance Chorus Parameter)

●For Chorus

Rate (Chorus Rate) 0.05-10.00 Hz

This specifies the modulation frequency of the chorus effect.

Depth (Chorus Depth) 0-127

This specifies the modulation depth of the chorus effect.

Pre Dly (Chorus Pre Delay) 0.0-100 ms

This specifies the delay between when the original sound is heard and when chorusing begins.

Fbk (Chorus Feedback) 0-127

This specifies the amount of the chorus effect's output to be returned - fed back - to its input. Higher settings create more complex chorusing.

Phase 0-180 degree

This specifies the spaciousness of the chorus effect.

Filter Type

This specifies the type of filter to be used by the chorus effect.

OFF: No filter is used.

LPF: Frequencies higher than the selected cutoff frequency value are eliminated.

HPF: Frequencies lower than the selected cutoff frequency

value are eliminated.

Cutoff Freq (Cutoff Frequency) *1

This sets the cutoff frequency at which the LPF or HPF begin to work.

*1 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz

●For Delay

Delay C (Delay Center) 200-1000 ms

This sets the delay time for the delay located at the center of the stereo field.

Delay L (Delay Left) 200-1000 ms

This sets the delay time for the delay located at the left side of the stereo field.

Delay R (Delay Right) 200-1000 ms

This sets the delay time for the delay located at the right side of the stereo field.

Fbk (Feedback) -98- +98%

This adjusts the amount of delay feedback, controlling the number of times the delay repeats. Higher values result in more repeats. With negative (-) values, the phase of the repeated delays is inverted.

Level C (Delay Center Level) 0-127

This sets the volume level of the delay located at the center of the stereo field.

Level L (Delay Left Level) 0-127

This sets the volume level of the delay located at the left side of the stereo field.

Level R (Delay Right Level) 0-127

This sets the volume level of the delay located at the right side of the stereo field.

HF Damp *1

This allows you to reduce, or "damp," the high-frequency content of the repeated feedback delays - frequencies above the selected value will be damped. If you do not wish to damp the high-frequency content of the feedback delays, set this parameter to BYPASS.

*1 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

PERFORM CHO OUT (Performance Chorus Output)

Output Assign (Chorus Output Assign) A/B/C

This setting selects the pair of OUTPUT jacks to which the Chorus unit's stereo output is routed when Chorus Output Select is set to "MAIN" or "MAIN+R."

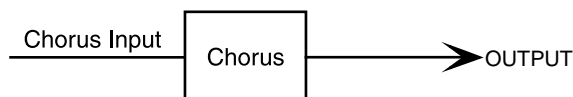
Level (Chorus Level) 0-127

This setting determines the Chorus output level.

Select (Chorus Output Select)

This parameter allows you to send the Chorus output directly to the currently selected OUTPUT jacks, to the Reverb, or to both.

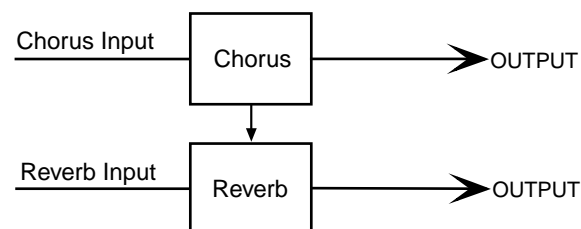
MAIN: The Chorus output is sent only to the OUTPUT jacks.



REV: The Chorus output is sent only to the Reverb.



MAIN+R: The Chorus output is sent to the OUTPUT jacks and to the Reverb.



Making Reverb Settings

These settings allow you to select the desired type of Reverb, its characteristics, and the pair of OUTPUT jacks to which the Reverb unit's stereo output is routed.

PERFORM REV TYPE (Performance Reverb Type)

You can choose from a variety of reverb types.

Type (Reverb Type)

REVERB: Normal Reverb

BRIGHT ROOM: This reverb simulates typical room acoustic reflections.

BRIGHT HALL: This reverb simulates typical concert hall acoustic reflections.

BRIGHT PLATE: This reverb simulates a reverb plate, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate. You can also achieve unusual metallic-sounding reverbs using BRIGHT PLATE.

Source (Reverb Source) PERFORM/PART 1-16

Set this when assigning reverb settings that are used by another part. Select PERFORM when using the Performance's reverb settings. When using the reverb settings assigned to one of the parts, select the part number.

PERFORM REV PRM (Performance Reverb Parameter)

For REVERB

Type (Reverb/Delay Type)

This selects a type of reverb or delay.

ROOM1: This is a short reverb with high density

ROOM2: This is a short reverb with low density.

STAGE1: This is a long reverb.

STAGE2: This is a reverb with strong early reflections.

HALL1: This is a very clear-sounding reverb.

HALL2: This is a rich reverb.

DELAY: This is a conventional delay effect.

PAN-DLY: This is a delay effect with echoes that pan left and right.

Time (Reverb/Delay Time)

When the Type setting is ROOM1-HALL2, this adjusts the length of reverberation. When the Type setting is DELAY or PAN-DLY, this adjusts the delay time.

Higher settings produce a more spacious ambience.

HF damp (Reverb/Delay HF Damp) *1

This specifies the frequency above which the high-frequency content of the reverb sound will be cut, or “damped.”

Lower values cause a greater range of high frequencies to be cut, producing a softer reverb sound.

If you do not want to damp the high frequencies, set this parameter to BYPASS.

Fbk

When the Type setting is DELAY or PAN-DLY, this adjust the amount of delay feedback, controlling the number of delay repeats.

Higher values result in more repeats.

**1 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS*

For BRIGHT ROOM/BRIGHT HALL/ BRIGHT PLATE

Pre Delay (Pre Delay Time) 0.0–100 ms

This specifies the time between when the original sound is heard and the moment at which the reverb is first heard.

Time (Reverb Time) 0–127

This sets the reverb length.

Size 1–8

This adjusts the size of the simulated room or hall. The size becomes bigger as the value increases.

High Cut (High Cut Frequency) *1

This sets the frequency above which the high-frequency content of the reverb will be reduced. If you do not want to reduce the brightness of the reverb, set this parameter to BYPASS.

Density (Reverb Density) 0–127

This adjusts the density of reverb. Higher values result in greater density.

Diffusion (Reverb Diffusion) 0–127

This 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 Frequency *2

This specifies the frequency below which the low-frequency content of the reverb sound will be reduced, or “damped.”

LF Damp Gain -36–0 dB

This adjusts the amount of damping applied to the frequency

range selected with LF Damp. With a setting of “0,” there will be no reduction of the reverb’s low-frequency content.

HF Damp Frequency *3

This specifies the frequency above which the high-frequency content of the reverb sound will be reduced, or “damped.”

HF Damp Gain -36–0 dB

This adjusts the amount of damping applied to the frequency range selected with HF Damp. With a setting of “0,” there will be no reduction of the reverb’s high-frequency content.

**1 160, 200, 250, 320, 400, 500, 640, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000, 5000, 6400, 8000, 10000, 12500 Hz, BYPASS*

**2 50, 64, 80, 100, 125, 160, 200, 250, 320, 400, 500, 640, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000 Hz*

**3 4000, 5000, 6400, 8000, 10000, 12500 Hz*

PERFORM REV OUT (Performance Reverb Output)

Output Assign (Reverb Output Assign) A/B/C

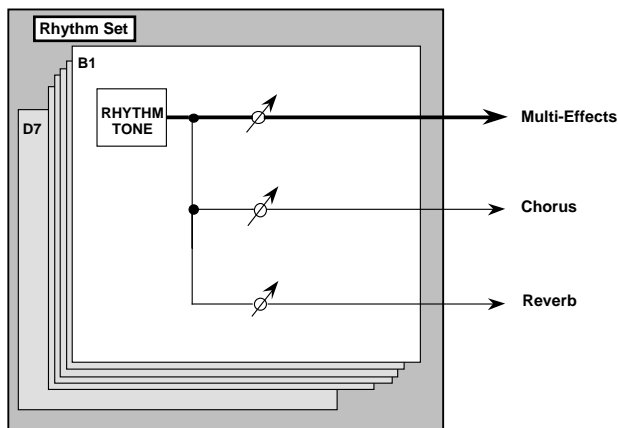
This setting allows you to specify the pair of OUTPUT jacks to which the stereo output of the Reverb is routed.

Level (Reverb Level) 0–127

This specifies the output level of the Reverb.

Adjusting Effect Settings in Rhythm Set Mode ([RHYTHM]-[EFFECTS])

You can apply Multi-Effects, Chorus or Reverb to each of a Rhythm Set's Tones. You can control the amount of effect to be applied to each Tone by adjusting its send level to the Multi-Effects, Chorus and Reverb.

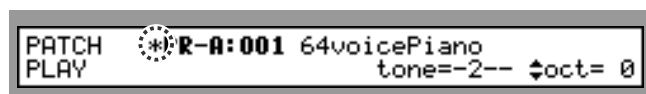


Setting Procedure:

1. Select the Rhythm Set you wish to work with.
2. Press [EFFECTS] to make its indicator light.
3. Press [▲] / [▼] to select the page you wish to display.
4. Press [◀] / [▶] to move the cursor to the parameter that you wish to adjust.
5. Turn the VALUE dial or press [INC] / [DEC] to select the desired value.

* If you make a mistake when setting a parameter's value, or you don't like the change you have made, just press [UNDO] to restore the parameter to its original value.

6. Repeat Steps 3 to 5 to set the Effect.
7. Press [EXIT] to return to the RHYTHM PLAY page. A "*" symbol will appear at the left of the Rhythm Set name, indicating that its settings have been modified.



* If you turn off the power or select another Rhythm Set while the "*" symbol is displayed, your new Rhythm Set settings will be lost. If you wish to preserve them, save the modified Rhythm Set using the Write operation. (p. 122)

Setting the Output for Each Tone in a Rhythm Set

OUTPUT

These parameters set the output destination and level for the currently selected Rhythm Set Tone, and allow you to set its send levels to the Chorus and Reverb.

Output Assign

MFX: This sends the Tone into the Multi-Effects. Its output destination is determined by the Multi-Effects output settings.

OUTPUT A-C: This sends the tone directly to one of the OUTPUT jack pairs, A-C.

INDIV 1-6: This sends the Tone directly to one of the INDIVIDUAL 1-6 jacks.

Chorus (Chorus Send Level)

This sets how much of the Tone is sent to the Chorus.

Reverb (Reverb Send Level)

This sets how much of the Tone is sent to the Reverb.

Making Multi-Effects Settings

This page allows you to establish various settings for the Multi-Effects unit, including its parameters and output-jack assignment.

RHYTHM MFX TYPE

Use this parameter to select from among the 63 available Multi-Effects. For a description of these effects, check out "Parameters for Each Multi-Effect (MFX TYPE)" (p. 36).

RHYTHM MFX PRM (Rhythm MFX Parameter)

These parameters allow you to customize the selected Multi-Effect. For a description of the parameters, check out "Parameters for Each Multi-Effect (MFX TYPE)" (p. 36).

* You cannot select this page when "Type" on the PATCH MFX TYPE page is set to THROUGH.

RHYTHM MFX CTRL (Rhythm MFX Control)

Select the Control Source to be used for changing the Multi-Effects parameters, and set the Sens and parameters to be changed by that Control Source.

* You cannot select this page when "Type" on the PATCH MFX TYPE page is set to THROUGH.

Control 1–4 (MFX Control 1–4 Source)

OFF: No controller is used.

CC01–95: Controller numbers 1–95 (except for 32)

BENDER: Pitch Bend

AFTERTOUCHE: Aftertouch

SYS-CTRL 1–4: System control (Control 1–4)

Destination

This selects the Multi-Effects parameter to be controlled using the MFX Control 1–4 source.

Sens (MFX Control Sens) -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.

RHYTHM MFX OUT (Rhythm MFX Output)

Output (Output Assign) A/B/C

This setting specifies the stereo pair of OUTPUT jacks to which the stereo output of the Multi-Effects unit is routed.

Dry (Dry Output Level) 0–127

This sets the Multi-Effects unit's output level to the selected jacks.

Chorus (Chorus Send Level) 0–127

This sets the amount of the Multi-Effect unit's output to be sent to the Chorus.

Reverb (Reverb Send Level) 0–127

This sets the amount of the Multi-Effect unit's output to be sent to the Reverb.

Making Chorus Settings

The XV-3080's Chorus effect unit can also be used as a stereo delay unit.

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

RHYTHM CHO TYPE (Rhythm Chorus Type)

This selects either Chorus or Delay.

Type

OFF: Neither Chorus or Delay is used.

CHORUS: Chorus is used.

DELAY: Delay is used.

RHYTHM CHO PRM (Rhythm Chorus Parameter)

●For Chorus

Rate (Chorus Rate) 0.05–10.00 Hz

This specifies the modulation frequency of the chorus effect.

Depth (Chorus Depth) 0–127

This specifies the modulation depth of the chorus effect.

Pre Dly (Chorus Pre Delay) 0.0–100 ms

This specifies the delay between when the original sound is heard and when chorusing begins.

Fbk (Chorus Feedback) 0–127

This specifies the amount of the chorus effect's output to be returned – fed back – to its input. Higher settings create more complex chorusing.

Phase 0–180 degree

This specifies the spaciousness of the chorus effect.

Filter Type

This specifies the type of filter to be used by the chorus effect.

OFF: No filter is used.

LPF: Frequencies higher than the selected cutoff frequency value are eliminated.

HPF: Frequencies lower than the selected cutoff frequency value are eliminated.

Cutoff Freq (Cutoff Frequency) *1

This sets the cutoff frequency at which the LPF or HPF begin to work.

* 1 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz

●For Delay**Delay C (Delay Center) 200–1000 ms**

This sets the delay time for the delay located at the center of the stereo field.

Delay L (Delay Left) 200–1000 ms

This sets the delay time for the delay located at the left side of the stereo field.

Delay R (Delay Right) 200–1000 ms

This sets the delay time for the delay located at the right side of the stereo field.

Fbk (Feedback) -98– +98%

This adjusts the amount of delay feedback, controlling the number of times the delay repeats. Higher values result in more repeats. With negative (-) values, the phase of the repeated delays is inverted.

Level C (Delay Center Level) 0–127

This sets the volume level of the delay located at the center of the stereo field.

Level L (Delay Left Level) 0–127

This sets the volume level of the delay located at the left side of the stereo field.

Level R (Delay Right Level) 0–127

This sets the volume level of the delay located at the right side of the stereo field.

HF Damp *1

This allows you to reduce, or “damp,” the high-frequency content of the repeated feedback delays – frequencies above the selected value will be damped. If you do not wish to damp the high-frequency content of the feedback delays, set this parameter to BYPASS.

* 1 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

RHYTHM CHO OUT (Rhythm Chorus Output)**Output Assign (Chorus Output Assign) A/B/C**

This setting selects the pair of OUTPUT jacks to which the

Chorus unit's stereo output is routed when Chorus Output Select is set to “MAIN” or “MAIN+R.”

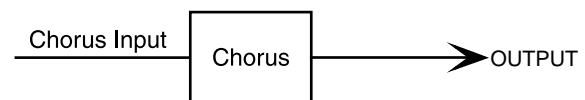
Level (Chorus Level) 0–127

This setting determines the Chorus output level.

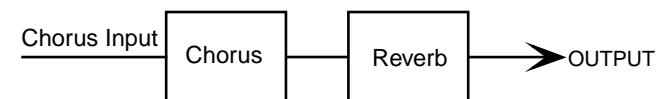
Select (Chorus Output Select)

This parameter allows you to send the Chorus output directly to the currently selected OUTPUT jacks, to the Reverb, or to both.

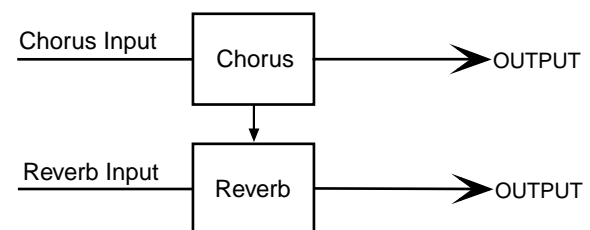
MAIN: The Chorus output is sent only to the OUTPUT jacks.



REV: The Chorus output is sent only to the Reverb.



MAIN+R: The Chorus output is sent to the OUTPUT jacks and to the Reverb.



Making Reverb Settings

These settings allow you to select the desired type of Reverb, its characteristics, and the pair of OUTPUT jacks to which the Reverb unit's stereo output is routed.

RHYTHM REV TYPE (Rhythm Reverb Type)

You can choose from a variety of reverb types.

Type (Reverb Type)

REVERB: Normal Reverb

BRIGHT ROOM: This reverb simulates typical room acoustic reflections.

BRIGHT HALL: This reverb simulates typical concert hall acoustic reflections.

BRIGHT PLATE: This reverb simulates a reverb plate, a popular type of artificial reverb unit that derives its sound from the vibration of a metallic plate. You can also achieve unusual metallic-sounding reverbs using BRIGHT PLATE.

RHYTHM REV PRM (Rhythm Reverb Parameter)

For REVERB

Type (Reverb/Delay Type)

This selects a type of reverb or delay.

ROOM1: This is a short reverb with high density

ROOM2: This is a short reverb with low density.

STAGE1: This is a long reverb.

STAGE2: This is a reverb with strong early reflections.

HALL1: This is a very clear-sounding reverb.

HALL2: This is a rich reverb.

DELAY: This is a conventional delay effect.

PAN-DLY: This is a delay effect with echoes that pan left and right.

Time (Reverb/Delay Time)

When the Type setting is ROOM1–HALL2, this adjusts the length of reverberation. When the Type setting is DELAY or PAN-DLY, this adjusts the delay time.

Higher settings produce a more spacious ambience.

HF damp (Reverb/Delay HF Damp) *1

This specifies the frequency above which the high-frequency content of the reverb sound will be cut, or “damped.”

Lower values cause a greater range of high frequencies to be cut, producing a softer reverb sound.

If you do not want to damp the high frequencies, set this

parameter to BYPASS.

Fbk

When the Type setting is DELAY or PAN-DLY, this adjust the amount of delay feedback, controlling the number of delay repeats.

Higher values result in more repeats.

*1 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

For BRIGHT ROOM/BRIGHT HALL/ BRIGHT PLATE

Pre Delay (Pre Delay Time) 0.0–100 ms

This specifies the time between when the original sound is heard and the moment at which the reverb is first heard.

Time (Reverb Time) 0–127

This sets the reverb length.

Size 1–8

This adjusts the size of the simulated room or hall. The size becomes bigger as the value increases.

High Cut (High Cut Frequency) *1

This sets the frequency above which the high-frequency content of the reverb will be reduced. If you do not want to reduce the brightness of the reverb, set this parameter to BYPASS.

Density (Reverb Density) 0–127

This adjusts the density of reverb. Higher values result in greater density.

Diffusion (Reverb Diffusion) 0–127

This 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 Frequency *2

This specifies the frequency below which the low-frequency content of the reverb sound will be reduced, or “damped.”

LF Damp Gain -36–0 dB

This adjusts the amount of damping applied to the frequency range selected with LF Damp. With a setting of “0,” there will be no reduction of the reverb's low-frequency content.

HF Damp Frequency *3

This specifies the frequency above which the high-frequency content of the reverb sound will be reduced, or “damped.”

HF Damp Gain -36-0 dB

This adjusts the amount of damping applied to the frequency range selected with HF Damp. With a setting of “0,” there will be no reduction of the reverb’s high-frequency content.

**1 160, 200, 250, 320, 400, 500, 640, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000, 5000, 6400, 8000, 10000, 12500 Hz, BYPASS*

**2 50, 64, 80, 100, 125, 160, 200, 250, 320, 400, 500, 640, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000 Hz*

**3 4000, 5000, 6400, 8000, 10000, 12500 Hz*

RHYTHM REV OUT (Rhythm Reverb Output)**Output Assign (Reverb Output Assign) A/B/C**

This setting allows you to specify the pair of OUTPUT jacks to which the stereo output of the Reverb is routed.

Level (Reverb Level) 0-127

This specifies the output level of the Reverb.

Settings in General MIDI Mode ([GM]-[EFFECTS])

For details refer to “Making Effects Settings(EFFECTS) p. 143.”

Parameters for Each Multi-Effect (MFX TYPE)

Multi-Effects provides 63 types of effect. Some of these consist of two different effects connected in series or parallel. Parameters marked with a sharp “#” can be controlled using a specified controller (Two setting items will change simultaneously for “#1” and “#2”).

1:	STEREO-EQ	(p. 38)	38:	CHORUS/DELAY	(p. 57)
2:	OVERDRIVE	(p. 38)	39:	FLANGER/DELAY	(p. 57)
3:	DISTORTION	(p. 39)	40:	CHORUS/FLANGER	(p. 57)
4:	PHASER	(p. 39)	41:	STEREO PHASER	(p. 57)
5:	SPECTRUM	(p. 40)	42:	KEYSYNC FLANGER	(p. 58)
6:	ENHANCER	(p. 40)	43:	FORMANT FILTER	(p. 59)
7:	AUTO WAH	(p. 40)	44:	RING MODULATOR	(p. 60)
8:	ROTARY	(p. 41)	45:	MULTI TAP DELAY	(p. 60)
9:	COMPRESSOR	(p. 42)	46:	REVERSE DELAY	(p. 61)
10:	LIMITER	(p. 42)	47:	SHUFFLE DELAY	(p. 62)
11:	HEXA-CHORUS	(p. 42)	48:	3D DELAY	(p. 62)
12:	TREMOLO CHORUS	(p. 43)	49:	3VOICE PITCH SHIFTER	(p. 63)
13:	SPACE-D	(p. 43)	50:	LOFI COMPRESS	(p. 64)
14:	STEREO CHORUS	(p. 44)	51:	LOFI NOISE	(p. 64)
15:	STEREO FLANGER	(p. 44)	52:	SPEAKER SIMULATOR	(p. 65)
16:	STEP FLANGER	(p. 45)	53:	OVERDRIVE 2	(p. 65)
17:	STEREO DELAY	(p. 46)	54:	DISTORTION 2	(p. 66)
18:	MODULATION DELAY	(p. 47)	55:	STEREO COMPRESSOR	(p. 66)
19:	TRIPLE TAP DELAY	(p. 48)	56:	STEREO LIMITER	(p. 66)
20:	QUADRUPLE TAP DELAY	(p. 48)	57:	GATE	(p. 67)
21:	TIME CONTROL DELAY	(p. 49)	58:	SLICER	(p. 67)
22:	2VOICE PITCH SHIFTER	(p. 50)	59:	ISOLATOR	(p. 68)
23:	FBK PITCH SHIFTER	(p. 50)	60:	3D CHORUS	(p. 68)
24:	REVERB	(p. 51)	61:	3D FLANGER	(p. 69)
25:	GATED REVERB	(p. 52)	62:	TREMOLO	(p. 70)
26:	OVERDRIVE→CHORUS	(p. 52)	63:	AUTO PAN	(p. 70)
27:	OVERDRIVE→FLANGER	(p. 52)			
28:	OVERDRIVE→DELAY	(p. 53)			
29:	DISTORTION→CHORUS	(p. 53)			
30:	DISTORTION→FLANGER	(p. 54)			
31:	DISTORTION→DELAY	(p. 54)			
32:	ENHANCER→CHORUS	(p. 54)			
33:	ENHANCER→FLANGER	(p. 54)			
34:	ENHANCER→DELAY	(p. 55)			
35:	CHORUS→DELAY	(p. 55)			
36:	FLANGER→DELAY	(p. 56)			
37:	CHORUS→FLANGER	(p. 56)			

MEMO

To have the types displayed according to category (as shown below), press [PATCH FINDER] in the MFX TYPE page.

■ Modulation (Effects that modulate the sound)

4:	PHASER
7:	AUTO WAH
41:	STEREO PHASER
42:	KEYSYNC FLANGER
43:	FORMANT FILTER
44:	RING MODULATOR

■ Delay (Effects that delay the sound)

- 7: STEREO DELAY
- 18: MODULATION DELAY
- 19: TRIPLE TAP DELAY
- 20: QUADRUPLE TAP DELAY
- 21: TIME CONTROL DELAY
- 22: 2VOICE PITCH SHIFTER
- 23: FBK PITCH SHIFTER
- 34: ENHANCER→DELAY
- 45: MULTI TAP DELAY
- 46: REVERSE DELAY
- 47: SHUFFLE DELAY
- 48: 3D DELAY
- 49: PITCH SHIFTER

■ Keyboard (Effects useful for the keyboard)

- 8: ROTARY

■ LOFI (Effects that intentionally degrades the sound quality)

- 50: LOFI COMPRESS
- 51: LOFI NOISE

■ Guitar and Bass (Effects useful for the Guitar and Bass)

- 2: OVERDRIVE
- 3: DISTORTION
- 26: OVERDRIVE→CHORUS
- 27: OVERDRIVE→FLANGER
- 28: OVERDRIVE→DELAY
- 29: DISTORTION→CHORUS
- 30: DISTORTION→FLANGER
- 31: DISTORTION→DELAY
- 52: SPEAKER SIMULATOR
- 53: OVERDRIVE 2
- 54: DISTORTION 2

■ Compressor (Effects in which the loudness becomes difficult to change)

- 9: COMPRESSOR
- 10: LIMITER
- 55: STEREO COMPRESSOR
- 56: STEREO LIMITER
- 57: GATE
- 58: SLICER

■ Chorus (Effects that broaden the sound)

- 11: HEXA-CHORUS
- 12: TREMOLO CHORUS
- 13: SPACE-D
- 14: STEREO CHORUS
- 15: STEREO FLANGER
- 16: STEP FLANGER
- 32: ENHANCER→CHORUS
- 33: ENHANCER→FLANGER
- 35: CHORUS→DELAY
- 36: FLANGER→DELAY
- 37: CHORUS→FLANGER
- 38: CHORUS/DELAY
- 39: FLANGER/DELAY
- 40: CHORUS/FLANGER
- 60: 3D CHORUS
- 61: 3D FLANGER

■ Dimension (Effects that control the location of the sound)

- 62: TREMOLO
- 63: AUTO PAN

■ Filter (Effects that modify the sound character)

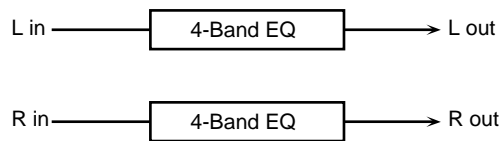
- 1: STEREO EQ
- 5: SPECTRUM
- 6: ENHANCER
- 59: ISOLATOR

■ Reverb (Effects that reverberate the sound)

- 24: REVERB
- 25: GATE REVERB

1: STEREO-EQ (Stereo Equalizer)

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



LowFreq (Low Frequency)

Select the frequency of the low range (200 Hz/400 Hz).

LowGain (Low Gain)

Adjust the gain of the low frequency.

Hi Freq (High Frequency)

Select the frequency of the high range (4000 Hz/8000 Hz).

Hi Gain (High Gain)

Adjust the gain of the high frequency.

Mid1 Freq (Middle 1 Frequency)

Adjust the frequency of Middle 1 (mid range).

Mid1 Q (Middle 1 Q)

This parameter adjusts the width of the area around the Middle 1 Frequency that will be affected by the Gain setting. Higher values of Q will result in a narrower area being affected.

Mid1 Gain (Middle1 Gain)

Adjust the gain for the area specified by the Middle 1 Frequency and Q settings.

Mid2 Freq (Middle 2 Frequency)

Adjust the frequency of Middle 2 (mid range).

Mid2 Q (Middle 2 Q)

This parameter adjusts the width of the area around the Middle 2 Frequency that will be affected by the Gain setting. Higher values of Q will result in a narrower area being affected.

Mid2 Gain (Middle 2 Gain)

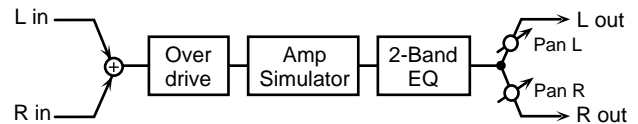
Adjust the gain for the area specified by the Middle 2 Frequency and Q settings.

Level (Output Level)

Adjust the output level.

2: OVERDRIVE

This effect creates a soft distortion similar to that produced by vacuum tube amplifiers.



Drive

Adjust the degree of distortion. The volume will change together with the degree of distortion.

Level (Output Level)

Adjust the output level.

LowGain (Low Gain)

Adjust the gain of the low frequency range.

Hi Gain (High Gain)

Adjust the gain of the high frequency range.

Amp Type (Amp Simulator Type)

Select the type of guitar amp.

SMALL:small amp

BUILT-IN:single-unit type amp

2-STACK:large double stack amp

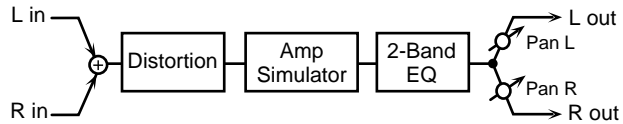
3-STACK:large triple stack amp

Pan (Output Pan)

Adjust the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right.

3: DISTORTION

This effect produces a more intense distortion than Overdrive.



Drive

Adjust the degree of distortion. The volume will change together with the degree of distortion.

Level (Output Level)

Adjust the output level.

LowGain (Low Gain)

Adjust the gain of the low frequency range.

Hi Gain (High Gain)

Adjust the gain of the high frequency range.

Amp Type (Amp Simulator Type)

Select the type of guitar amp.

SMALL:small amp

BUILT-IN:single-unit type amp

2-STACK:large double stack amp

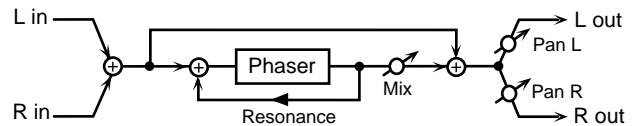
3-STACK:large triple stack amp

Pan (Output Pan)

Adjust the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right.

4: PHASER

A phaser adds a phase-shifted sound to the original sound, producing a twisting modulation that creates spaciousness and depth.



Manual

Adjust the basic frequency from which the sound will be modulated.

Rate

Adjust the frequency (period) of modulation.

Depth

Adjust the depth of modulation.

Res (Resonance)

Adjust the amount of feedback for the phaser.

Mix (Mix Level)

Adjust the ratio with which the phase-shifted sound is combined with the direct sound.

Pan (Output Pan)

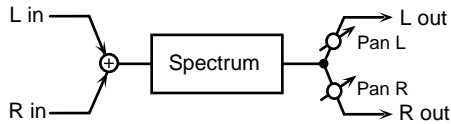
Adjust the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right.

Level (Output Level)

Adjust the output level.

5: SPECTRUM

Spectrum is a type of filter which modifies the timbre by boosting or cutting the level at specific frequencies. It is similar to an equalizer, but has 8 frequency points fixed at locations most suitable for adding character to the sound.



Band 1 (Band 1 Gain)

Adjust the 250 Hz level.

Band 2 (Band 2 Gain)

Adjust the 500 Hz level.

Band 3 (Band 3 Gain)

Adjust the 1000 Hz level.

Band 4 (Band 4 Gain)

Adjust the 1250 Hz level.

Band 5 (Band 5 Gain)

Adjust the 2000 Hz level.

Band 6 (Band 6 Gain)

Adjust the 3150 Hz level.

Band 7 (Band 7 Gain)

Adjust the 4000 Hz level.

Band 8 (Band 8 Gain)

Adjust the 8000 Hz level.

Q

Simultaneously adjust the width of the adjusted areas for all the frequency bands.

Pan (Output Pan)

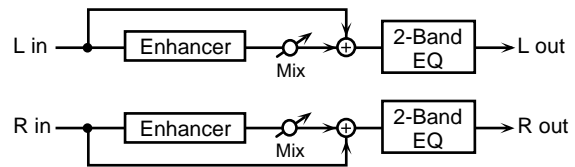
Adjust the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right.

Level (Output Level)

Adjust the output level.

6: ENHANCER

The Enhancer controls the overtone structure of the high frequencies, adding sparkle and tightness to the sound.



Sens (Sensitivity)

Adjust the sensitivity of the enhancer.

Mix (Mix Level)

Adjust the ratio with which the overtones generated by the enhancer are combined with the direct sound.

LowGain (Low Gain)

Adjust the gain of the low frequency range.

Hi Gain (High Gain)

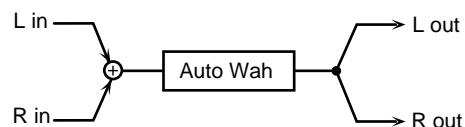
Adjust the gain of the high frequency range.

Level (Output Level)

Adjust the output level.

7: AUTO-WAH

The Auto Wah cyclically controls a filter to create cyclic change in timbre.



Filter (Filter Type)

Select the type of filter.

LPF:The wah effect will be applied over a wide frequency range.

BPF:The wah effect will be applied over a narrow frequency range.

Sens

Adjust the sensitivity with which the filter is controlled.

Manual

Adjust the center frequency from which the effect is applied.

Peak

Adjust the amount of the wah effect that will occur in the area of the center frequency. Lower settings will cause the effect to be applied in a broad area around the center frequency. Higher settings will cause the effect to be applied

in a more narrow range.

Rate

Adjust the frequency of the modulation.

Depth

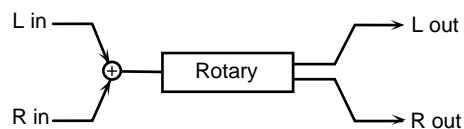
Adjust the depth of the modulation.

Level (Output Level)

Adjust the output level.

8: ROTARY

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



LowSlow (Low Frequency Slow Rate)

Adjust the slow speed (SLOW) of the low frequency rotor.

LowFast (Low Frequency Fast Rate)

Adjust the fast speed (FAST) of the low frequency rotor.

LowAccl (Low Frequency Acceleration)

Adjust the time it takes the low frequency rotor to reach the newly selected speed when switching from fast to slow (or slow to fast) speed. Lower values will require longer times.

Low Lvl (Low Frequency Level)

Adjust the volume of the low frequency rotor.

Hi Slow (High Frequency Slow Rate)

Adjust the slow speed (SLOW) of the high frequency rotor.

Hi Fast (High Frequency Fast Rate)

Adjust the fast speed (FAST) of the high frequency rotor.

Hi Accl (High Frequency Acceleration)

Adjust the time it takes the high frequency rotor to reach the newly selected speed when switching from fast to slow (or slow to fast) speed. Lower values will require longer times.

Hi Lvl (High Frequency Level)

Adjust the volume of the high frequency rotor.

Separation

Adjust the spatial dispersion of the sound.

Speed

Simultaneously switch the rotational speed of the low frequency rotor and high frequency rotor.

SLOW: Slow down the rotation to the specified speed (the Low Slow / Hi Slow values).

FAST: Speed up the rotation to the specified speed (the Low Fast / Hi Fast values).

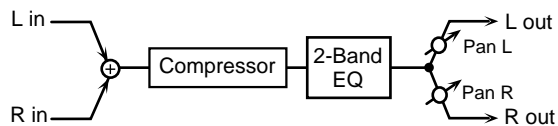
For details refer to "Using a Pedal Switch to Modify the Rotary Speed of the Rotary Effect (p. 138)."

Level (Output Level)

Adjust the output level.

9: COMPRESSOR

The Compressor flattens out high levels and boosts low levels, smoothing out unevenness in volume.



Attack

Adjust the attack time of an input sound.

Sustain

Adjust the time over which low level sounds are boosted until they reach the specified volume.

Post Gain

Adjust the output gain.

LowGain

Adjust the low frequency gain.

Hi Gain

Adjust the high frequency gain.

Pan (Output Pan)

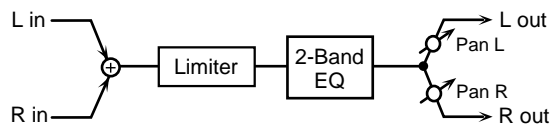
Adjust the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right.

Level (Output Level)

Adjust the output level.

10: LIMITER

The Limiter compresses signals that exceed a specified volume level, preventing distortion from occurring.



Thresh (Threshold Level)

Adjust the volume at which compression will begin.

Ratio (Compression Ratio)

Adjust the compression ratio.

Release (Release Time)

Adjust the time from when the volume falls below the Threshold Level until compression is no longer applied.

Gain (Post Gain)

Adjust the output gain.

LowGain

Adjust the low frequency gain.

Hi Gain

Adjust the high frequency gain.

Pan (Output Pan)

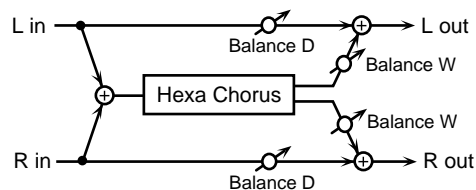
Adjust the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right.

Level (Output Level)

Adjust the output level.

11: HEXA-CHORUS

Hexa-chorus uses a six-phase chorus (six layers of chorused sound) to give richness and spatial spread to the sound.



Pre Dly (Pre Delay Time)

Adjust the time delay from when the direct sound begins until the chorus sound is heard.

Rate

Adjust the rate of modulation.

Depth

Adjust the depth of modulation.

Dly Dev (Pre Delay Deviation)

Pre Delay determines the time from when the direct sound begins until the processed sound is heard. Pre Delay Deviation adjusts the differences in Pre Delay between each chorus sound.

Dpt Dev (Depth Deviation)

Adjust the difference in modulation depth between each chorus sound.

Pan Dev (Pan Deviation)

Adjust the difference in stereo location between each chorus sound. With a setting of 0, all chorus sounds will be in the center. With a setting of 20, each chorus sound will be spaced at 60 degree intervals relative to the center.

Balance (Effect Balance)

Adjust the volume balance between the direct sound and the chorus sound. With a setting of D100:0W only the direct

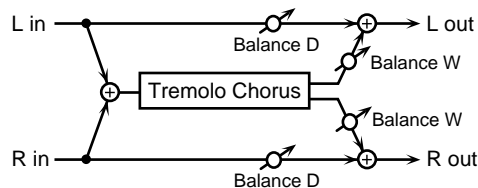
sound will be output, and with a setting of D0:100W only the chorus sound will be output.

Level (Output Level)

Adjust the output level.

12: TREMOLO CHORUS

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



Pre Dly (Pre Delay Time)

Adjust the time delay from when the direct sound begins until the chorus sound is heard.

ChoRate (Chorus Rate)

Adjust the modulation speed of the chorus effect.

Cho Dpt (Chorus Depth)

Adjust the modulation depth of the chorus effect.

Phase (Tremolo Phase)

Adjust the spread of the tremolo effect.

TrmRate (Tremolo Rate) #

Adjust the modulation speed of the tremolo effect.

Trm Sep (Tremolo Separation)

Adjust the spread of the tremolo effect.

Balance (Effect Balance) #

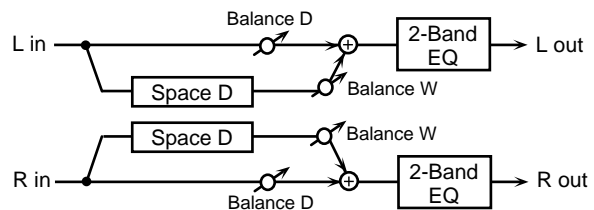
Adjust the volume balance between the direct sound and the tremolo chorus sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the tremolo chorus sound will be output.

Level (Output Level)

Adjust the output level.

13: SPACE-D

Space-D is a multiple chorus that applies two-phase modulation in stereo. It gives no impression of modulation, but produces a transparent chorus effect.



Pre Dly (Pre Delay Time)

Adjust the time delay from when the direct sound begins until the processed sound is heard.

Rate #

Adjust the rate of modulation.

Depth

Adjust the depth of modulation.

Phase

Adjust the spatial spread of the sound.

LowGain

Adjust the gain of the low frequency range.

Hi Gain

Adjust the gain of the high frequency range.

Balance (Effect Balance) #

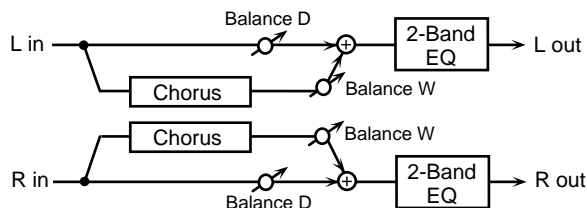
Adjust the volume balance between the direct sound and the chorus sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the chorus sound will be output.

Level (Output Level)

Adjust the output level.

14: STEREO CHORUS

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



Pre Dly (Pre Delay Time)

Adjust the time delay from when the direct sound begins until the processed sound is heard.

Rate

Adjust the rate of modulation.

Depth

Adjust the depth of modulation.

Phase

Adjust the spatial spread of the sound.

Filter (Filter Type)

Select the type of filter.

OFF:a filter will not be used

LPF:cut the frequency range above the cutoff frequency

HPF:cut the frequency range below the cutoff frequency

Cutoff (Cutoff Frequency)

Adjust the basic frequency of the filter.

LowGain

Adjust the gain of the low frequency range.

Hi Gain

Adjust the gain of the high frequency range.

Balance (Effect Balance)

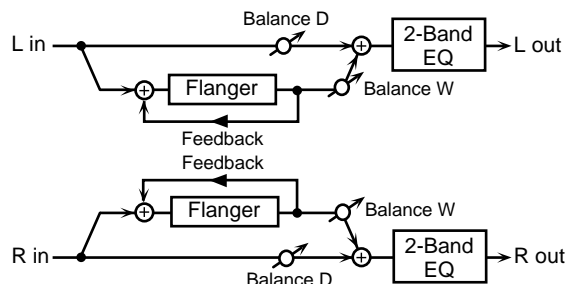
Adjust the volume balance between the direct sound and the chorus sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the chorus sound will be output.

Level (Output Level)

Adjust the output level.

15: 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 like a jet airplane taking off or landing. A filter is provided so that you can adjust the timbre of the flanged sound.



Pre Dly (Pre Delay Time)

Adjust the time delay from when the direct sound begins until the flanger sound is heard.

Rate

Adjust the rate of modulation.

Depth

Adjust the depth of modulation.

Fbk (Feedback Level)

Adjust the amount (%) of the processed sound that is returned (fed back) into the input. Positive (+) settings will return the sound in phase, and negative (-) settings will return the sound in reverse phase.

Phase

Adjust the spatial spread of the sound.

Filter Type

Select the type of filter.

OFF:a filter will not be used

LPF:cut the frequency range above the cutoff frequency

HPF:cut the frequency range below the cutoff frequency

Cutoff (Cutoff Frequency)

Adjust the basic frequency of the filter.

LowGain

Adjust the gain of the low frequency range.

Hi Gain

Adjust the gain of the high frequency range.

Balance (Effect Balance)

Adjust the volume balance between the direct sound and the

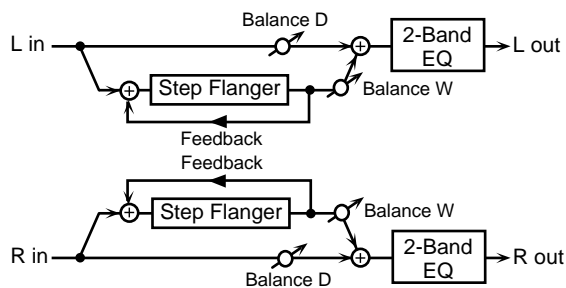
flanger sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the flanger sound will be output.

Level (Output Level)

Adjust the output level.

16: STEP FLANGER

The Step Flanger effect is a flanger in which the flanger pitch changes in steps. The speed at which the pitch changes can also be specified in terms of a note-value of a specified tempo.



Pre Dly (Pre Delay Time)

Adjust the time delay from when the direct sound begins until the flanger sound is heard.

Rate

Adjust the rate of modulation.

Depth

Adjust the depth of modulation.

Fbk (Feedback Level) #

Adjust the amount (%) of the flanger sound that is returned (fed back) into the input. Negative (-) settings will invert the phase.

Phase

Adjust the spatial spread of the sound.

Step Rate

Adjust the rate (period) of pitch change. This parameter can be set as a note-value of a specified tempo. In this case, specify the value of the desired note.

When Step Rate is Set as a Note Value

As the specified tempo, you may use either the Patch Tempo or the tempo clock of the XV-3080's system.

LowGain

Adjust the gain of the low frequency range.

Hi Gain

Adjust the gain of the high frequency range.

Balance (Effect Balance)

Adjust the volume balance between the direct sound and the flanger sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the chorus sound will be output.

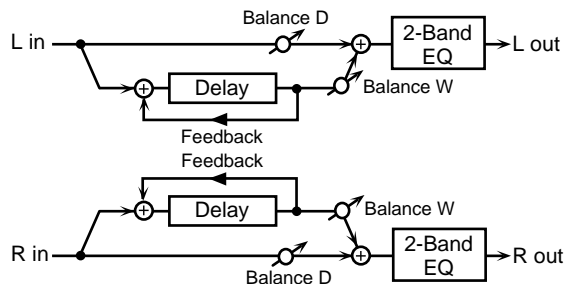
Level (Output Level)

Adjust the output level.

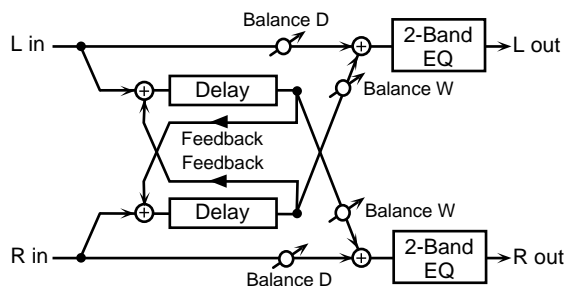
17: STEREO DELAY

This is a stereo delay.

When Feedback Mode is NORMAL:



When Feedback Mode is CROSS:



Delay L (Delay Time Left)

Adjust the time from the original sound until when the left delay sound is heard.

Delay R (Delay Time Right)

Adjust the time from the original sound until when the right delay sound is heard.

Fbk (Feedback Level)

Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.

Mode (Feedback Mode)

Select the way in which delay sound is fed back into the effect.

NORMAL:The left delay sound will be fed back into the left delay, and the right delay sound into the right delay.

CROSS:The left delay sound will be fed back into the right delay, and the right delay sound into the left delay.

Phase L (Feedback Phase Left)

Select the phase of the left delay sound.

NORMAL:Phase is not changed.

INVERT:Phase is inverted.

Phase R (Feedback Phase Right)

Select the phase of the right delay sound.

NORMAL:Phase is not changed.

INVERT:Phase is inverted.

HF Damp

Adjust the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS.

LowGain

Adjust the gain of the low frequency range.

Hi Gain

Adjust the gain of the high frequency range.

Balance (Effect Balance)

Adjust the volume balance between the direct sound and the delay sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the delay sound will be output.

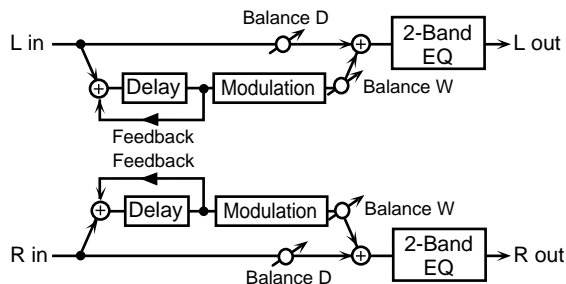
Level (Output Level)

Adjust the output level.

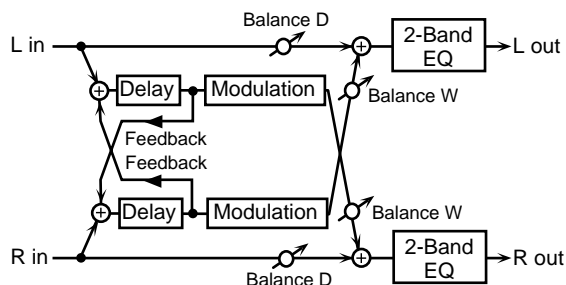
18: MODULATION DELAY

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

When Feedback Mode is NORMAL:



When Feedback Mode is CROSS:



Delay L (Delay Time Left)

Adjust the time from the original sound until when the left delay sound is heard.

Delay R (Delay Time Right)

Adjust the time from the original sound until when the right delay sound is heard.

Fbk (Feedback Level)

Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.

Mode (Feedback Mode)

Select the way in which delay sound is fed back into the effect.

NORMAL: The left delay sound will be fed back into the left delay, and the right delay sound into the right delay.

CROSS: The left delay sound will be fed back into the right delay, and the right delay sound into the left delay.

Rate

Adjust the speed of the modulation.

Depth

Adjust the depth of the modulation.

Phase

Adjust the spatial spread of the sound.

HF Damp

Adjust the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS.

LowGain

Adjust the gain of the low frequency range.

Hi Gain

Adjust the gain of the high frequency range.

Balance (Effect Balance)

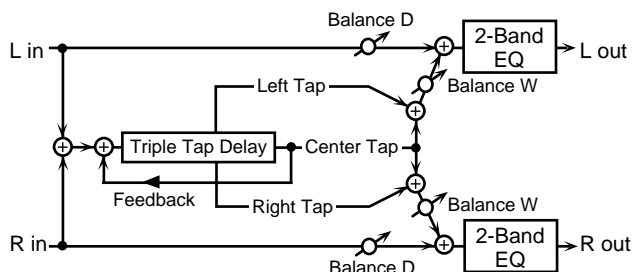
Adjust the volume balance between the direct sound and the modulation delay sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the modulation delay sound will be output.

Level (Output Level)

Adjust the output level.

19: TRIPLE TAP DELAY

The Triple Tap Delay produces three delay sounds; center, left and right. The center delay time can be specified as a note value of a specified tempo.



Delay C (Delay Time Center)

Delay L (Delay Time Left)

Delay R (Delay Time Right)

Adjust the time delay from the direct sound until when the delay sound is heard. This parameter can be set as a note-value of a specified tempo. In this case, specify the value of the desired note.

When Step Rate is Set as a Note Value

As the specified tempo, you may use either the Patch Tempo or the tempo clock of the XV-3080's system.

Fbk (Feedback Level)

Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.

Level C (Center Level)

Level L (Left Level)

Level R (Right Level)

Adjust the volume of each delay sound.

HF Damp

Adjust the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS.

LowGain

Adjust the gain of the low frequency range.

Hi Gain

Adjust the gain of the high frequency range.

Balance (Effect Balance)

Adjust the volume balance between the direct sound and the delay sound. With a setting of D100:0W only the direct sound

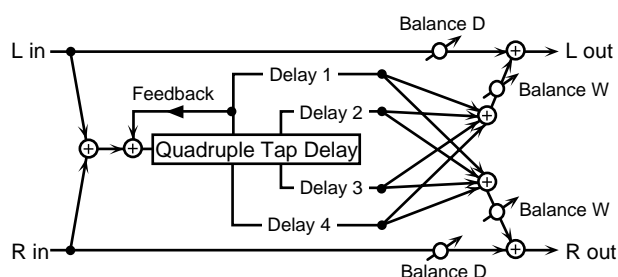
will be output, and with a setting of D0:100W only the delay sound will be output.

Level (Output Level)

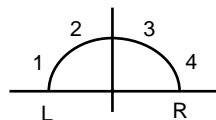
Adjust the output level.

20: QUADRUPLE TAP DELAY

The Quadruple Tap Delay has four delays. Each of the Delay Time parameters can be specified as a note length of the selected tempo.



The stereo location of each delay sound is as follows.



Delay 1 (Delay Time 1)

Delay 2 (Delay Time 2)

Delay 3 (Delay Time 3)

Delay 4 (Delay Time 4)

Adjust the time delay from the direct sound until when each delay sound is heard. These parameters can be set as a note-value of a specified tempo. In this case, specify the value of the desired note.

When Step Rate is Set as a Note Value

As the specified tempo, you may use either the Patch Tempo or the tempo clock of the XV-3080's system.

Level 1

Level 2

Level 3

Level 4

Adjust the volume of each delay sound.

Fbk (Feedback Level)

Adjust the proportion (%) of the delay sound that is fed back

into the effect. Negative (-) settings will invert the phase.

HF Damp

Adjust the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS.

Balance (Effect Balance)

Adjust the volume balance between the direct sound and the delay sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the delay sound will be output.

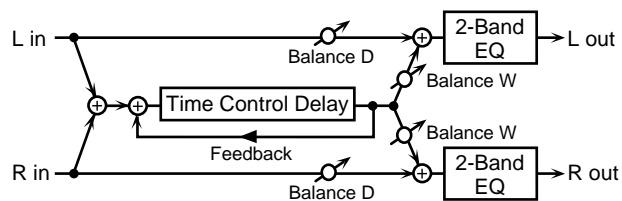
Level (Output Level)

Adjust the output level.

21: 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 will lower the pitch, and shortening it will raise the pitch.

For details refer to “**Changing the Multi-Effects Settings From an External MIDI Device** (p. 135).”



Delay (Delay time)

Adjust the time delay from the direct sound until when each delay sound is heard.

Accel (Acceleration)

This parameter adjusts the time over which the Delay Time will change from the current setting to a newly specified setting. The rate of change for the Delay Time directly affects the rate of pitch change.

Fbk (Feedback Level)

Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.

HF Damp

Adjust the frequency above which sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS.

Pan (Output Pan)

Adjust the stereo location of the delay sound. L64 is far left, 0 is center, and 63R is far right.

LowGain

Adjust the gain of the low frequency range.

Hi Gain

Adjust the gain of the high frequency range.

Balance (Effect Balance)

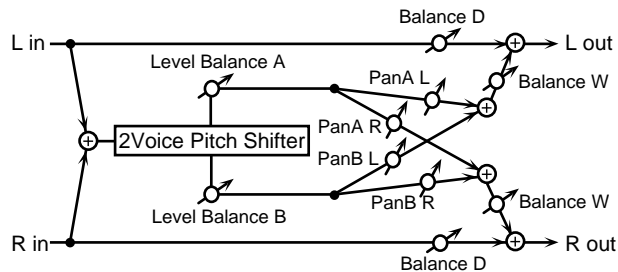
Adjust the volume balance between the direct sound and the delay sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the delay sound will be output.

Level (Output Level)

Adjust the output level.

22: 2VOICE PITCH SHIFTER

A Pitch Shifter shifts the pitch of the original sound. This 2-voice pitch shifter has two pitch shifters, and can add two pitch shifted sounds to the original sound.



CoarseA (Coarse Pitch A) #1

Adjust the pitch of Pitch Shift A in semitone steps (-2-+1 octaves).

Fine A (Fine Pitch A) #1

Make fine adjustments to the pitch of Pitch Shift A in 2-cent steps (-100-+100 cents).

One cent is 1/100th of a semitone.

Pan A (Output Pan A)

Adjust the stereo location of the Pitch Shift A sound. L64 is far left, 0 is center, and 63R is far right.

PreDlyA (Pre Delay Time A)

Adjust the time delay from when the direct sound begins until the Pitch Shift A sound is heard.

CoarseB (Coarse Pitch B) #2

Adjust the pitch of Pitch Shift B in semitone steps (-2-+1 octaves).

Fine B (Fine Pitch B) #2

Make fine adjustments to the pitch of Pitch Shift B in 2-cent steps (-100-+100 cents).

One cent is 1/100th of a semitone.

Pan B (Output Pan B)

Adjust the stereo location of the Pitch Shift B sound. L64 is far left, 0 is center, and 63R is far right.

PreDlyB (Pre Delay Time B)

Adjust the time delay from when the direct sound begins until the Pitch Shift A sound is heard.

Mode (Pitch Shifter Mode)

Higher settings of this parameter will result in slower response, but steadier pitch.

Lvl Bal (Level Balance)

Adjust the volume balance between the Pitch Shift A and Pitch Shift B sounds.

Balance (Effect Balance)

Adjust the volume balance between the direct sound and the pitch shift sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the pitch shift sound will be output.

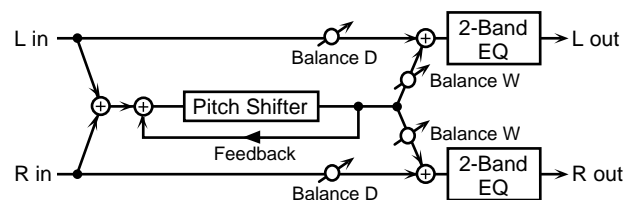
Level (Output Level)

Adjust the output level.

23: FBK PITCH SHIFTER

(Feedback Pitch Shifter)

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



Coarse (Coarse Pitch) #1

Adjust the pitch of the pitch shifted sound in semitone steps (-2-+1 octaves).

Fine (Fine Pitch) #1

Make fine adjustments to the pitch of the pitch shifted sound in 2-cent @5 Fbk (Feedback Level) #

Adjust the proportion (%) of the processed sound that is fed back into the effect. Negative (-) settings will invert the phase.

Pre Dly (Pre Delay Time)

Adjust the time delay from when the direct sound begins until the pitch shifted sound is heard.

Mode (Pitch Shifter Mode)

Higher settings of this parameter will result in slower response, but steadier pitch.

Pan (Output Pan)

Adjust the stereo location of the pitch shifted sound. L64 is far left, 0 is center, and 63R is far right.

LowGain

Adjust the gain of the low frequency range.

Hi Gain

Adjust the gain of the high frequency range.

Balance (Effect Balance)

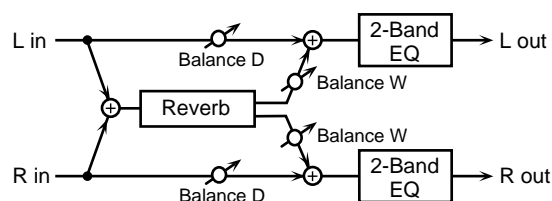
Adjust the volume balance between the direct sound and the pitch shift sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the pitch shift sound will be output.

Level (Output Level)

Adjust the output level.

24: REVERB

The Reverb effect adds reverberation to the sound, simulating an acoustic space.

**Type (Reverb Type)**

Select the type of Reverb effect.

ROOM1:dense reverb with short decay

ROOM2:sparse reverb with short decay

STAGE1:reverb with greater late reverberation

STAGE2:reverb with strong early reflections

HALL1:reverb with clear reverberance

HALL2:reverb with rich reverberance

Pre Dly (Pre Delay Time)

Adjust the time delay from when the direct sound begins until the reverb sound is heard.

Time (Reverb Time) #

Adjust the time length of reverberation.

HF Damp

Adjust the frequency above which the reverberant sound will be cut. As the frequency is set lower, more of the high frequencies will be cut, resulting in a softer and more muted reverberance. If you do not want the high frequencies to be cut, set this parameter to BYPASS.

LowGain

Adjust the gain of the low frequency range.

Hi Gain

Adjust the gain of the high frequency range.

Balance (Effect Balance) #

Adjust the volume balance between the direct sound and the reverb sound. With a setting of D100:0W only the direct

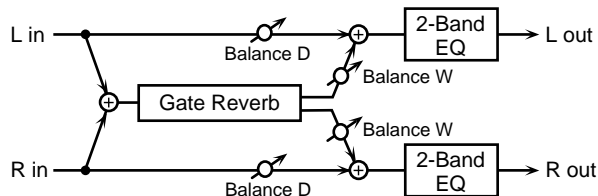
sound will be output, and with a setting of D0:100W only the reverb sound will be output.

Level (Output Level)

Adjust the output level.

25: GATED REVERB

Gate Reverb is a special type of reverb in which the reverberant sound is cut off before its natural length.



Type (Gate Reverb Type)

Select the type of reverb.

NORMAL:conventional gate reverb

REVERSE:backwards reverb

SWEEP1:the reverberant sound moves from right to left

SWEEP2:the reverberant sound moves from left to right

Pre Dly (Pre Delay Time)

Adjust the time delay from when the direct sound begins until the reverb sound is heard.

Gate Time

Adjust the time from when the reverb is heard until when it disappears.

LowGain

Adjust the gain of the low frequency range.

Hi Gain

Adjust the gain of the high frequency range.

Balance (Effect Balance)

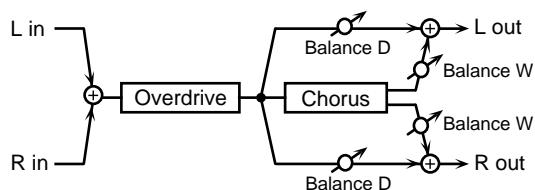
Adjust the volume balance between the direct sound and the reverb sound. With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the reverb sound will be output.

Level (Output Level)

Adjust the output level.

26: OVERDRIVE→CHORUS

This effect connects an overdrive and a chorus in series.



OD Drive

Adjust the degree of overdrive distortion. The volume will

change together with the degree of distortion.

OD Pan (Overdrive Pan)

Adjust the stereo location of the overdrive sound. L64 is far left, 0 is center, and 63R is far right.

Cho Dly (Chorus Pre Delay Time)

Adjust the time delay from when the direct sound begins until the chorus sound is heard.

ChoRate (Chorus Rate)

Adjust the modulation speed of the chorus effect.

Chorus Depth

Adjust the modulation depth of the chorus effect.

Chorus Balance

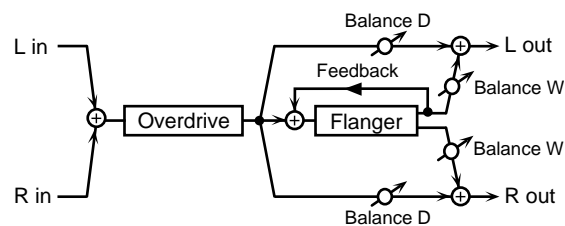
Adjust the volume balance between the overdrive sound that is sent through the chorus and the overdrive sound that is not sent through the chorus. With a setting of "D100: 0W," only the overdrive sound will be output. With a setting of "D0: 100W," only the overdrive sound that is sent through the chorus will be output.

Level (Output Level)

Adjust the output level.

27: OVERDRIVE→FLANGER

This effect connects an overdrive and a flanger in series.



OD Drive

Adjust the degree of overdrive distortion. The volume will change together with the degree of distortion.

OD Pan (Overdrive Pan)

Adjust the stereo location of the overdrive sound. L64 is far left, 0 is center, and 63R is far right.

Flg Dly (Flanger Pre Delay Time)

Adjust the time delay from when the direct sound begins until the flanger sound is heard.

FlgRate (Flanger Rate)

Adjust the modulation speed of the flanger effect.

Flg Dpt (Flanger Depth)

Adjust the modulation depth of the flanger effect.

Flg Fbk (Flanger Feedback Level)

Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.

Flanger Balance #

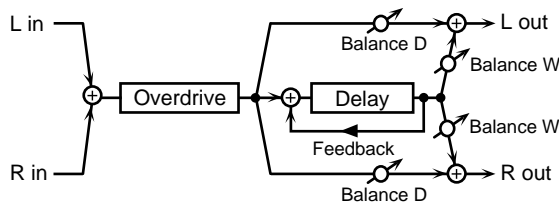
Adjust the volume balance between the overdrive sound that is sent through the flanger and the overdrive sound that is not sent through the flanger. With a setting of "D100: 0W," only the overdrive sound will be output. With a setting of "D0: 100W," only the overdrive sound that is sent through the flanger will be output.

Level (Output Level)

Adjust the output level.

28: OVERDRIVE → DELAY

This effect connects an overdrive and a delay in series.



OD Drive

Adjust the degree of overdrive distortion. The volume will change together with the degree of distortion.

OD Pan (Overdrive Pan) #

Adjust the stereo location of the overdrive sound. L64 is far left, 0 is center, and 63R is far right.

DlyTime (Delay Time)

Adjust the time delay from when the direct sound begins until the delay sound is heard.

Dly Fbk (Delay Feedback Level)

Adjust the proportion (%) of the delay sound that is fed back into the effect. Negative (-) settings will invert the phase.

Delay HF Damp

Adjust the frequency above which delayed sound fed back to the effect will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS.

Delay Balance (Delay Balance) #

Adjust the volume balance between the overdrive sound that is sent through the delay and the overdrive sound that is not

sent through the delay. With a setting of "D100: 0W," only the overdrive sound will be output. With a setting of "D0: 100W," only the overdrive sound that is sent through the delay will be output.

Level (Output Level)

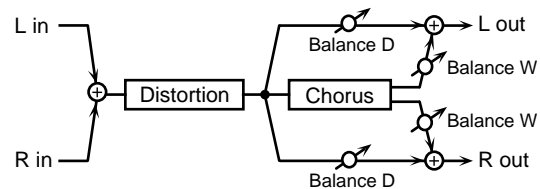
Adjust the output level.

29: DISTORTION → CHORUS

This effect connects distortion and chorus in series. The parameters are essentially the same as "26: OVERDRIVE → CHORUS," with the exception of the following two.

OD Drive → Dist Drive (Specify the amount of distortion.)

OD Pan → Dist Pan (Specify the stereo location of the distortion sound.)

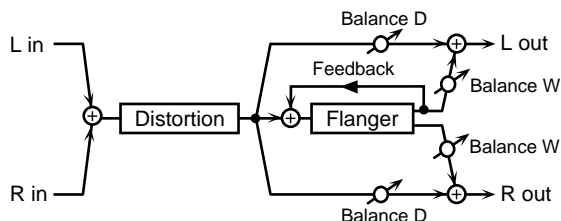


30: DISTORTION → FLANGER

This effect connects distortion and flanger in series. The parameters are essentially the same as in “27: OVERDRIVE?FLANGER,” with the exception of the following two.

OD Drive → Dist Drive (Specify the amount of distortion.)

OD Pan → Dist Pan (Specify the stereo location of the distortion sound.)

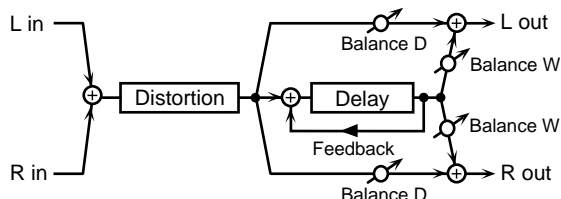


31: DISTORTION → DELAY

This effect connects distortion and delay in series. The parameters are essentially the same as in “28: OVERDRIVE?DELAY,” with the exception of the following two.

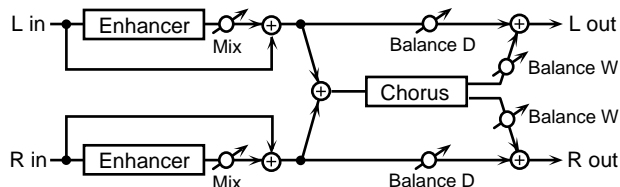
OD Drive → Dist Drive (Specify the amount of distortion.)

OD Pan → Dist Pan (Specify the stereo location of the distortion sound.)



32: ENHANCER → CHORUS

This effect connects an enhancer and a chorus in series.



Enhancer Sens #

Adjust the sensitivity of the enhancer.

Enhancer Mix (Enhancer Mix Level)

Adjust the ratio with which the overtones generated by the enhancer are combined with the direct sound.

Cho Dly (Chorus Pre Delay Time)

Adjust the time delay from when the direct sound begins until the chorus sound is heard.

ChoRate (Chorus Rate)

Adjust the modulation speed of the chorus effect.

Chorus Depth

Adjust the modulation depth of the chorus effect.

Chorus Balance #

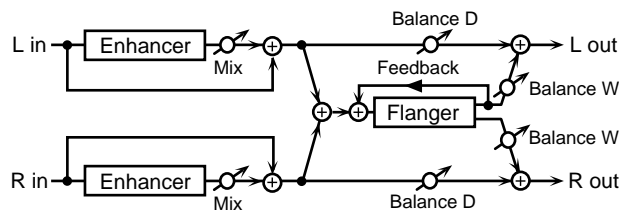
Adjust the volume balance between the enhancer sound that is sent through the chorus and the enhancer sound that is not sent through the chorus. With a setting of “D100: 0W,” only the enhancer sound will be output. With a setting of “D0: 100W,” only the enhancer sound that is sent through the chorus will be output.

Level (Output Level)

Adjust the output level.

33: ENHANCER → FLANGER

This effect connects an enhancer and a flanger in series.



Enhancer Sens #

Adjust the sensitivity of the enhancer.

Enhancer Mix (Enhancer Mix Level)

Adjust the ratio with which the overtones generated by the enhancer are combined with the direct sound.

Flg Dly (Flanger Pre Delay Time)

Adjust the time delay from when the direct sound begins until the flanger sound is heard.

FlgRate (Flanger Rate)

Adjust the modulation speed of the flanger effect.

Flg Dpt (Flanger Depth)

Adjust the modulation depth of the flanger effect.

Flg Fbk (Flanger Feedback Level)

Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.

Flanger Balance #

Adjust the volume balance between the enhancer sound that is sent through the flanger and the enhancer sound that is not sent through the flanger. With a setting of “D100: 0W,” only

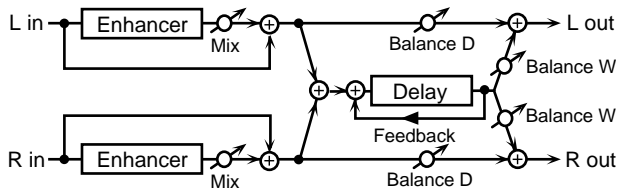
the enhancer sound will be output. With a setting of "D0: 100W," only the enhancer sound that is sent through the flanger will be output.

Level (Output Level)

Adjust the output level.

34: ENHANCER→DELAY

This effect connects an enhancer and a delay in series.



Enhancer Sens #

Adjust the sensitivity of the enhancer.

Enhancer Mix (Enhancer Mix Level)

Adjust the ratio with which the overtones generated by the enhancer are combined with the direct sound.

DlyTime (Delay Time)

Adjust the time delay from when the direct sound begins until the delay sound is heard.

Dly Fbk (Delay Feedback Level)

Adjust the proportion (%) of the delay sound that is fed back into the delay input. Negative (-) settings will invert the phase.

Delay HF Damp

Adjust the frequency above which delayed sound fed back to the delay input will be cut. If you do not want to cut the high frequencies of the delay feedback, set this parameter to BYPASS.

Delay Balance #

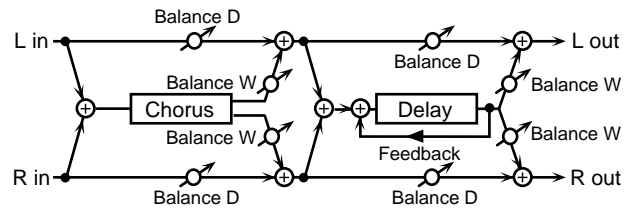
Adjust the volume balance between the enhancer sound that is sent through the delay and the enhancer sound that is not sent through the delay. With a setting of "D100: 0W," only the enhancer sound will be output. With a setting of "D0: 100W," only the enhancer sound that is sent through the delay will be output.

Level (Output Level)

Adjust the output level.

35: CHORUS→DELAY

This effect connects a chorus and a delay unit in series.



Cho Dly (Chorus Pre Delay Time)

Adjust the time delay from when the direct sound begins until the chorus sound is heard.

ChoRate (Chorus Rate)

Adjust the modulation speed of the chorus effect.

Cho Dpt (Chorus Depth)

Adjust the modulation depth of the chorus effect.

Cho Bal (Chorus Balance) #

Adjust the volume balance between the direct sound and the chorus sound. With a setting of "D100: 0W," only the direct sound will be output. With a setting of "D0: 100W," only the chorus sound will be output.

DlyTime (Delay Time)

Adjust the time delay from when the direct sound begins until the delay sound is heard.

Dly Fbk (Delay Feedback Level)

Adjust the proportion (%) of the delay sound that is fed back into the delay input. Negative (-) settings will invert the phase.

Delay HF Damp

Adjust the frequency above which delayed sound fed back to the delay input will be cut. If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS.

Delay Balance #

Adjust the volume balance between the chorus sound that is sent through the delay and the chorus sound that is not sent through the delay. With a setting of "D100: 0W," only the chorus sound will be output. With a setting of "D0: 100W," only the chorus sound that is sent through the delay will be output.

Level (Output Level)

Adjust the output level.

36: FLANGER→DELAY

This effect connects a flanger and a delay in series.

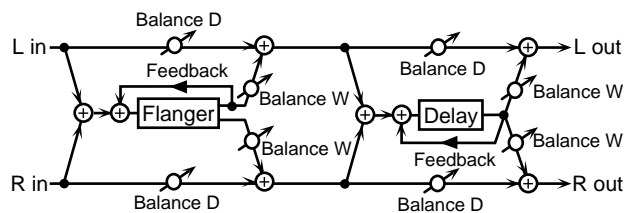


Fig Dly (Flanger Pre Delay Time)

Adjust the time delay from when the direct sound begins until the flanger sound is heard.

FlgRate (Flanger Rate)

Adjust the modulation speed of the flanger effect.

Flg Dpt (Flanger Depth)

Adjust the modulation depth of the flanger effect.

Flg Fbk (Flanger Feedback Level)

Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.

Flg Bal (Flanger Balance)

Adjust the volume balance between the direct sound and the flanger sound. With a setting of "D100: 0W," only the direct sound will be output. With a setting of "D0: 100W," only the flanger sound will be output.

DlyTime (Delay Time)

Adjust the time delay from when the direct sound begins until the delay sound is heard.

Dly Fbk (Delay Feedback Level)

Adjust the proportion (%) of the delay sound that is fed back into the delay input. Negative (-) settings will invert the phase.

HF Damp

Adjust the frequency above which delayed sound fed back to the delay input will be cut. If you do not want to cut the high frequencies of the delay feedback, set this parameter to BYPASS.

Delay Balance

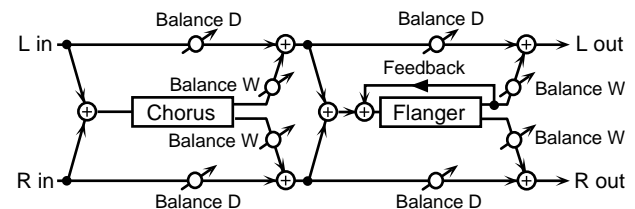
Adjust the volume balance between the flanger sound that is sent through the delay and the flanger sound that is not sent through the delay. With a setting of "D100: 0W," only the flanger sound will be output. With a setting of "D0: 100W," only the flanger sound that is sent through the delay will be output.

Level (Output Level)

Adjust the output level.

37: CHORUS→FLANGER

This effect connects a chorus and a flanger in series.



Cho Dly (Chorus Pre Delay Time)

Adjust the time delay from when the direct sound begins until the chorus sound is heard.

ChoRate (Chorus Rate)

Adjust the modulation speed of the chorus effect.

Cho Dpt (Chorus Depth)

Adjust the modulation depth of the chorus effect.

Cho Bal (Chorus Balance)

Adjust the volume balance between the direct sound and the chorus sound. With a setting of "D100: 0W," only the direct sound will be output. With a setting of "D0: 100W," only the chorus sound will be output.

Flg Dly (Flanger Pre Delay Time)

Adjust the time delay from when the direct sound begins until the flanger sound is heard.

FlgRate (Flanger Rate)

Adjust the modulation speed of the flanger effect.

Flg Dpt (Flanger Depth)

Adjust the modulation depth of the flanger effect.

Flg Fbk (Flanger Feedback Level)

Adjust the proportion (%) of the flanger sound that is fed back into the effect. Negative (-) settings will invert the phase.

Flanger Balance

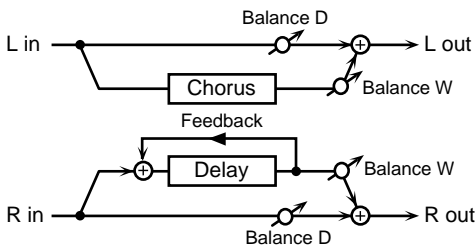
Adjust the volume balance between the chorus sound and the chorus sound that is passed through the flanger. With a setting of "D100: 0W," only the chorus sound will be output. With a setting of "D0: 100W," only the chorus sound that passes through the flanger will be output.

Level (Output Level)

Adjust the output level.

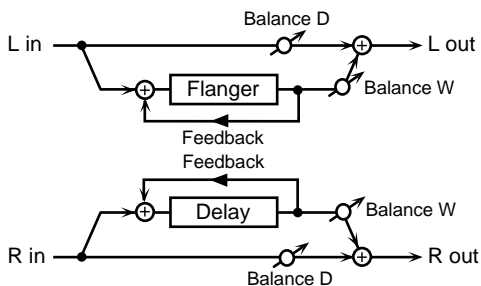
38: CHORUS/DELAY

This effect connects a chorus and a delay in parallel. 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.



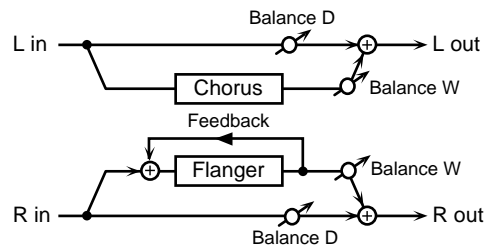
39: FLANGER/DELAY

This effect connects a flanger and a delay in parallel. The parameters are the same as for "36: FLANGER→DELAY." However, the Delay Balance parameter adjusts the volume balance between the direct sound and the delay sound.



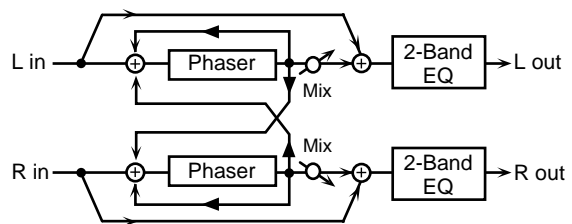
40: CHORUS/FLANGER

This effect connects a chorus and a flanger in parallel. The parameters are the same as for "37: CHORUS→FLANGER." However, the Flanger Balance parameter adjusts the volume balance between the direct sound and the flanger sound.



41: 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.



Type (Phaser Type)

Selects the type of Phaser.

Type 2 adds more of the Phaser effect to the high frequencies than Type 1.

Mode

Selects the number of stages in the phaser (4/8).

Pol (Polarity)

Selects whether the left and right phase of the modulation will be the same or the opposite.

INVERSE: The left and right phase will be opposite. When using a mono source, this spreads the sound.

SYNCHRO: The left and right phase will be the same. Select this when inputting a stereo source.

Man (Manual)

Adjusts the center frequency to which the phase effect is applied.

Rate (Phaser Rate)

Adjust the frequency of modulation.

Depth (Phaser Depth)

Adjust the depth of modulation.

Res (Phaser Resonance)

Adjust the amount of feedback for the phaser. Higher settings will give the sound a stronger character.

X-Fbk (Cross Feedback Level)

Adjust the proportion (%) of the phaser sound that is to be returned to the input. Positive (+) settings will return the signal to the input with the original phase, while negative (-) settings produce an inverted phase.

Step Rate (Step Rate Switct/Step Rate #)

Adjust the frequency of pitch change.

This setting determines whether the pitch is changed in a stepped fashion (ON) or not (OFF).

Mix (Mix Level)

Adjust the volume of the phase-shifted sound, relative to the direct sound.

Low Gain

Adjust the low frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the low frequency range.

Hi Gain

Adjust the high frequency gain (amount of boost or cut).

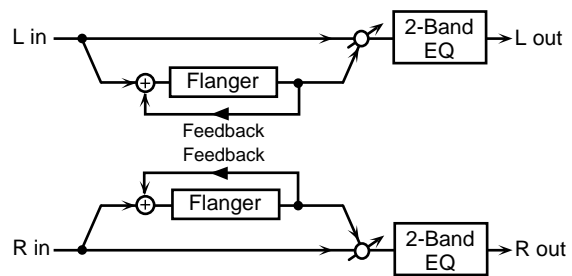
Positive (+) settings will emphasize (boost) the high frequency range.

Level (Output Level)

Adjust the output level.

42:KEYSYNC FLANGER

Keysync FLanger controls the Flanger by resetting the effect at the volume of the sound input to the effects device, restarting from the same pitch each time the Flanger is reset. This parameter lets your playing dynamics on the keyboard control the flanger effect.



Pre Dly (Pre Delay Time)

Adjust the time delay from the original sound until the flanger sound is heard.

Rate (LFO Rate)

Adjust the modulation frequency of the flanger sound.

Depth (LFO Depth)

Adjust the modulation depth of the flanger sound.

Fbk (Feedback)

Adjust the proportion (%) of the flanger sound that is to be returned to the input. Positive (+) settings will return the signal to the input with the original phase, while negative (-) settings produce an inverted phase. Higher settings will produce a more distinctive sound.

Phase 0-180 [deg]

Adjust the spaciousness of the flanger sound.

Filter (Filter Type)

OFF:A filter will not be used.

LPF:he frequency region above the Cutoff Freq setting will be cut.

HPF:The frequency region below the Cutoff Freq setting will be cut.

Cutoff(Cutoff Frequency)

Sets the cutoff frequency when a specific frequency band is cut off by a filter.

Step Rate (Step Rate Switct/Step Rate #)

Adjust the frequency of pitch change.

This setting determines whether the pitch is changed in a stepped fashion (ON) or not (OFF).

Keysync (Keysync Switch)

Determines whether the Flanger LFO is reset according to the input sound (ON) or not (OFF).

Thre (Keysync Threshold)

Adjust the volume level for which reset will be applied.

Keysync Phase

Sets the LFO phase when the LFO is reset.

LowGain

Adjust the low frequency range gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the low frequency range.

Hi Gain

Adjust the high frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the high frequency range.

Balance #

Adjusts the volume balance between the direct sound and the flanger sound.

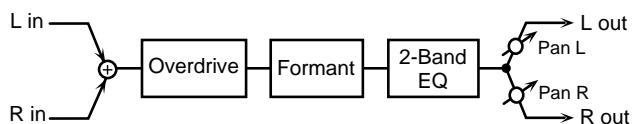
With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W the flanger sound will be output.

Level (Output Level) 0-127

Adjust the output level.

43:FORMANT FILTER

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

**Drive**

Turns Drive on/off.

Specifies the depth of distortion. The volume will change together with the degree of distortion.

Vowel

Selects the vowel. The left setting is the vowel 1. The right setting is the vowel 2.

Rate

Sets the frequency at which the two vowels will be switched.

Depth

Sets the effect depth.

Keysync Sw (KeySync Switch)

Determines whether the LFO for switching the vowels is reset according to the input sound (ON) or not (OFF).

Threshold (Keysync Threshold)

Specifies the volume level for which reset will be applied.

Manual

Sets the point at which the two vowels will be switched.

When set to 50, Vowels 1 and 2 switched in the same amount of time. Setting this higher than 50 increases the time for Vowel 1; setting this lower than 50 decreases the time for Vowel 1.

Low Gain

Specifies the low frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the low frequency range.

Hi Gain

Specifies the high frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the high frequency range.

Pan (Output Pan)

Specifies the stereo location of the output sound. L64 is far left, 0 is center, and 63R is far right.

Level (Output Level)

Specifies the output volume.

44:RING MODULATOR

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

You can also change the modulation frequency according to the volume of the sound input to the effects device.



Freq (Frequency)

Sets the frequency at which modulation will be applied.

Mod (Modulator)

Selects the input of the source sound for the envelope controlling the modulation.

When set to Source, the frequency is modulated according to the envelope of the sound input to the multi-effects.

Mon (Modulator Monitor)

Determines whether the input sound used as the modulator is output (ON) or not (OFF).

Sens

Sets the amount of frequency modulation applied.

Pol (Polarity)

Determines whether the frequency modulation moves towards higher frequencies (UP) or lower frequencies (DOWN).

LowGain

Adjust the low frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the low frequency range.

Hi Gain

Adjust the high frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the high frequency range.

Balance (Effect Balance)

Sets the volume balance between the source sound and the effect sound.

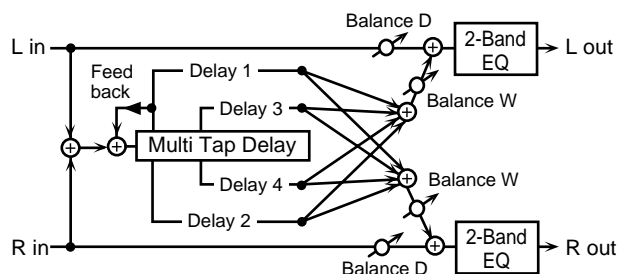
With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W the effect sound will be output.

Level (Output Level)

Adjust the output level.

45:MULTI TAP DELAY

The Multi Tap Delay has four delays. Each of the Delay Time parameters can be specified as a note length of the selected tempo. You can also set the panning and level of each delay sound.



Delay 1 (Delay Time 1)

Adjust the delay time from the original sound until the delay 1 sound is heard.

Delay 2 (Delay Time 2)

Adjust the delay time from the original sound until the delay 2 sound is heard.

Delay 3 (Delay Time 3)

Adjust the delay time from the original sound until the delay 3 sound is heard.

Delay 4 (Delay Time 4)

Adjust the delay time from the original sound until the delay 4 sound is heard.

Pan 1 (Output Pan 1)

Sets the stereo position of the delay sound (Delay 1). A setting of L64 is far left, 0 is center, and 63R is far right.

Pan 2 (Output Pan 2)

Sets the stereo position of the delay sound (Delay 2). A setting of L64 is far left, 0 is center, and 63R is far right.

Pan 3 (Output Pan 3)

Sets the stereo position of the delay sound (Delay 3). A setting of L64 is far left, 0 is center, and 63R is far right.

Pan 4 (Output Pan 4)

Sets the stereo position of the delay sound (Delay 4). A setting of L64 is far left, 0 is center, and 63R is far right.

Level 1

Adjust the output level of delay 1.

Level 2

Adjust the output level of delay 2.

Level 3

Adjust the output level of delay 3.

Level 4

Adjust the output level of delay 4.

Fbk (Feedback) #

Adjust the proportion (%) of the delay sound that is to be returned to the input. Positive (+) settings will return the signal to the input with the original phase, while negative (-) settings produce an inverted phase.

HF Damp

Adjust the frequency at which the high frequency range of the delayed sound returned to the input will be cut.

If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS.

LoG (Low Gain)

Adjust the low frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the low frequency range.

HiG (High Gain)

Adjust the high frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the high frequency range.

Balance (Effect Balance) #

Sets the volume balance between the source sound and the effect sound.

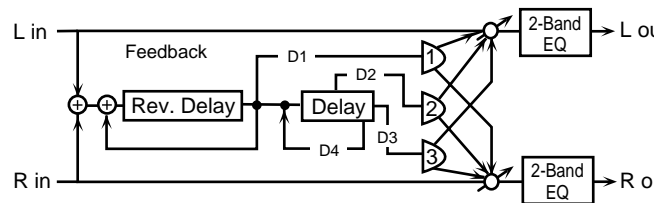
With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the effect sound will be output.

Lev (Output Level)

Adjust the output level.

46:REVERSE DELAY

Reverse Delay is a delay effect that adds the reverse of the input sound as the delay sound.

**Delay 1 (Delay Time 1)**

Adjust the delay time from the original sound until the delay 1 sound is heard.

Delay 2 (Delay Time 2)

Adjust the delay time from the original sound until the delay 2 sound is heard.

Delay 3 (Delay Time 3)

Adjust the delay time from the original sound until the delay 3 sound is heard.

Delay 4 (Delay Time 4)

Adjust the delay time from the original sound until the delay 4 sound is heard.

Feedback 1:4 #

Adjust the proportion (%) of the delay 1 and 4 sound that is fed back into the effect. Positive (+) settings will return the signal to the input with the original phase, while negative (-) settings produce an inverted phase.

HF Damp 1:4

Adjust the frequency above which delayed sound (Delay 1, 4) fed back to the delay input will be cut.

If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS.

Thr (Threshold Level)

Specify the volume level at which the reverse delay will begin to apply.

Pan 1:2:3 (Output Pan 1:2:3)

Adjust the pan of delay sound (Delay 1, 2, 3). A setting of L64 is far left, 0 is center, and 63R is far right.

Level 1:2:3

Adjust the output level of delay 1, 2 and 3.

Balance (Effect Balance)

Sets the volume balance between the source sound and the effect sound.

With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the effect sound will be output.

LowGain

Adjust the low frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the low frequency range.

Hi Gain

Adjust the high frequency gain (amount of boost or cut).

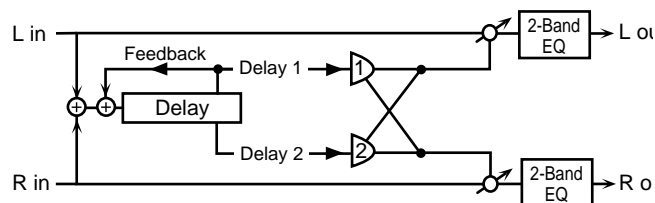
Positive (+) settings will emphasize (boost) the high frequency range.

Level (Output Level)

Adjust the output level.

47:SHUFFLE DELAY

Shuffle Delay adds a shuffle to the delay sound, giving the sound a bouncy delay effect with a swing feel.



Delay (Delay Time)

Adjust the delay time from the original sound until the delay sound is heard.

Shuffle (Shuffle Rate)

Sets the ratio (as a percentage) of the time that elapses before the sound plays in Delay B relative to the time that elapses before the sound plays in Delay A. When set to 100%, the delay times are the same.

Accel (Acceleration)

Adjust the time over which the Delay Time will change from the current setting to a newly specified setting. The rate of change for the Delay Time directly affects the rate of pitch change.

Fbk (Feedback)

Adjust the proportion (%) of the delay sound that is to be returned to the input. Positive (+) settings will return the signal to the input with the original phase, while negative (-) settings produce an inverted phase.

HF Damp

Adjust the frequency above which delayed sound fed back to the delay input will be cut.

If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS.

Pan A

Adjust the pan of the delay A sound.

Pan B

Adjust the pan of the delay B sound.

Level Balance

Sets the balance for the levels of the delay A and the delay B.

LowGain

Adjust the low frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the low frequency range.

Hi Gain

Adjust the high frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the high frequency range.

Balance (Effect Balance)

Sets the volume balance between the source sound and the effect sound.

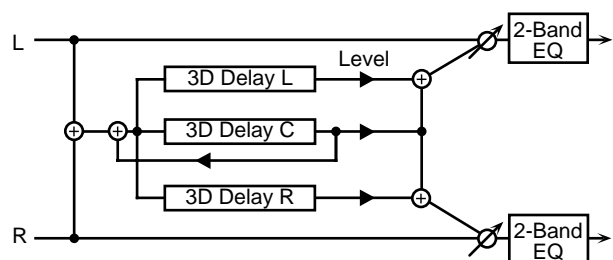
With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the effect sound will be output.

Level (Output Level)

Adjust the output level.

48:3D DELAY

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



Delay C (Delay Time Center)

Adjust the delay time from the original sound until the center delay sound is heard.

Delay L (Delay Time Left)

Adjust the delay time from the original sound until the left delay sound is heard.

Delay R (Delay Time Right)

Adjust the delay time from the original sound until the right delay sound is heard.

Fbk (Feedback) #

Adjust the proportion (%) of the delay sound that is to be returned to the input. Positive (+) settings will return the signal to the input with the original phase, while negative (-) settings produce an inverted phase.

Level C (Level Center)

Adjust the volume of the left delay sound.

Level L (Level Left)

Adjust the volume of the center delay sound.

Level R (Level Right)

Adjust the volume of the right delay sound.

HF Damp

Adjust the frequency above which delayed sound fed back to the delay input will be cut.

If you do not want to cut the high frequencies of the feedback, set this parameter to BYPASS.

Out (Output Mode)

Adjust the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select Speaker when using speakers, or Phones when using headphones.

Lo G (Low Gain)

Adjust the low frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the low frequency range.

Hi G (High Gain)

Adjust the high frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the high frequency range.

Balance (Effect Balance) #

Sets the volume balance between the source sound and the effect sound.

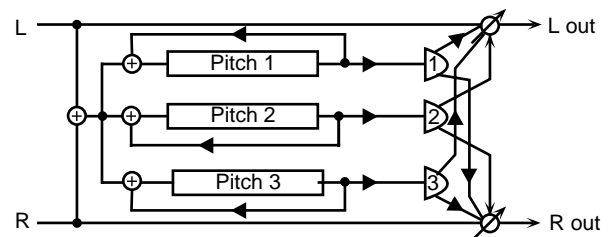
With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the effect sound will be output.

Lev (Output Level)

Adjust the output level.

49:3VOICE PITCH SHIFTER

A Pitch Shifter shifts the pitch of the original sound. This 3-voice pitch shifter has three pitch shifters, and can add three pitch shifted sounds to the original sound.

**Coarse 1:2:3 (Coarse Pitch 1:2:3)**

Specify the pitch in semitones for pitch shift 1-3.

Fine 1:2:3 (Fine Pitch 1:2:3)

Make fine adjustments to the pitch of the pitch shift 1-3 in 2-cent steps.

Pre Delay 1:2:3 (Pre Delay Time 1:2:3)

Specify the time delay from the original sound until the pitch shift 1-3 sound is heard.

Fbk 1:2:3 (Feedback Level 1:2:3)

Adjust the proportion (%) of the pitch shift 1-3 sound that is fed back into the effect.

Pan 1:2:3 (Output Pan 1:2:3)

Specify the stereo location of the pitch shift 1-3 sound. L64 is far left, 0 is center, and 63R is far right.

Level 1:2:3 (Level 1:2:3)

Specify the volume of the pitch shift 1-3.

Balance (Effect Balance)

Sets the volume balance between the source sound and the effect sound.

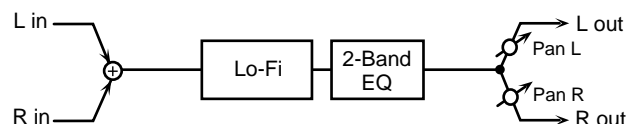
With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W the effect sound will be output.

Level (Output Level)

Specifies the output volume.

50:LOFI COMPRESS

This is an effect that intentionally degrades the sound quality.



Type (LoFi Type)

Lowers the audio quality. The audio quality will worsen as this setting is increased.

Pre Filter (Pre Filter Type)

Adjust the type of filter that will be applied before the sound passes through the Lo-Fi effect.

Post Filter 1 (Post Filter 1 Type)

Adjust the type of filter that will be applied after the sound passes through the Lo-Fi effect.

Post Filter 2 (Post Filter 2 Type/Cutoff Frequency)

OFF:A post filter 2 will not be used.

LPF:The frequency region above the Cutoff Freq setting will be cut.

HPF:The frequency region below the Cutoff Freq setting will be cut.

Sets the cutoff frequency when a specific frequency band is cut off by a filter.

LowGain

Adjust the low frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the low frequency range.

Hi Gain

Adjust the high frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the high frequency range.

Balance (Effect Balance)

Sets the volume balance between the source sound and the effect sound.

With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the effect sound will be output.

Pan (Output Pan)

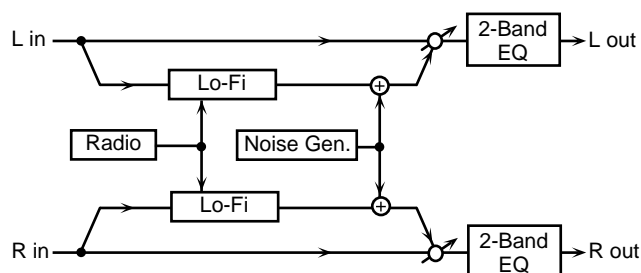
Adjust the stereo location of the output sound. A setting of L64 is far left, 0 is center, and 63R is far right.

Level (Output Level)

Adjust the output level.

51:LOFI NOISE

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



Type (LoFi Type)

Lowers the audio quality. The audio quality will worsen as this setting is increased.

Post Fltr (Post Filter Type/Cutoff Frequency)

OFF:A filter will not be used.

LPF:The frequency region above the Cutoff Freq setting will be cut.

HPF:The frequency region below the Cutoff Freq setting will be cut.

And adjust the frequency at which the filter will begin cutting.

Radio Detune (Radio Detune#/Radio Noise Level)

Simulates the tuning noise of a radio. As this value is raised, the tuning will drift further.

And adjust the volume of the radio noise.

Disc:LPF:Lev(Disc NoiseType:Disc Noise LPF:Disc Noise Level)

Disc:Selects the type of record noise. The frequency at which the noise is heard will depend on the selected type.

LPF:Adjust the cutoff frequency of the low pass filter that is applied to the record noise.

Level:Adjust the volume of the record noise.

LowGain

Adjust the low frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the low frequency range.

Hi Gain

Adjust the high frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the high frequency range.

Balance (Effect Balance) #

Sets the volume balance between the source sound and the effect sound.

With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the effect sound will be output.

Pan (Output Pan)

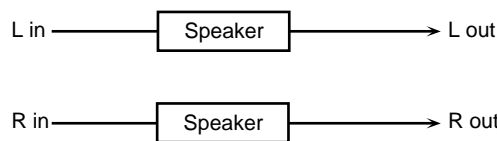
Adjust the stereo position of the delay sound. A setting of L64 is far left, 0 is center, and 63R is far right.

Level (Output Level)

Adjust the output level.

52:SPEAKER SIMULATOR

Speaker Simulator is an effect that simulates the speaker type and mic settings used to record the speaker sound.



Speaker Type

Select the type of speaker. The specifications of each type are as follows. 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 mic
SMALL 2	small open-back enclosure	10	dynamic mic
MIDDLE	open back enclosure	12 x 1	dynamic mic
JC-120	open back enclosure	12 x 2	dynamic mic
BUILT IN 1	open back enclosure	12 x 2	dynamic mic
BUILT IN 2	open back enclosure	12 x 2	condenser mic
BUILT IN 3	open back enclosure	12 x 2	condenser mic
BUILT IN 4	open back enclosure	12 x 2	condenser mic
BUILT IN 5	open back enclosure	12 x 2	condenser mic
BG STACK 1	sealed enclosure	12 x 4	condenser mic
BG STACK 2	large sealed enclosure	12 x 4	condenser mic
MS STACK 1	large sealed enclosure	12 x 4	condenser mic
MS STACK 2	large sealed enclosure	12 x 4	condenser mic
METAL STACK	large double stack	12 x 4	condenser mic
2-STACK	large sealed enclosure	12 x 4	condenser mic
3-STACK	large sealed enclosure	12 x 4	condenser mic

Mic Set (Mic Setting)

Adjust the location of the mic that is recording the sound of the speaker. This can be adjusted in three steps, with the mic becoming more distant in the order of 1, 2, and 3.

Mic:Dir (Mic Level:Direct Level) #

Mic: Adjust the volume of the microphone.

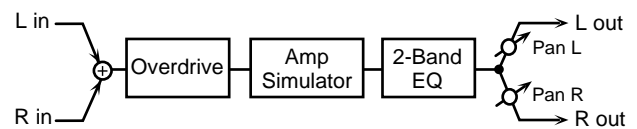
Dir: Adjust the volume of the direct sound.

Level (Output Level) #

Adjust the output level.

53:OVERDRIVE 2

This is an overdrive that provides heavy distortion.



Drive #

Adjust the amount of distortion. The volume will change together with the degree of distortion.

Level (Output Level)

Adjust the output level.

LowGain

Adjust the low frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the low frequency range.

Hi Gain

Adjust the high frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the high frequency range.

Amp Type (Amp Simulator Switch/Type)

Turns the Amp Simulator on/off.

And djust the 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

Tone

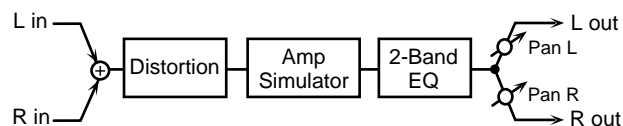
Adjust the sound quality of the Overdrive effect.

Pan (Output Pan)

Adjust the stereo location of the output sound. A setting of L64 is far left, 0 is center, and 63R is far right.

54: DISTORTION 2

This is a distortion effect that provides heavy distortion.



Drive

Adjust the amount of distortion. The volume will change together with the degree of distortion.

Level (Output Level)

Adjust the output level.

LowGain

Adjust the low frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the low frequency range.

Hi Gain

Adjust the high frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the high frequency range.

Amp Type (Amp Simulator Switch/Type)

Turns the Amp Simulator on/off.

Adjust the 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

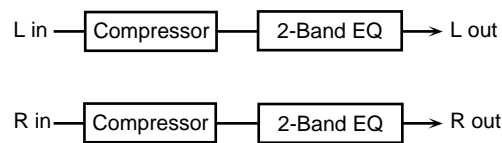
Tone

Adjust the sound quality of the Overdrive effect.

Pan (Output Pan)

Adjust the stereo location of the output sound. A setting of L64 is far left, 0 is center, and 63R is far right.

55: STEREO COMPRESSOR



Sustain

Adjust the time over which low level sounds are boosted until they reach the specified volume.

Attack

Adjust the attack time of an input sound.

Post Gain

Adjust the output gain.

LowGain

Adjust the low frequency gain.

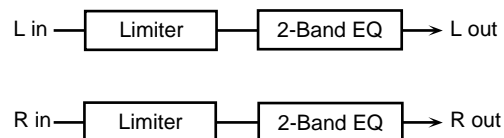
Hi Gain

Adjust the high frequency gain.

Level (Output Level)

Adjust the output level.

56: STEREO LIMITER



Thre (Threshold Level)

Adjust the volume at which compression will begin.

Release (Release Time)

Adjust the time from when the volume falls below the Threshold Level until compression is no longer applied.

Ratio (Compression Ratio)

Adjust the compression ratio.

Gain (Post Gain)

Adjust the output gain.

LowGain

Adjust the low frequency gain.

Hi Gain

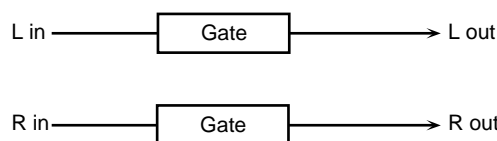
Adjust the high frequency gain.

Level (Output Level) #

Adjust the output level.

57:GATE

The Gate effect cuts the reverb's delay according to the volume of the sound input to the effects device. Use this in situations such as when you want to force a decrease in the decay sound.

**Key**

Selects the input of the sound that acts as the trigger closing the gate.

When set to Source, the gate is closed by the sound input to the Multi-effects.

Thre (Key Threshold)

Sets the volume level at which the gate begins to close.

Monitor (Key Monitor)

Determines whether the sound used as the gate trigger is output (ON) or not (OFF).

Mode**GATE (Gate Reverb):**

When the source volume falls below a certain level, the gate closes, giving the effect of the reverb sound being cut with a gate reverb.

DUCK (Ducking Reverb):

When the source volume gets high enough, the gate closes, which gives a ducking reverb-type effect. Stop the reverb sound only when input loud sound so that prevent the play sound become unclear.

Atk (Attack Time)

Sets the time it takes the gate fully opens after being triggered.

Hold (Hold Time)

Sets the time it takes the gate starts closing after the instant the source sound goes under the threshold level.

Rel (Release Time)

Sets the time it takes the gate fully closes after passes by the hold time.

Balance (Effect Balance) #

Sets the volume balance between the source sound and the effect sound.

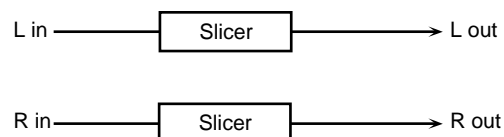
With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the effect sound will be output.

Level (Output Level)

Adjust the output level.

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.

**Beat 1-1-4-4**

For a single measure containing four quarter notes, this sets the level of each sixteenth-note when the measure is divided into sixteenth notes. When set to 0, no sound is output.

Rate #

Determines the cycle for one measure.

Attack

Sets the speed at which the volume changes between beats. The higher the value, the faster the volume changes.

Reset #

Selects the input of the sound that acts as the trigger resetting the one-measure pattern.

When set to OFF, the pattern is not reset, even if the input is present.

When set to Source, the pattern is reset by the sound input to the multi-effects.

Thre (Reset Threshold)

Sets the volume level at which the reset begins.

Mon (Reset Monitor)

Determines whether the sound used as the reset trigger is output (ON) or not (OFF). This parameter is disabled when Reset is set to OFF or Source.

Mode

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, then there is no change in volume.

SLASH:The level is momentarily set to 0 before progressing to the level for the next beat. This change in volume occurs even if the level of a following beat is the same as the one preceding it.

Shuffle

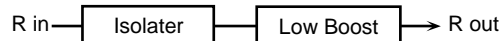
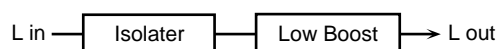
Sets the timing of volume changes in levels for even-numbered Beats (Beat 1-2/Beat 1-4/Beat 2-2/...). The higher the value selected, the later the timing with which the beat progresses.

Level (Output Level)

Adjust the output level.

59:ISOLATOR

An equalizer which cuts the volume greatly, allowing you to add a special effect to the sound by cutting the volume in varying ranges.



Level High #

Level Middle #

Level Low #

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.

Anti Phase Mid (Anti Phase Middle Switch/Level)

This turns the Anti-Phase function on and off and sets the level settings for the Middle frequency ranges. When turned on, the counter-channel of stereo sound is inverted and added to the signal. Adjusting these levels for certain frequencies allows you to lend emphasis to specific parts. (This is effective only for stereo source.)

Anti Phase Low (Anti Phase Low Switch/Level)

This turns the Anti-Phase function on and off and sets the level settings for the Low frequency ranges. When turned on, the counter-channel of stereo sound is inverted and added to the signal. Adjusting these levels for certain frequencies allows you to lend emphasis to specific parts. (This is effective only for stereo source.)

Low Boost (Low Booster Switch/Level)

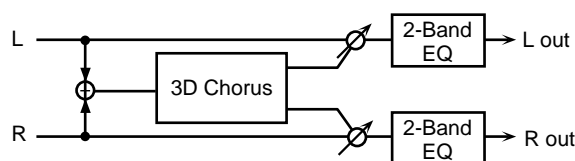
Adjust whether Low Booster will be used (ON) or not (OFF). This emphasizes the bottom to create a heavy bass sound. And adjust the level. Increasing this value gives you a heavier low end. (Depending on the Isolator and filter settings this effect may be hard to distinguish.)

Level (Output Level)

Adjust the output level.

60:3D CHORUS

This applies a 3D effect to the chorus sound. The chorus sound will be positioned 90 degrees left and 90 degrees right.



Pre Dly (Pre Delay Time)

Adjust the delay time from the original sound until when the chorus sound is heard.

Rate (LFO Rate)

Adjust the modulation frequency of the chorus sound.

Depth (LFO Depth)

Adjust the modulation depth of the chorus sound.

Phase

Adjust the spaciousness of the chorus sound.

Filter Type

OFF:A filter will not be used.

LPF:The frequency region above the Cutoff Freq setting will be cut.

HPF:The frequency region below the Cutoff Freq setting will be cut.

Cutoff (Cutoff Frequency)

Sets the cutoff frequency when a specific frequency band is cut off by a filter.

Out (Output Mode)

Adjust the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select Speaker when using speakers, or Phones when using headphones.

Lo G (Low Gain)

Adjust the low frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the low frequency range.

Hi G (High Gain)

Adjust the high frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the high frequency range.

Balance #

Adjust the volume balance between the original sound and the flanger sound.

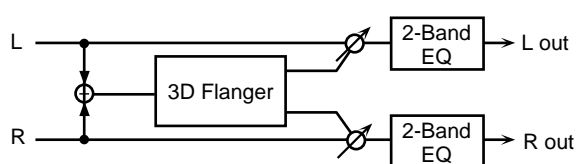
With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the flanger sound will be output.

Lev (Output Level)

Adjust the output level.

61:3D FLANGER

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

**Pre Dly (Pre Delay Time)**

Adjust the time delay from the direct sound until the flanger

sound is heard.

Rate (LFO Rate) #

Adjust the modulation speed of the flanger sound.

Depth (LFO Depth)

Adjust the modulation depth of the flanger sound.

Fbk (Feedback) #

Adjust the proportion (%) of the flanger sound that is to be returned to the input. Positive (+) settings will return the signal to the input with the original phase, while negative (-) settings produce an inverted phase. Higher settings will produce a more distinctive sound.

Phase

Adjust the spaciousness of the flanger sound.

Filter (Filter Type)

OFF:No filter is used.

LPF:The frequency region above the Cutoff Freq setting will be cut.

HPF:The frequency region below the Cutoff Freq setting will be cut.

Cutoff (Cutoff Frequency)

Sets the cutoff frequency when a specific frequency band is cut off by a filter.

Step Rate (Step Rate Switct/Step Rate #)

Determines whether the pitch is changed in a stepped fashion (ON) or not (OFF).

And adjust the rate at which the pitch will change.

Out (Output Mode)

Adjust the method that will be used to hear the sound that is output to the OUTPUT jacks. The optimal 3D effect will be achieved if you select Speaker when using speakers, or Phones when using headphones.

Lo G (Low Gain)

Adjust the low frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the low frequency range.

Hi G (High Gain)

Adjust the high frequency gain (amount of boost or cut).

Positive (+) settings will emphasize (boost) the high frequency range.

Balance

Adjust the volume balance between the original sound and the flanger sound.

With a setting of D100:0W only the direct sound will be output, and with a setting of D0:100W only the flanger sound will be output.

Level (Output Level)

Adjust the output level.

62:TREMOLO

Tremolo cyclically modulates the volume to add tremolo effect to the sound.



Mod Wave (Modulation Wave)

TRI: The sound will be modulated like a triangle wave.

SQR: The sound will be modulated like a square wave.

SIN: The sound will be modulated like a sine wave.

SAW1/2: The sound will be modulated like a sawtooth wave. The teeth in Saw1 and Saw2 point at opposite directions.



Rate

Adjust the frequency (speed) of the change.

Depth

Sets the depth to which the effect is applied.

LowGain

Adjust the low frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the low frequency range.

Hi Gain

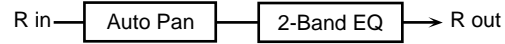
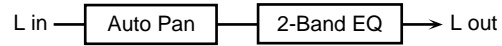
Adjust the high frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the high frequency range.

Level (Output Level)

Adjust the output level.

63:AUTO PAN

The Auto Pan effect cyclically modulates the stereo location of the sound.



Mod Wave (Modulation Wave)

TRI: The sound will be modulated like a triangle wave.

SQR: The sound will be modulated like a square wave.

SIN: The sound will be modulated like a sine wave.

SAW1/2: The sound will be modulated like a sawtooth wave. The teeth in Saw1 and Saw2 point at opposite directions.



Rate

Adjust the frequency (speed) of the change.

Depth

Sets the depth to which the effect is applied.

LowGain

Adjust the low frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the low frequency range.

Hi Gain

Adjust the high frequency gain (amount of boost or cut). Positive (+) settings will emphasize (boost) the high frequency range.

Level (Output Level)

Adjust the output level.

When using 3D effects

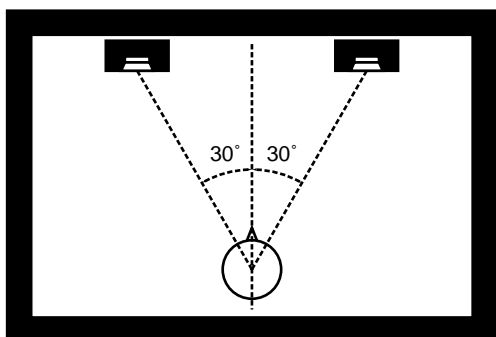
The following three 3D effects utilize RSS (Roland Sound Space) technology to create a spaciousness that cannot be produced by delay, reverb, chorus, etc.

48: 3D DELAY

60: 3D CHORUS

61: 3D FLANGER

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



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

Each of these effects has an **Out (Output Mode)** parameter. If the sound from the OUTPUT jacks is to be heard through speakers, set this parameter to Speaker. If the sound is to be heard through headphones, set it to Phones. This will ensure that the optimal 3D effect will be heard. If this parameter is not set correctly, the full 3D effect may not appear.

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 a Patch, Performance, or the GM System[RB12] is selected.
2. Press [UTILITY] to make its indicator light.
3. Press [▲] / [▼] to select the UTIL 1 page.
4. Use [◀] / [▶] to make "COPY" blink, and then press [ENTER].

5. Press [▲] / [▼] to select the FX COPY page.

```
PATCH  ↑ Source | Number
FX COPY ↓ PATCH | USER:001 (User Patch )
```

Copy Source Copy source Patch/Performance/
Rhythm Set
(group, number, name)

```
PERFORM ↑ Source | Number
FX COPY ↓ PERFORM | USER: 01 (User Perform)
```

```
RHYTHM ↑ Source | Number
FX COPY ↓ RHYTHM | USER:001 (User Rhythm )
```

6. Press [◀] / [▶] to move the cursor to the parameter that you wish to set.

Press [▶] to move to the next display, and then select the contents of the effect that you wish to copy.

```
PATCH  ←Type
FX COPY ↓ALL [UNDO]/[ENTER]
```

Copy Type

ALL:Multi-effects, chorus, and reverb settings

MF:Multi-effects settings

CHORUS:Chorus settings

REVERB:Reverb settings

CHO&REV:Chorus and reverb settings

7. Turn the VALUE dial or press [DEC] / [INC] to select the desired value.
8. Press [ENTER] to execute the Copy operation.
9. Press [EXIT] two times to return to the applicable PLAY page.

Chapter 3 Selecting Output Jacks

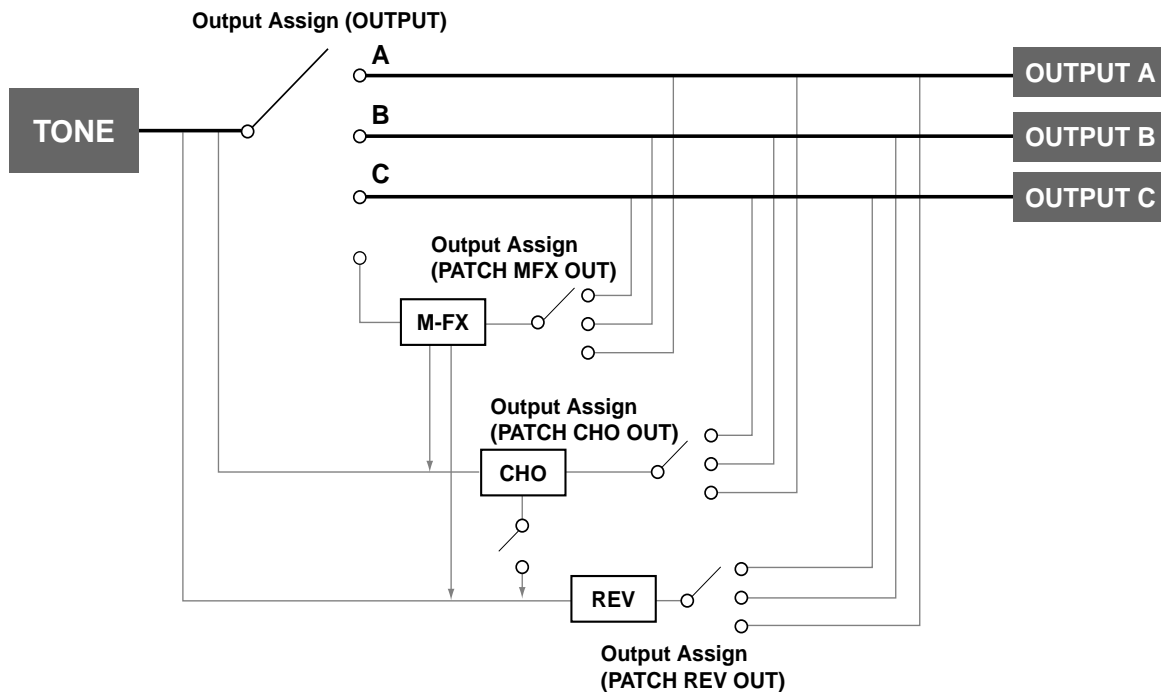
The XV-3080 has three sets of stereo outputs.

These outputs allow you to separate sounds – or groups of sounds – from the XV-3080's overall stereo mix, and to send them to their own external destinations. For example, you could route a stereo Rhythm Set to a pair of output jacks connected to an external effects device. You can also use the three pairs of jacks as six independent output jacks to which you can route Tones, Rhythm Tones or Patches.

This chapter describes the signal paths in the XV-3080's various modes, along with the associated parameters. Please refer to this section when selecting your outputs.

Patch Mode Settings

Signal (TONE) Flow



Parameters

The parameters related to Patch output settings are shown below.

1-4 OUTPUT (Tone Output) ([PATCH]-[EFFECTS])

This sets the output destination and level for the currently selected Tone as well as its send level to the Chorus and Reverb.

Output Assign

MFX: The Tone is sent to the Multi-Effects. The Tone's final output destination is determined by the Multi-Effects output setting.

OUTPUT A-C: The Tone is routed to the OUTPUT A-C

jacks.

INDIV 1-6: The Tone is routed to the INDIVIDUAL 1-6 jacks.

Chorus (Chorus Send Level) 0-127

This sets the Tone's send level to the Chorus. Its final output destination is determined by the Chorus output setting.

Reverb (Reverb Send Level) 0-127

This sets the Tone's send level to the Reverb. Its final output destination is determined by the Reverb output setting.

PATCH LVL&PAN (Patch level & Pan) ([PATCH]-[COMMON])

Level (Patch Level) 0-127

This sets the volume of the Patch.

* You can specify the level for each Tone using the Tone Level parameter (TVA p. 95).

Pan (Patch pan)L64-0-63R

This determines the stereo positioning of the Patch. A setting of L64 places the Patch at the far left, 0 in the center, and 63R at the far right.

* You can set each Tone's pan position using the Tone Pan parameter (TVA p. 95).

* 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.

PATCH COMMON ([PATCH]-[COMMON])

Output Assign

This specifies the output destination for the Patch.

MFX: The Patch is sent into the Multi-Effects. Its final output destination is determined by the Multi-Effects output settings.

OUTPUT A-C: The Patch is sent to the selected pair of OUTPUT A-C jacks.

INDIV 1-6: The Patch is sent to the selected INDIVIDUAL 1-6 jack.

TONE: Each Tone in the Patch is sent to its programmed output destination.

PATCH MFX OUT (Patch MFX Output) ([PATCH]-[EFFECTS])

Output (Output Assign) A/B/C

This specifies the pair of OUTPUT jacks to which the stereo Multi-Effects output is routed.

Dry (Dry Output Level) 0-127

This sets the Multi-Effects output level to the selected OUTPUT jacks.

Chorus (Chorus Send Level) 0-127

This sets the amount of the Multi-Effects output to be sent to the Chorus.

The final output-jack destination is determined by the Chorus output settings.

Reverb (Reverb Send Level) 0-127

This sets the amount of the Multi-Effects output to be sent to the Reverb.

The final output-jack destination is determined by the Reverb output settings.

PATCH CHO OUT (Patch Chorus Output) ([PATCH]-[EFFECTS])

Output Assign (Chorus Output Assign) A/B/C

This setting selects the pair of OUTPUT jacks to which the Chorus unit's stereo output is routed when Chorus Output Select is set to "MAIN" or "MAIN+R."

Level (Chorus Level) 0-127

This setting determines the Chorus output level.

Select (Chorus Output Select)

This parameter allows you to send the Chorus output directly to the currently selected OUTPUT jacks, to the Reverb, or to both.

MAIN: The Chorus output is sent only to the OUTPUT jacks.

REV: The Chorus output is sent only to the Reverb.

MAIN+R: The Chorus output is sent to the OUTPUT jacks and to the Reverb.

PATCH REV OUT (Patch Reverb Output) ([PATCH]-[EFFECTS])

Output Assign (Reverb Output Assign) A/B/C

This setting selects the OUTPUT jacks to which the Reverb unit's stereo output is routed.

Level (Reverb Level) 0-127

This setting determines the Reverb output level.

SYSTEM SETUP ([SYSTEM]-[COMMON])

Master Level 0-127

This adjusts the volume of the entire XV-3080.

Mix/Parallel

MIX: All sounds – including those routed to OUTPUTs B/C or INDIVIDUAL 3-6 – are mixed together and routed to the A(MIX) OUTPUT jacks.

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-3080's signal to a mixer that has only two channels.

* When MIX is selected, sounds routed to the INDIVIDUAL 3/5 jacks are sent to the left A(MIX) OUTPUT jack, and sounds routed to the INDIVIDUAL 4/6 jacks are sent to the right A(MIX) OUTPUT jack.

PARALLEL: Sounds are routed to output jacks according to their output settings.

* *The XV-3080's Master Level and Mix/Parallel settings are each established using a single global parameter.*

Example of Settings

Assigning Different Output Destinations for the Tones in a Patch

In this example, let's suppose we have a Patch composed of four Tones, and we are outputting Tone 1 from the A OUTPUT jacks, Tone 2 from the B OUTPUT jacks, Tone 3 from the INDIVIDUAL 5 jack, and Tone 4 from the INDIVIDUAL 6 jack.

The Chorus and Reverb are output from the B OUTPUT jacks.

First, set the output destination for each Tone.

1. Select the Patch you wish to use.
2. Press [EFFECTS] so that its indicator lights.
3. Press [▲] / [▼] to choose the OUTPUT page.
4. Use TONE SELECT [1]–[4] to select the Tone you wish to set up.
5. Press [◀] / [▶] to move the cursor to the parameter you wish to set, and turn the VALUE dial or press [INC] / [DEC] to select the following values.

	Output Assign	Chorus	Reverb
Tone 1	OUTPUT A:127	100	100
Tone 2	OUTPUT B:127	100	100
Tone 3	INDIV 5:127	100	100
Tone 4	INDIV 6:127	100	100



The Chorus and Reverb send levels can be set to any value you wish other than 0.

6. Press [COMMON] to make its indicator light.

7. Use [▲] / [▼] to select the PATCH COMMON page.
8. Press [◀] / [▶] to move the cursor to Output Assign.
9. Turn the VALUE dial or press [INC] / [DEC] to select TONE.

Next, select the Chorus output destination and set its overall level.

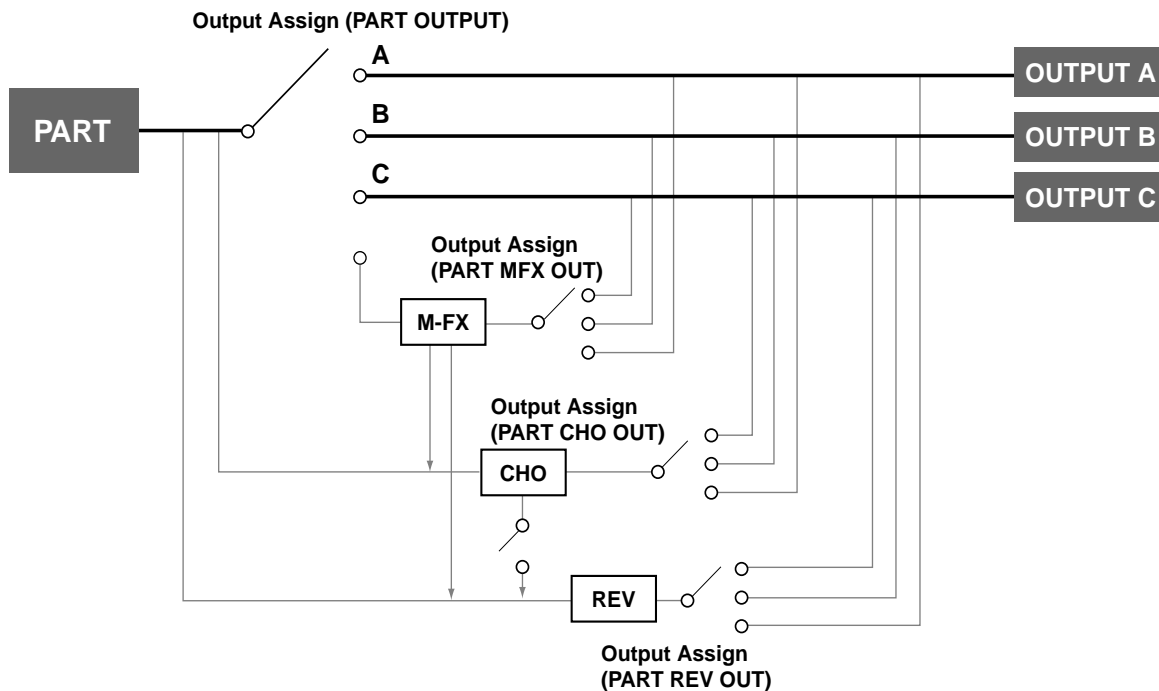
1. Press [EFFECTS] so that its indicator lights.
2. Press [▲] / [▼] to select the PATCH CHO OUT page.
3. Press [◀] / [▶] to move the cursor to Output Assign.
4. Turn the VALUE dial or press [INC] / [DEC] to select B.
5. Press [◀] / [▶] to move the cursor to Level.
6. Turn the VALUE dial to select 100.
7. Press [◀] / [▶] to move the cursor to Select.
8. Either rotate the VALUE dial or press [INC] / [DEC] to set it to MAIN.

Finally, select the Reverb output destination and set its overall level.

1. Press [▲] / [▼] to select the PATCH REV OUT page.
2. Press [◀] / [▶] to move the cursor to Output Assign.
3. Turn the VALUE dial or press [INC] / [DEC] to select B.
4. Press [◀] / [▶] to move the cursor to Level.
5. Turn the VALUE dial to select 100.
6. Press [EXIT] to return to the PATCH PLAY page.

Performance Mode Settings

Signal(PART) Flow



Parameters

The parameters related to Part output settings are shown below.

PART 1-16 OUTPUT ([PERFORM]-[EFFECTS])

This sets the output destination and level for the selected Part as well as its send level to the Chorus and Reverb.

Output Assign

MFX: The signal is sent into the Multi-Effects. Its final output destination is determined by the Multi-Effects output setting.

OUTPUT A-C: The Part is sent to the selected pair of OUTPUT A-C jacks.

INDIVIDUAL 1-6: The Part is sent to the selected INDIVIDUAL 1-6 jack.

PATCH: The Part's output destination is determined by the settings of the Patch or Rhythm Set assigned to the Part.

Chorus (Chorus Send Level) 0-127

This sets the Part's send level sent to the Chorus. Its final output destination is determined by the Chorus output setting.

Reverb (Reverb Send Level) 0-127

This sets the Part's send level sent to the Reverb. Its final output destination is determined by the Reverb output setting.

PERFORM MFX OUT ([PERFORM]-[EFFECTS])

Output (Output Assign) A/B/C

This specifies the OUTPUT jacks to which the Multi-Effects unit's stereo output is routed.

Dry (Dry Output Level) 0-127

This sets the Multi-Effects output level to the selected jacks.

Chorus (Chorus Send Level) 0-127

This sets the amount of the Multi-Effect unit's output to be sent to the Chorus. Its final output destination is determined by the Chorus output setting.

Reverb (Reverb Send Level) 0-127

This sets the amount of the Multi-Effect unit's output to be sent to the Reverb. Its final output destination is determined by the Reverb output setting.

PERFORM CHO OUT ([PERFORM]-[EFFECTS])

Output Assign (Chorus Output Assign) A/B/C

This setting selects the pair of OUTPUT jacks to which the Chorus unit's stereo output is routed when Chorus Output Select is set to "MAIN" or "MAIN+R."

Level (Chorus Level) 0-127

This setting determines the Chorus output level.

Select (Chorus Output Select)

This parameter allows you to send the Chorus output directly to the currently selected OUTPUT jacks, to the Reverb, or to both.

MAIN: The Chorus output is sent only to the OUTPUT jacks.

REV: The Chorus output is sent only to the Reverb.

MAIN+R: The Chorus output is sent to the OUTPUT jacks and to the Reverb.

PERFORM REV OUT ([PERFORM]-[EFFECTS])

Output Assign (Reverb Output Assign) A/B/C

This specifies the OUTPUT jacks to which the Reverb unit's stereo output is routed.

Level (Reverb Level) 0-127

This setting determines the Reverb output level.

SYSTEM SETUP ([SYSTEM]-[COMMON])

Master Level 0-127

This adjusts the volume of the entire XV-3080.

Mix/Parallel

MIX: All Parts – including those routed to OUTPUTs B/C or INDIVIDUAL 3-6 – are mixed together and routed to the A(MIX) OUTPUT jacks.

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-3080's signal to a mixer that has only two channels.

* *When MIX is selected, sounds routed to the INDIVIDUAL 3/5 jacks are sent to the left A(MIX) OUTPUT jack, and sounds routed to the INDIVIDUAL 4/6 jacks are sent to the right A(MIX) OUTPUT jack.*

PARALLEL: Sounds are routed to output jacks according to their output settings.

* *The XV-3080's Master Level and Mix/Parallel settings are each established using a single global parameter.*

Example of Settings

Selecting Different Output Destinations for Parts in a Performance

This example describes the procedure for outputting Part 1 from the A(MIX) OUTPUT jacks without sending it through any internal effects, sending Part 2 through the Multi-Effects and then outputting it from the B OUTPUT jack, and outputting Part 3 from the INDIVIDUAL 5 OUTPUT jack without sending it through any internal effects.

First, set Part 1.

1. Select the Performance you wish to use.
2. Press [EFFECTS] so that its indicator lights.
3. Press [▲] / [▼] to select the PART OUTPUT page.
4. Press PART SELECT [1/9] to make its indicator light.
* *Make sure that the [1-8/9-16] button's indicator is not lit. If the indicator is lit, press [1-8/9-16] to turn it off.*
5. Press [◀] / [▶] to move the cursor to Output Assign.
6. Turn the VALUE dial or press [INC] / [DEC] to select OUTPUT A.
7. Press [◀] / [▶] to move the cursor to Chorus.
8. Turn the VALUE dial to select 0.
9. Set the Part's Reverb send to 0 by repeating Steps 7 and 8, selecting Reverb in Step 7.

Next, set up Part 2.

1. Press PART SELECT [2/10] to make its indicator light.

* Make sure that the [1-8/9-16] button's indicator is not lit. If the indicator is lit, press [1-8/9-16] to turn it off.

- Press [◀] or [▶] to move the cursor to the parameter you wish to set, and turn the VALUE dial or press [INC] or [DEC] to select the following values.

Output Assign	Chorus	Reverb
MFX: 100	0	0



The output level can be set to any value you wish other than 0.

- Press [▲] / [▼] to choose the MFX OUT page.
- Press [◀] / [▶] to move the cursor to the parameter you wish to set, and turn the VALUE dial or press [INC] / [DEC] to select the following values.

Output	Dry	Chorus	Reverb
OUTPUT B	100	0	0

Finally, set up Part 3.

- Press [▲] / [▼] to select the PART OUTPUT page.
- Press PART SELECT [3/11] to make its indicator light.

* Make sure that the [1-8/9-16] button's indicator is not lit. If the indicator is lit, press [1-8/9-16] to turn it off.
- Press [◀] / [▶] to move the cursor to the parameter you wish to set, and turn the VALUE dial or press [INC] / [DEC] to select the following values.

Output Assign	Chorus	Reverb
INDIV 5: 100	0	0

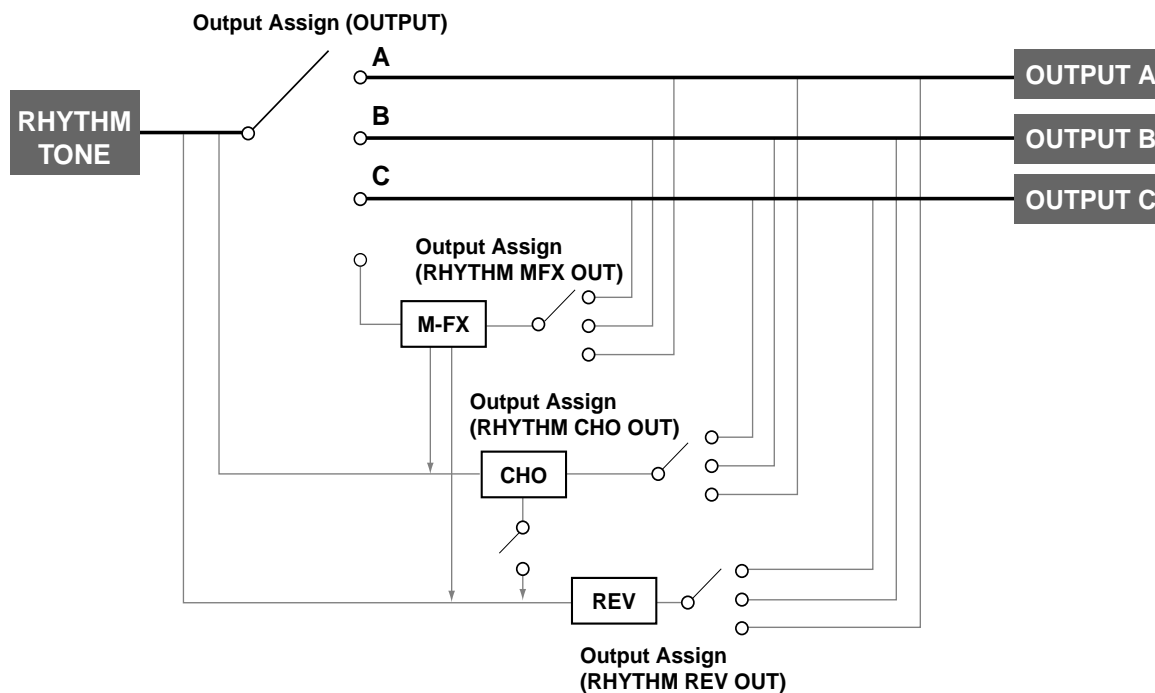


The output level can be set to any value you wish other than 0.

- Press [EXIT] to return to the PERFORM PLAY page.

Rhythm Set Mode Settings

Signal(RHYTHM TONE) Flow



Parameters

The parameters related to Rhythm Set output settings are shown below.

AO-C8 OUTPUT ([RHYTHM]-[EFFECTS])

This sets the output destination and level for each Rhythm Tone, as well as the Tone's send level to the Chorus and Reverb.

Output Assign

MFx: The Rhythm Tone is sent into the Multi-Effects. Its final output destination is determined according by the Multi-Effects output setting.

OUTPUT A-C: The Rhythm Tone is sent to the selected OUTPUT A-C jacks.

INDIVIDUAL 1-6: The Rhythm Tone is sent to the selected INDIVIDUAL 1-6 jack.

Chorus (Chorus Send Level) 0-127

This sets the Rhythm Tone's send level into the Chorus. Its final output destination is determined by the Chorus output setting.

Reverb (Reverb Send Level) 0-127

This sets the Rhythm Tone's send level into the Reverb. Its final output destination is determined by the Reverb output setting.

RHYTHM COMMON ([RHYTHM]-[COMMON])

Level (Rhythm level)0-127

This sets the volume of the entire Rhythm Set.

Output Assign

This specifies the output destination of the entire Rhythm Set.

MFx: This sends all of the Rhythm Set's Rhythm Tones into the Multi-Effects. Their final output destination is determined by the Multi-Effects output setting.

OUTPUT A-C: The Rhythm Set's Rhythm Tones are sent to the selected OUTPUT A-C jacks.

INDIV 1-6: The Rhythm Set's Rhythm Tones are sent to the selected INDIVIDUAL 1-6 jack.

TONE: The Rhythm Tones are routed to jacks according to their output settings.

RHYTHM MFX OUT ([RHYTHM]-[EFFECTS])**Output (Output Assign) A/B/C**

This specifies the OUTPUT jacks to which the stereo Multi-Effects unit's output is routed.

Dry (Dry Output Level) 0-127

This sets the output level of the Multi-Effects to the selected OUTPUT jacks.

Chorus (Chorus Send Level) 0-127

This sets the amount of the Multi-Effect unit's output to be sent to the Chorus. Its final output destination is determined by the Chorus output setting.

Reverb (Reverb Send Level) 0-127

This sets the amount of the Multi-Effect unit's output to be sent to the Reverb. Its final output destination is determined by the Reverb output setting.

RHYTHM CHO OUT ([RHYTHM]-[EFFECTS])**Output Assign (Chorus Output Assign) A/B/C**

This setting selects the pair of OUTPUT jacks to which the Chorus unit's stereo output is routed when Chorus Output Select is set to "MAIN" or "MAIN+R."

Level (Chorus Level) 0-127

This setting determines the Chorus output level.

Select (Chorus Output Select)

This parameter allows you to send the Chorus output directly to the currently selected OUTPUT jacks, to the Reverb, or to both.

MAIN: The Chorus output is sent only to the OUTPUT jacks.

REV: The Chorus output is sent only to the Reverb.

MAIN+R: The Chorus output is sent to the OUTPUT jacks and to the Reverb.

RHYTHM REV OUT ([RHYTHM]-[EFFECTS])**Output Assign (Reverb Output Assign) A/B/C**

This specifies the OUTPUT jacks to which the Reverb unit's stereo output is routed.

Level (Reverb Level) 0-127

This specifies the overall volume of the Reverb.

SYSTEM SETUP ([SYSTEM]-[COMMON])**Master Level 0-127**

This adjusts the volume of the entire XV-3080.

Mix/Parallel

MIX: All Rhythm Tones – including those routed to OUTPUTs B/C or INDIVIDUAL 3-6 – are mixed together and routed to the A(MIX) OUTPUT jacks.

This setting allows you to quickly route everything through headphones when you are creating sounds, or to combine all of your Rhythm Tones into two outputs when sending the XV-3080's signal to a mixer that has only two channels.

- * When MIX is selected, Rhythm Tones routed to the INDIVIDUAL 3/5 jacks are sent to the left A(MIX) OUTPUT jack, and Rhythm Tones routed to the INDIVIDUAL 4/6 jacks are sent to the right A(MIX) OUTPUT jack.

PARALLEL: Rhythm Tones are routed to output jacks according to their output settings.

- * The XV-3080's Master Level and Mix/Parallel settings are each established using a single global parameter.

Example of Settings**Setting the Output Destination of a Specific Rhythm Tone**

This example explains the procedure for outputting the Rhythm Tone assigned to C4 from the INDIVIDUAL 5 jack without sending it through any internal effects.

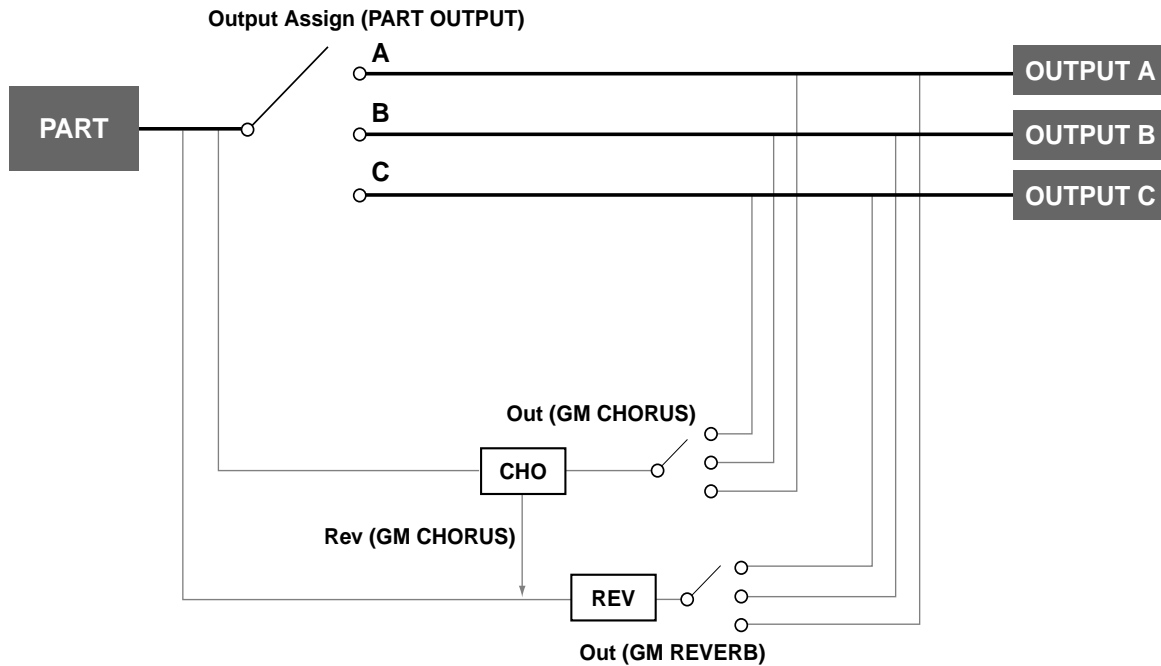
1. Select the Rhythm Set you wish to use.
2. Press [EFFECTS] so that its indicator lights.
3. Press [▲] / [▼] to choose the OUTPUT page.
4. Press [E]-[H] and select C4 in the upper left corner of the display.
If a MIDI keyboard is connected, you can select C4 by pressing the C4 key on the keyboard.
5. Press [◀] / [▶] to move the cursor to Output Assign.

Chapter 3 Selecting Output Jacks

6. Turn the VALUE dial or press [DEC] / [INC] to select INDIV 3.
7. Press [◀] / [▶] to move the cursor to Chorus.
8. Turn the VALUE dial to select 0.
9. Set Reverb to 0 by repeating Steps 7 and 8, selecting Reverb in Step 7.
10. Press [COMMON] to make its indicator light.
11. Press [▲] / [▼] to select the RHYTHM COMMON page.
12. Press [◀] / [▶] to move the cursor to Output Assign.
13. Turn the VALUE dial or press [INC] / [DEC] to select TONE.
14. Press [EXIT] to return to the RHYTHM PLAY page.

Settings in General MIDI Mode

Signal(PART) Flow



Parameters

The parameters related to Part(General MIDI Mode) output settings are shown below.

PART OUTPUT

Output Assign (Output Assign/Output Level)

Sets the output destination for each Part.

The Output Level parameter adjusts the volume of each Part.

Chorus (Chorus Send Level)

Adjusts the amount of Chorus for each Part.

Reverb (Reverb Send Level)

Adjusts the amount of Reverb for each Part.

GM CHORUS

Rev (Reverb Send Level)

Sets the send level to Reverb.

Out (Chorus Output Assign) OUTPUT A-C

Sets the output destination for Chorus.

GM REVERB

Out (Reverb Output Assign) OUTPUT A-C

Sets the output destination of the chorus sound.

SYSTEM SETUP ([SYSTEM]-[COMMON])

Master Level 0-127

This adjusts the volume of the entire XV-3080.

Mix/Parallel

MIX: All Rhythm Tones – including those routed to OUTPUTs B/C or INDIVIDUAL 3-6 – are mixed together and routed to the A(MIX) OUTPUT jacks.

This setting allows you to quickly route everything through headphones when you are creating sounds, or to combine all of your Rhythm Tones into two outputs when sending the XV-3080's signal to a mixer that has only two channels.

* When MIX is selected, Rhythm Tones routed to the INDIVIDUAL 3/5 jacks are sent to the left A(MIX)

Chapter 3 Selecting Output Jacks

OUTPUT jack, and Rhythm Tones routed to the INDIVIDUAL 4/6 jacks are sent to the right A(MIX) OUTPUT jack.

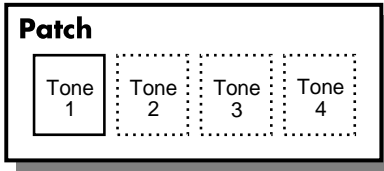
PARALLEL: Rhythm Tones are routed to output jacks according to their output settings.

* *The XV-3080's Master Level and Mix/Parallel settings are each established using a single global parameter.*

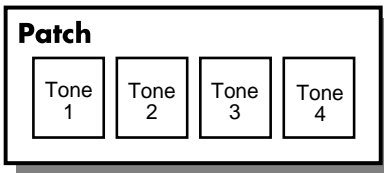
Chapter 4 Creating a Patch

How a Patch Is Organized

The type of sound most commonly played on the XV-3080 is called a **Patch**. Each Patch can contain up to four Tones.



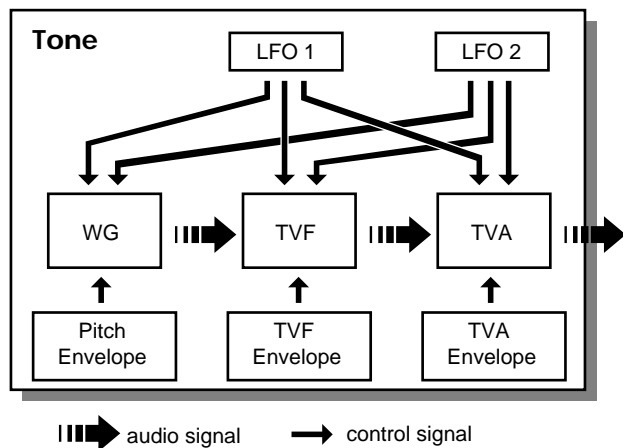
Example 1: A Patch consisting of only one Tone (Tones 2-4 are turned off).



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. 84) You can also specify how Tones 1 and 2 and Tones 3 and 4 will be combined (Structure). (p. 88)

How a Tone Is Organized

Tones are the smallest programmable unit of sound on the XV-3080, 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-3080 has 1083 different waveforms. (See Waveform List p. 168.)

All Patches built into the XV-3080 consist of combinations of

Tones based on these waveforms.

TVF (Time Variant Filter)

This specifies how the frequency components of the Tone will change.

TVA (Time Variant Amplifier)

This determines how the volume and panning of the Tone will 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

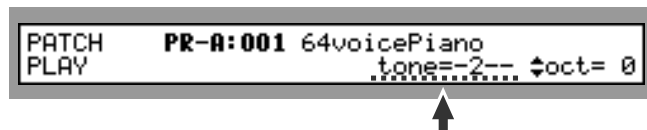
- Select a Patch that is similar to the sound you wish to create.
When you want to create a new sound, it's a good idea to begin with a Patch that is close to the sound that you have in mind. Starting with a Patch that bears no resemblance to the one you want to create is likely to result in much more programming work for you. (**Selecting a Patch** (p. 16))
- Decide which Tones will sound
When creating a Patch, it is important to decide which Tones you are going to use. It is also important to turn off unused Tones to avoid wasting voices, unnecessarily reducing the number of simultaneous notes you can play. (**Selecting the Tones That Will Sound**)
- 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. 88)
- Turn off effects
Since the XV-3080 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. 21)

Selecting the Tones That Will 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. Select the Patch you wish to work with.
2. Make sure that the PATCH PLAY page is displayed.
3. Hold down [SHIFT] and press TONE SW [1]-[4] to switch the corresponding Tone on so that its indicator lights, or off so that its indicator goes dark.

The PATCH PLAY page indicates the Tones that are on as follows. Tones that are off are shown as "-."

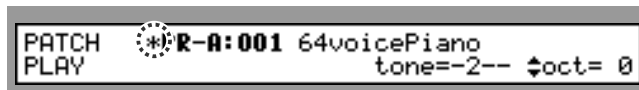


Settings Common to the Entire Patch (COMMON)

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

1. Select the Patch you wish to use.
2. Press the [COMMON] function select button.
3. Use [▲]/[▼] to select the page containing the parameter you want to set.
4. Use [◀]/[▶] to move the cursor to the parameter.
5. Either turn the VALUE dial or press [INC]/[DEC] to select the desired value.
6. Press [EXIT] to return to the PATCH PLAY page.

A "*" symbol will appear at the left of the Patch name, indicating that its settings have been modified.



* If you turn off the power or select another Patch while the "*" symbol is displayed, your new Patch settings will be lost. If you wish to preserve them, save the modified Patch using the Write operation. (p. 122)

PATCH NAME

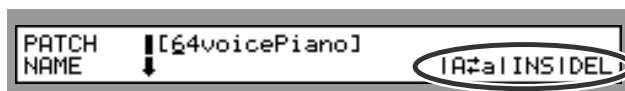
You can give a Patch a name of up to 12 characters.

Use [◀]/[▶] to move the cursor to a character position, and then turn the [VALUE] knob or press [INC]/[DEC] to select the desired character.

Available characters/symbols:

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

Press [SHIFT] to display the following in the bottom right corner of the page.

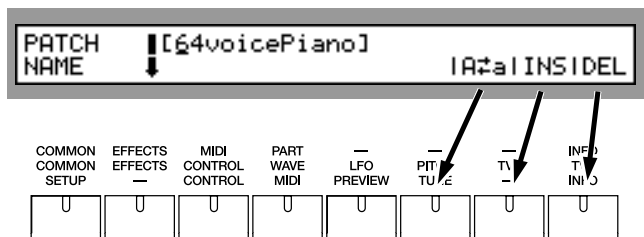


A ↕ a: This switches between upper and lower cases.

INS: This inserts a space at the cursor position, shifting the remaining characters one space to the right.

DEL: This deletes the character at the cursor position, shifting the remaining characters one space to the left.

Press each of the buttons to execute the corresponding function (refer to the figure).



PATCH CATEGORY

Category (Patch category)

This specifies the type, or “category” of the Patch. The Patch Finder uses this setting. It also determines the phrase that will be heard when you audition the Patch using the Phrase Preview feature.

For details on the possible category names, refer to p. 17.

PATCH LVL&PAN (Patch level & Pan)

Level (Patch level)0-127

This specifies the volume of the Patch.

* You can specify the level of each Tone in a Patch using the Tone Level parameter (TVA p. 95).

Pan (Patch pan)L64-0-63R

This 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. 95).

* 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

Traditional analog synthesizers often exhibited a degree of instability in their tuning. The XV-3080’s Analog Feel feature can simulate this characteristic. This setting specifies the depth of Analog Feel that is applied to the Patch.

PATCH OCT&TUNE (Patch octave & Tune)

Octave (Octave shift)-3-0-+3

This sets the pitch of the Patch in units of an octave (+/-3 octaves).

* This setting can also be adjusted from the PATCH PLAY page.(p. 20)

Coarse (Coarse tune)-48-+48

This adjusts the pitch of all of the Patch’s Tones simultaneously in semitone steps over a range of +/-4 octaves.

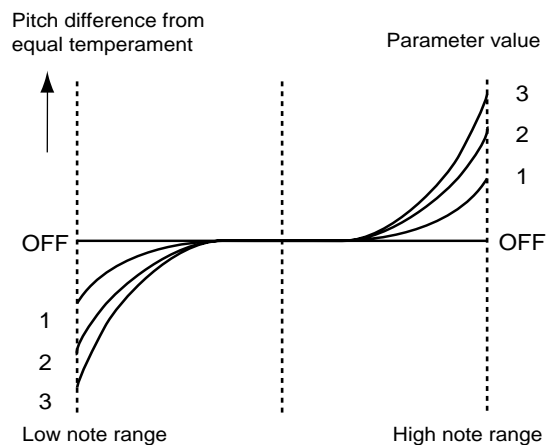
Fine (Fine tune)-50-+50

This 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 semitone up or down.

Stretch (Stretch tune depth)OFF/1/2/3

This setting allows you to apply “stretched 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 will be equal temperament. A setting of 3 will produce the greatest difference in the pitch of the low and high ranges.

This diagram shows the pitch change relative to equal temperament that will occur in the low and high ranges. Stretch will have a subtle effect on the way in which chords resonate.



PATCH COMMON

Priority (Voice priority)

This determines how notes will be managed when the XV-3080’s maximum polyphony limit is exceeded (128 voices).

LAST: The last-played voices will be given priority, and currently-sounding notes will be turned off in order, beginning with the first-played note.

LOUDEST: The voices with the loudest volume will be given priority, and currently-sounding notes will be turned off beginning with the lowest-volume voice.

Output Assign

This specifies the output destination for the Patch.

MFx: The Patch is sent into the Multi-Effects. The output destination is determined by the Multi-Effects output setting.

OUTPUT A–C: The Patch is sent to the selected pair of OUTPUTs, A–C.

INDIV 1–6: The Patch is sent to the selected INDIVIDUAL output jack, 1–6.

TO NE: Each Tone in the Patch is sent to its programmed output destination.

PATCH TEMPO

Clock Source (Patch clock source)

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 Patch.

PATCH: The Patch Tempo will be used.

SYSTEM: The global System Tempo or clock messages received from an external sequencer will be used.

Tempo (Patch tempo)20–250

When Clock Source is set to "PATCH," this setting establishes the Patch's tempo.

* *Clock messages for the Patch Tempo are not transmitted from the MIDI OUT jack.*

PATCH MODIFY

Cutoff (Cutoff Offset)-63-0-+63

This simultaneously lowers or raises the individual TVF cutoff frequency values of the Tones in the Patch.

Resonance (Resonance offset)-63-0-+63

This simultaneously lowers or raises the individual TVF Resonance values of the Tones in the Patch.

Attack (Attack time offset)

This simultaneously lowers or raises the individual TVA ENVELOPE T1 values of the Tones in the Patch.

Release (Release offset)

This simultaneously lowers or raises the individual TVA ENVELOPE T4 values of the Tones in the Patch.

Velocity Sens

This simultaneously lowers or raises the individual TVF VELOCITY V-Cutoff and TVA V-Sens values of the Tones in the Patch.

TMT VELO CONTROL (TMT velocity control)

With the XV-3080, you can set the expression range (key range) and the way a Tone is played according to the force with which the key is pressed (velocity) for each Tone individually. These settings are collectively referred to as the **TMT (Tone Mix Table)**.

TMT Velocity Control (TMT velocity control)ON/OFF/RANDOM

This determines whether Velocity messages from a MIDI keyboard or

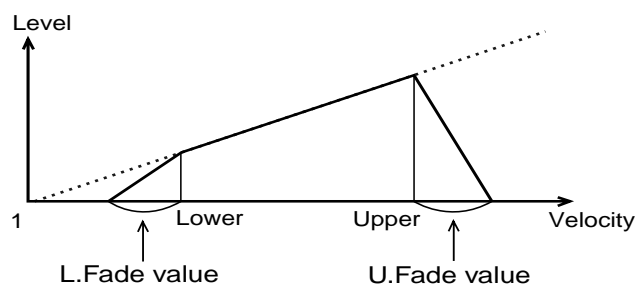
sequencer will be recognized (ON), or ignored (OFF).

When set to RANDOM, the Patch's constituent Tones will sound randomly, regardless of any Velocity messages.

TMT VEL RANG (TMT Velocity range)

L.Fade (TMT velocity fade width lower)0–127

This determines what will happen to the Tone's level when the Tone is played at a velocity lower than its specified velocity range. Higher settings produce a more gradual change in volume. If you don't want notes played below the specified velocity range to be heard at all, set this to 0.



Lower (TMT Velocity range lower)C-1 to G9

This sets the lowest velocity at which the Tone will sound.

Upper (TMT velocity upper)C-1 to G9

This sets the highest velocity at which the Tone will sound.

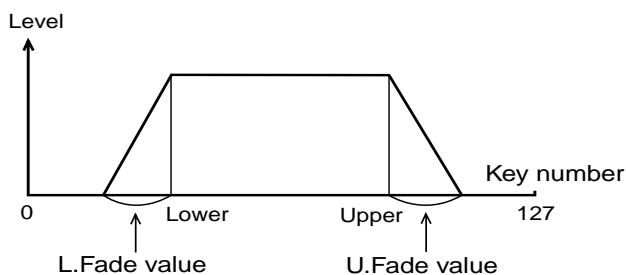
* *It is not possible to set the Lower value higher than the Upper value, or the Upper value below the Lower value. If you attempt to do so, the two values will change simultaneously.*

U.Fade (TMT velocity fade width upper)0-127

This determines what will happen to the Tone's level when the Tone is played at a velocity greater than its specified velocity range. Higher settings 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.

TMT KEY RANG (TMT key range)**L.Fade (TMT keyboard fade width lower)0-127**

This determines what will happen to the Tone's level when a note that's lower than the Tone's specified keyboard range is played. Higher settings 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.

**Lower (TMT keyboard range lower)C-1 to G9**

This specifies the lowest note that will cause the Tone to sound.

Upper (TMT keyboard range upper)C-1 to G9

This specifies the highest note that will cause the Tone to sound.

* *The Lower value cannot be set to a value greater than Upper value, or vice versa. If you attempt to do this, the two values will change simultaneously.*

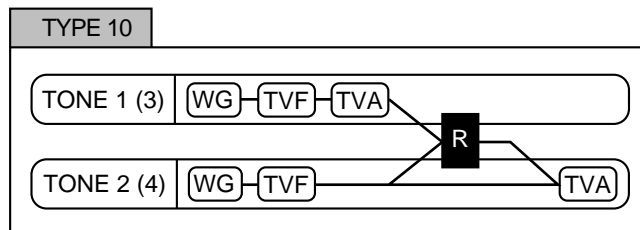
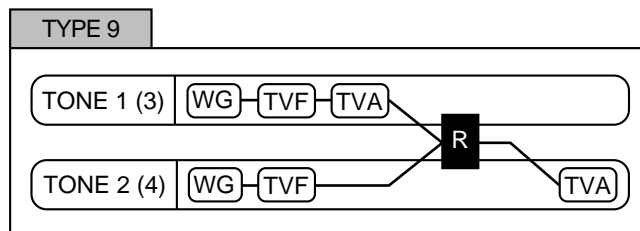
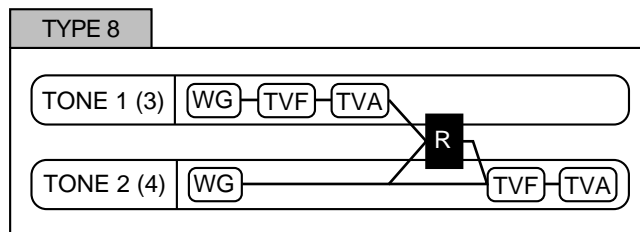
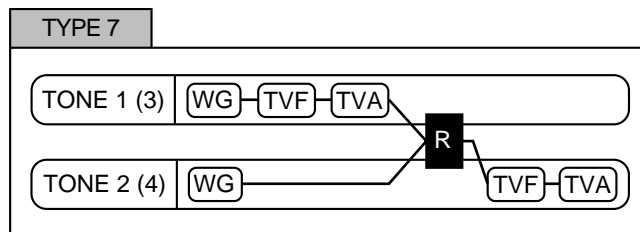
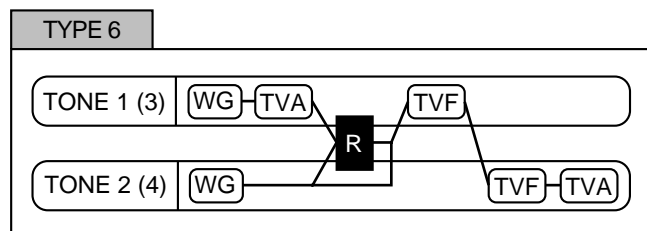
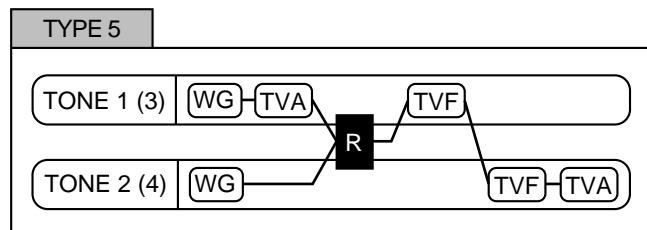
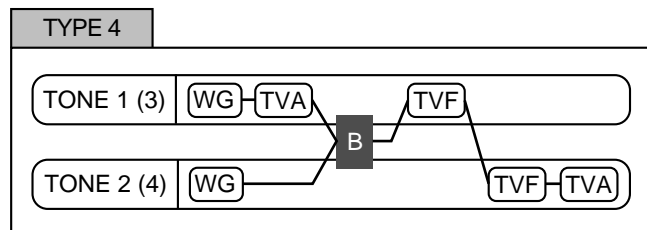
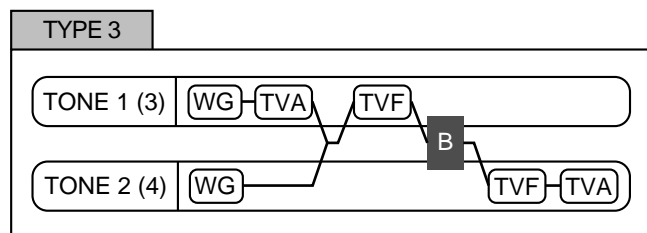
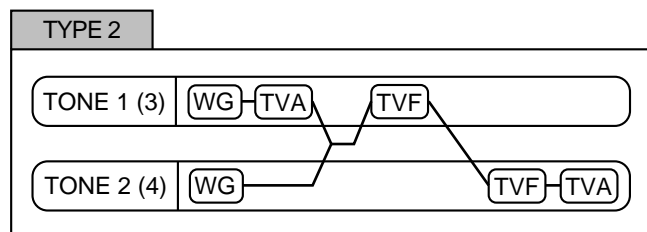
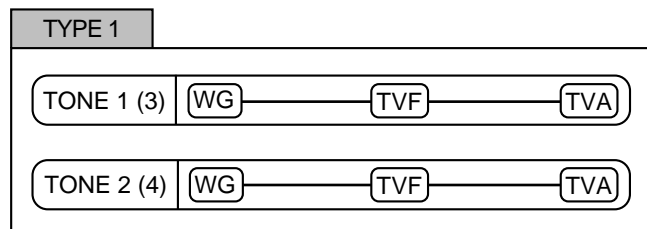
U.Fade (TMT keyboard fade width upper)0-127

This determines what will happen to the Tone's level when a note that's higher than the Tone's specified keyboard range is played. Higher settings 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.

STRUCT (Structure)

Each of the above two parameters determines how Tone 1 and 2, and Tone 3 and 4 are connected.

Type (Structure type)1-10



The display will graphically show the selected Structure. The displayed symbols have the following meanings.

W1 (WG1), W2 (WG2), F1 (TVF1), F2 (TVF2), A1 (TVA1), A2 (TVA2), B (booster), R (ring modulator)

- * If you select a Tone while on the STRUCT page, the Tone paired with the selected Tone will also be selected.
- * 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.

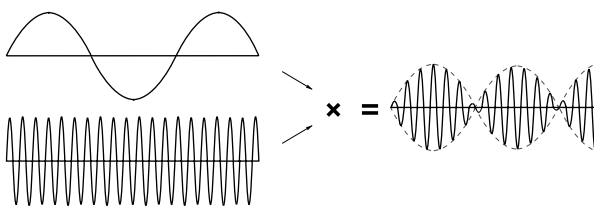
Booster (Booster gain)0/+6/+12/+18

The Booster amplifies the incoming signal, causing it to distort. This creates an effect similar to the distortion often used on an electric guitar. If the "Type" parameter has been set to 3 or 4, you can set the Booster strength.

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 use a tremendous amount of detail when you edit the Tones in a Patch. Each Tone's editable parameters are assigned to the function select buttons as follows.

[CONTROL]

Using Controllers to Change How Sounds Are Played (p. 98)

[WAVE]

Modifying a Waveform (p. 91)

[LFO]

Applying Vibrato or Tremolo (p. 97)

[PITCH]

Modifying Pitch (p. 92)

[TVF]

Modifying the Brightness of a Sound with a Filter (p. 93)

[TVA]

Making the Volume Change (p. 95)

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

1. Select the Patch you wish to set up.
2. Press the function select button that accesses the parameter you wish to adjust, causing the button's indicator to light.
3. Press [▲] / [▼] to select the page containing the parameter.
4. Use TONE SELECT [1]–[4] to select the Tone you wish to set up.

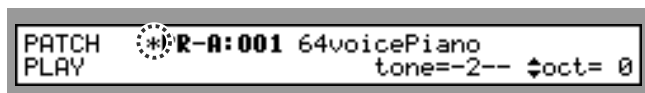
Its indicator will blink, and the selected Tone's number will appear in the upper left of the display.

* When adjusting settings for parameters that apply to all Tones – parameters other than *EFFECTS OUTPUT*, *CONTROL CTRL Rx MIDI*, and *MATRIX CONTROL* – individual Tones need not, and cannot, be selected.

5. Press [◀] / [▶] to move the cursor to the parameter that you wish to adjust.
6. Turn the VALUE dial or press [INC] / [DEC] to select the desired value.

* If you make a mistake when selecting a value, or if you do not like the change you have made, press [UNDO] to restore the parameter to its original value.

7. Repeat Steps 2–6 to finish setting up the Patch.
8. Press [EXIT] to return to the PATCH PLAY page. A "*" symbol will appear at the left of the Patch name, indicating that its settings have been modified.



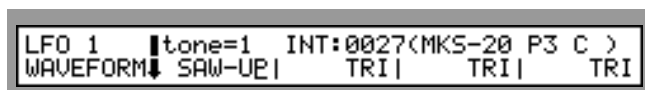
* If you turn off the power or select another Patch while the "*" symbol is displayed, your new Patch settings will be lost. If you wish to preserve them, save the modified Patch using the Write operation. (p. 122)

Palette Function

When editing a Tone, you can simultaneously view the settings of all four of its Tones by pressing [PALETTE].

1. When editing a Tone, press [PALETTE] to make its indicator light.

The Palette page appears.



2. Press a TONE SELECT [1]–[4] button, [◀] / [▶] to choose the Tone you wish to modify.

The button indicator for the selected Tone lights, and the Tone's number and wave name appear in the display.

To simultaneously modify the same parameter in two or more Tones, hold down one Tone's TONE SELECT [1]–[4] button, press the next desired TONE SELECT [1]–[4] button, and then another if desired, and so on.

3. Turn the VALUE dial or press [INC] / [DEC] to raise or lower the parameter's current value to the desired setting.

If you have selected two or more Tones, the change you make will raise or lower the parameter's value for all selected Tones by the same amount.

If you wish to set all selected Tones to the same value, move the cursor to the Tone that already has the desired value by pressing [◀] / [▶], and while holding down [SHIFT], press the VALUE dial.

* If you make a mistake when selecting a parameter value, or if you do not like a change you have made, press [UNDO] to restore the parameter to its original value.

4. If you wish to edit other parameters, press [▲] / [▼] to select the desired parameter.
5. Repeat Steps 2–4 to adjust the parameter's value.

6. To leave the Palette page, press [PALETTE] to turn off its indicator.
7. Press [EXIT] to return to the PATCH PLAY page.

Tips for Selecting a Waveform

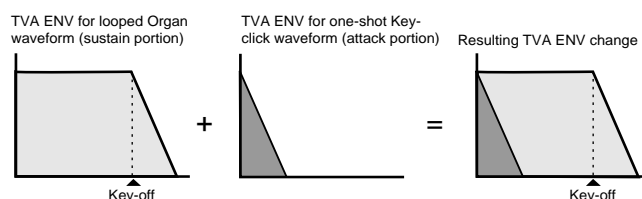
Because the XV-3080 is designed to create completely realistic sounds, the editing process depends heavily on the complex PCM waveforms upon which Tones are based. Therefore, if you try to create a sound that is totally different from the waveform(s) you're working with, the desired result may be difficult or impossible to achieve.

The XV-3080'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-3080's one-shot waveforms are sounds that are complete in themselves, such as percussive instrument sounds. The XV-3080 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-3080's looped waveforms also include components of other sounds, such as piano-string resonant vibrations and the hollow sounds of brass instruments.

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



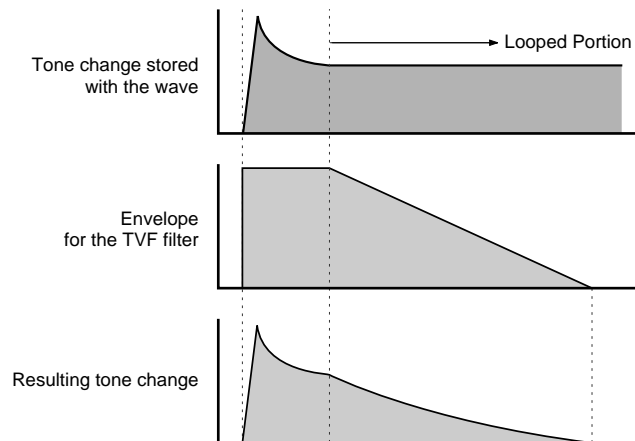
Notes for editing one-shot waveforms

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-3080 provides a variety of waveforms containing realistic acoustic instrument attacks. To obtain the maximum realism when using these waveforms, it is 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 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 using the Color and Depth parameters (FXM page) before filtering. This will help you achieve the desired result. To make an entire waveform brighter, try applying effects such as an enhancer and equalizer before modifying the TVF parameter.

Modifying 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.

WAVE

Group (Wave group type)

This selects the desired waveform's group.

INT:Internal

XP-A-F:Wave Expansion Boards A-F

* *It is not possible to select XP-A-F unless a wave expansion board is inserted into the corresponding slot.*

Number (Wave Number)

This selects the desired waveform by its number. You can choose a separate waveform for each of the XV-3080's left

and right channels.

The selected wave's name will appear to the right of the wave number parameter.

Gain (Wave gain)16/0/+6/+12

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.

Switch (TMT tone switch)ON/OFF

This 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 will also change.*
- * *You can also turn Tones on and off on the PATCH PLAY page. (p. 84)*

Wave Tempo SyncON/OFF

This determines whether the waveform is synchronized (ON) or not synchronized (OFF) to the Patch's tempo.

FXM (Frequency Cross Modulation)

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.

Switch (Wave FXM switch)ON/OFF

This sets whether FXM will be used (ON) or not (OFF).

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.

Depth (Wave FXM depth)0-16

This specifies the depth of the modulation produced by FXM.

TONE DELAY

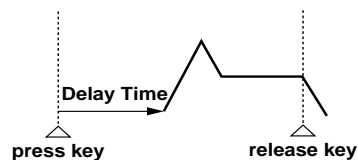
This produces a time delay between the moment a key is pressed (or released) and the moment the Tone actually begins to sound. Since you can adjust the timing of each Tone in a Patch, you can create effects in which pressing a single key produces two or more sounds occurring at different times.

If you do not wish to use Tone Delay, set Mode to NORMAL and Delay Time to 0.

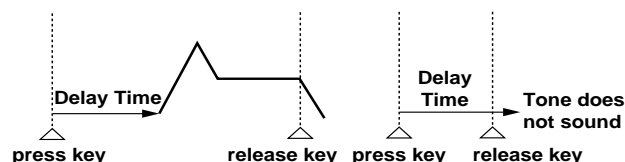
Mode (Tone delay mode)

This sets the manner in which the Tone will sound.

NORMAL: The Tone will sound 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-NORMAL: The Tone will not sound while the key is being pressed, but will sound – after the specified Delay Time – when the key is released.



KEY-OFF-DECAY: The Tone will not sound while the key is being pressed, but will sound after the specified Delay Time when the key is released. However, for this setting – unlike KEY-OFF-N – the TVA envelope of the Tone will begin when the key is first pressed. As a result, in most cases, only the decay portion of the sound will be heard.



If you have 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-NORMAL or KEY-OFF-DECAY may result in no sound being heard.

Time (Tone delay time) 1-127/note

This specifies the time after which the Tone will sound when using Tone Delay.

When the Type parameter (STRUCT page) has a setting of 2-10, the outputs of Tones 1 (3) and 2 (4) will be combined with Tone 2 (4). Tone 1 (or 3) settings will be ignored.

* For more information on the types of notes, refer to the Parameter List. (p. 151)

Modifying Pitch (PITCH)

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

PITCH

These parameters set the basic pitch of each Tone.

Coarse (Tone coarse tune)-48-+48

This setting adjusts the pitch of the Tone in semitone steps over a range of +/-4 octaves.

Fine (Tone fine tune)-50-+50

This 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.

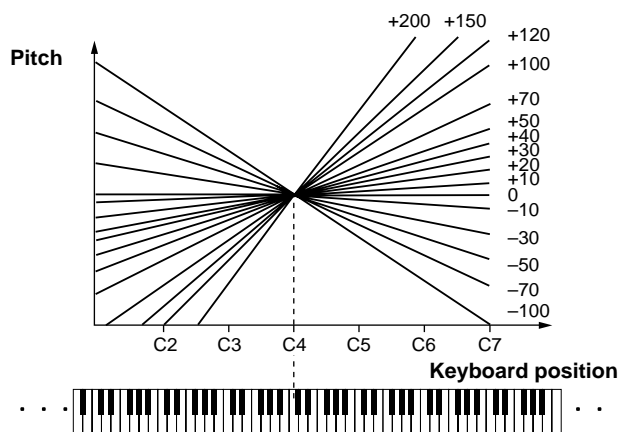
Random (Tone Random pitch depth)0-1200

This specifies the width of random pitch deviation that will occur each time a key is pressed. If you do not 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

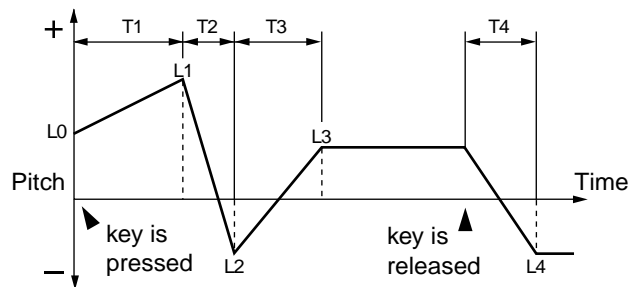
This sets the amount of pitch change that will occur per octave on the keyboard.

If you want the pitch to change by one octave for each 12 keys on the keyboard – as on normal 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.



PCH ENVELOPE (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.



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.

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.

Time Keyfollow (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 will 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.

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.

V-T4 (Pitch envelope time 4 velocity sensitivity)-63--+63

Use this parameter when you want keyboard playing

dynamics (velocity) to affect T4 (Time 4) of the pitch envelope. With higher settings, the T4 value will change more significantly depending on whether you play softly or with greater force. For positive (+) settings, keyboard velocity will reduce the T4 setting. For negative (-) settings, keyboard velocity will increase the T4 setting.

L0 (Pitch Envelope Level 0)-63--+63

* **** (change) This sets the amount of change applied to the Tone's basic pitch when a key is first pressed.

T1–T4 (Pitch envelope time 1–4)0–127

These settings determine the times over which the basic pitch settings will change from one pitch envelope level (L1–L4) to the next.

L1–L4 (Pitch envelope level 1–4)-63--+63

Each pitch envelope level value determines an amount of change to be applied to the Tone's basic pitch.

Modifying the Brightness of a Sound 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.

TVF FILTER

Type (TVF filter type)

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 (TVF 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 Tone's upper harmonics for a more rounded, warmer sound. Higher settings make it sound brighter.

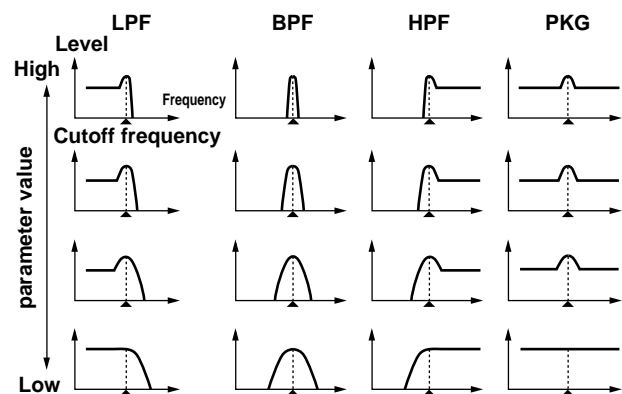
When Filter Type is BPF, the cutoff frequency setting determines the range of frequencies within the Tone that will be heard. This can be useful when creating distinctive sounds.

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 (TVF 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.



Keyfollow (TVF cutoff keyfollow)-200-+200

Use this parameter if you want the cutoff frequency to change according to the key that is 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.

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.

V-Cutoff (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.

V-Curve (TVF cutoff velocity curve)FIXED/1-7

This selects one of seven curves that determine how keyboard playing dynamics (velocity) influence the Tone's cutoff frequency. The selected curve is displayed graphically to the right of its value.

When V-Curve is set to "FIXED," the cutoff frequency remains unchanged regardless of how hard or soft the keys are played.

V-Resonance (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.

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.

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.

V-Curve (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.

Time KF (TVF envelope time keyfollow)-100-+100

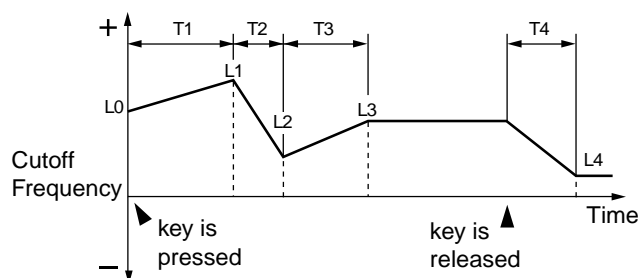
Use this parameter when you want a note's keyboard position to affect times T2-T4 of the TVF envelope. Higher settings change the times by a greater amount as you move away from Middle C (C4) - at Middle C, the original T1-T4 settings are in effect. Positive (+) settings cause the times to shorten as you play above Middle C. Negative (-) settings cause the times to lengthen as you play above Middle C.

VT-1 (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.

VT-4 (TVF envelope time 4 velocity sensitivity)-63-+63

Use this parameter when you want keyboard playing dynamics (velocity) to affect T4 (Time 4) 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 T4 setting. With negative (-) settings, greater keyboard velocity will increase the T4 setting.



L0 (TVF envelope level 0)0-127

* *** chaaange This sets the amount of change applied to the cutoff frequency setting when the key is first pressed.

T1-T4 (TVF envelope time 1-4)0-127

These settings determine the times over which the cutoff frequency setting will change from one TVF envelope level (L1-L4) to the next.

L1-L4 (TVF envelope level 1-4)0-127

Each TVF envelope level value determines an amount of change to be applied to the original cutoff frequency setting.

Making the Volume Change (TVA)

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

TVA

Level (Tone level)0-127

This 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 (PATCH LVL&PAN page) setting, raising or lowering the Tone level settings of its individual Tones by the selected amount. (p. 85)*

Pan (Tone Pan)L64-0-63R

This 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 (PATCH LVL&PAN page), shifting the Tone Pan values of its individual Tones leftward or rightward by the selected amount. (p. 85)*

V-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.

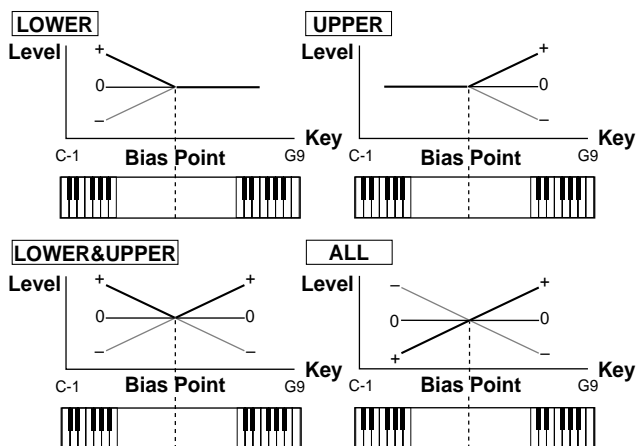
V-Curve (TVA level velocity curve)FIXED/1-7

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 Tone's volume. The selected curve is displayed to the right of its parameter value.

When set to "FIXED," the Tone's volume will not be 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.



Bias (TVA bias level)-100--+100

This adjusts the slope of the volume change that will occur 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.

Point (TVA bias point)C-1 to G9

This selects the MIDI key at which the Tone's volume will begin to change.

Direction (TVA bias direction)

This determines whether the volume of notes above or below the Bias point – or both – will change according to their distance from the Bias Point.

LOWER: Notes below the Bias Point will be affected.

UPPER: Notes above the Bias Point will be affected.

LOWER&UPPER: Notes below and above the Bias Point will be affected.

ALL: The volume of notes across the entire keyboard will be biased according to the Bias Level slope, based on their distance from the Bias Point.

PAN MODULATE (Tone pan modulate)

Use these parameters to dynamically alter the Tone's stereo position as set by the TVA Pan.

Keyfollow (Tone pan keyfollow)

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.

Random (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.

Alternate (Tone alternate pan depth)

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 Tones, set them to the exact opposite L and R settings.

TVA TIME ENV (TVA Time Envelope)

This specifies the manner in which keyboard velocity will affect the times of the TVA envelope.

V-T1 (TVA envelope time 1 velocity sensitivity)

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.

V-T4 (TVA envelope time 4 velocity sensitivity)

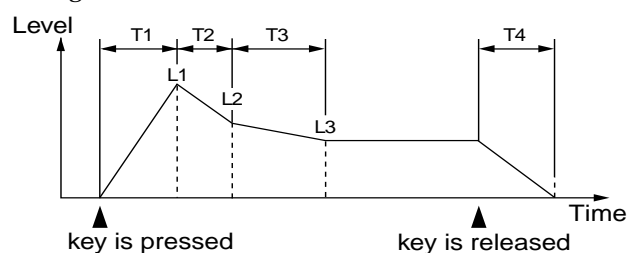
Use this parameter when you want keyboard playing dynamics (velocity) to affect T4 (Time 4) of the TVA envelope. With higher settings, the T4 value will change more significantly depending on whether you play softly or with greater force. With positive (+) settings, greater keyboard velocity will reduce the T4 setting. With negative (-) settings, greater keyboard velocity will increase the T4 setting.

Time Keyfollow (TVA envelope time key follow)

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.

TVA ENVELOPE

These parameters set the characteristics of the TVA envelope, which applies changes over time to the Tone's Tone level setting.



T1-T4 (TVA envelope time 1-4)

These settings determine the times over which the Tone level setting will change from one TVA envelope level to the next.

L1-L3 (TVA envelope level 1-3)

Each TVA envelope level value determines an amount of change to be applied to the original Tone level setting.

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. 100, p. 140).

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.

LFO1(LFO2) WAVE

Since both LFOs have the same parameters, the following explanations applies to both.

Form (LFO form)

This selects the waveform the LFO is to use.

Offset (LFO offset)

This adjusts the basic width of the LFO waveform.

SIN:sine wave

TRI:triangle wave

SAW-UP:sawtooth wave

SAW-DW:sawtooth wave (negative polarity)

SQR:square wave

RND:random wave

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.

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)

CHS:chaos wave

* When setting "UP" or "DW," set the Key Sync parameter to "ON." If this is "OFF," it will have no effect.

Rate (LFO rate) 0-127/note

This adjusts the basic modulation rate, or speed, of the LFO.

* The Chaos waveform has no wavelength. When the Chaos waveform is selected, the Rate setting has no effect.

* For more information on the types of notes, refer to the Parameter List. (p. 151)

Detune (LFO rate detune) 0-127

This setting allows you to adjust the tuning of the LFO waveform.[RB2]

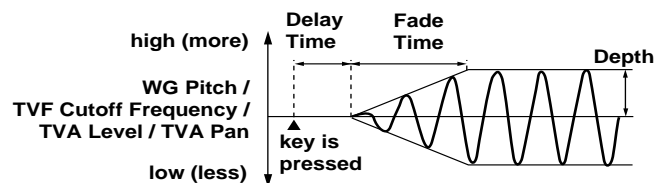
Key Sync (LFO key sync) OFF/ON

This sets whether you want the LFO cycle to start in sync with the timing of a key press (ON) or not (OFF).

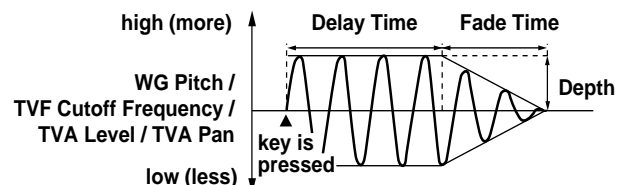
LFO1(LFO2) FADE (LFO fade)**Fade Mode (LFO fade mode)**

This sets how the LFO will be applied.

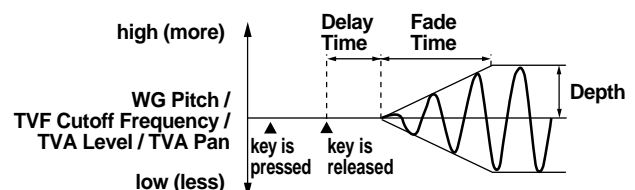
ON-IN:The LFO will fade in after the key is pressed.



ON-OUT:The LFO will be immediately applied when the key is pressed, and will then fade out.

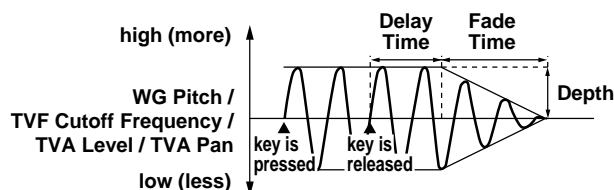


OFF-IN:The LFO will fade in after the key is released.



OFF-OUT:The LFO will be immediately applied when the key

is pressed, and will begin fading out when the key is released.



Fade Time (LFO fade time)

This adjusts the time over which the LFO rises to its full effect or fades away. (Refer to the diagrams for Fade Mode.)

LFO1(LFO2) DELAY (LFO delay)

Delay Time (LFO delay time)

This 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.)

Delay Keyfollow (LFO Delay Keyfollow)

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, select a negative value. Higher values will result in greater change. If you do not want the elapsed time before the LFO effect is applied (the effect is continuous) to change according to the key pressed, set this to "0."

LFO DEPTH 1:2

These parameters adjust the degree to which the LFO affects its target parameters. Two values are displayed for each parameter that can be modulated by the LFO: the left one sets the amount of LFO1 to be applied, and the right one sets the amount of LFO2.

Pitch (Pitch LFO Depth 1, 2)

This adjusts how much the LFO will affect the Tone's pitch.

TVF (TVF LFO Depth 1, 2)

This adjusts how much the LFO will affect the Tone's TVF cutoff frequency.

TVA (TVA LFO Depth 1, 2)

This adjusts how much the LFO will affect the Tone's TVA Level.

Pan (Pan LFO Depth 1, 2)

This adjusts how much the LFO will affect the Tone's TVA

Pan.

Using Controllers to Change How Sounds Are Played (CONTROL)

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

KEY MODE (Key Assign Mode)

Assign (Key Assign Mode)

This sets how the Patch's notes will be played. The SOLO setting is effective when playing a solo instrument Patch such as sax or flute.

MONO: Only one note will sound at a time.

* *While only a single note will sound, that note may, as usual, consist of multiple Tones.*

POLY: Two or more notes can be played simultaneously.

Legato (Legato Switch) 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.

Legato 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 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.*

PATCH 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 Assign Mode is MONO, this can be effective in simulating performance techniques such as a violinist's glissando.

Sw (Portamento switch) ON/OFF

Turn this switch on when you wish to use Portamento.

Time (Portamento time) 0–127

This sets the time over which one pitch will glide to the next.

Mode (Portamento mode)

This selects the way in which Portamento will be applied.

NORMAL:Portamento will always be applied.

LEGATO:Portamento will be applied only for notes played legato (i.e., when you press a second key before releasing the first).

Type (Portamento type)

This determines the way in which the pitch difference between the two notes will affect the time it takes to glide from one note to the next.

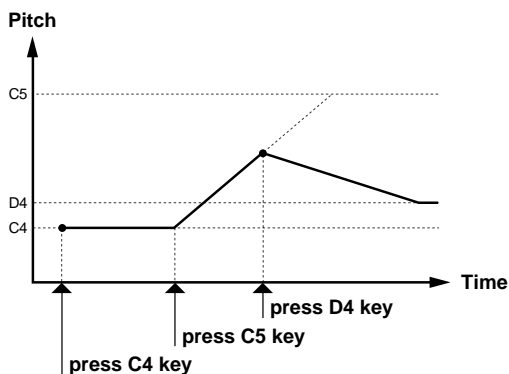
RATE:The time it takes will depend on the distance between the two pitches.

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

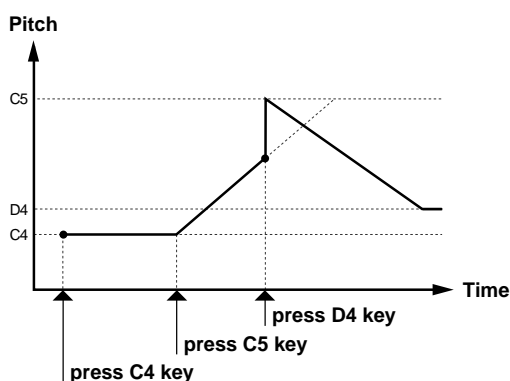
Start (Portamento start)

Portamento will begin anew if you press another key during a pitch movement. This setting specifies how the new portamento will start.

PITCH:The pitch will begin changing immediately to the new note's pitch when its key is pressed.



NOTE:The pitch will begin 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.

Bender (Tone receive bender) OFF/ON

If you want the Tone to respond to Pitch Bend messages, turn this parameter on. If not, turn it off.

Expression (Tone receive expression) OFF/ON

If you want the Tone to respond to Expression messages, turn this on. If not, turn it off.

Pan Mode (Tone receive pan mode)

CONTINUOUS:Pan messages will be responded to immediately, instantly changing the stereo position of the Tone.

KEY-ON:The stereo location of the 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.

Hold-1 (Tone receive hold 1) 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 do not want the Tone to respond to Hold1 messages.

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.

Envelope Mode (Tone envelope mode) NO-SUSTAIN/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."

CONTROL&BENDER (TMT control & Bender)

This sets the TMT control switch and the bend range.

TMT Ctrl Sw (TMT control switch) 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 (Pitch bend range) 0-48

This sets the amount of pitch change that will occur when you move the Pitch Bend lever. The left value specifies the amount of pitch change that will be applied to the Patch's pitch when the lever is moved fully left (or down on some MIDI controllers). The right value specifies the pitch change that will occur when the lever is moved fully to the right (or up). The left value has a range of -48-0 (-4-0 octaves), and the right value has a range of 0-+48 (0-4 octaves).

MATRIX CTRL SRC (Matrix control source)

If you wish to use controllers to control a specific Tone parameter, you can select the desired controller in this page. Four control sources can be assigned to each Patch.

Control 1-4 (Matrix control 1-4 source)

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 (SYS CTRL ASSIGN page).

OFF: a controller will not be used

CC01-CC95: Controller number 1-95 (except CC32)

BENDER

AFTERTOUCH

SYS-CTRL1: System Control 1

SYS-CTRL2: System Control 2

SYS-CTRL3: System Control 3

SYS-CTRL4: System Control 4

VELOCITY

KEYFOLLOW

TEMPO

LFO1

LFO2

PITCH-ENV:Pitch Envelope

TVF-ENV:TVF-Envelope

TVA-ENV:TVA-Envelope

MATRIX CTRL1-4 (Matrix control 1-4)

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.

The upper line of the display shows the Control Source selected in the MATRIX CTRL SRC page.

DEST1-4 (Destination 1-4)

Dest: This selects a parameter to be controlled.

Sns: This adjusts the amount of change that will occur in response to controller changes. Negative (-) values invert the change. For LFO rates, negative (-) values slow down the LFO, and positive (+) values will speed it up.

Tone: This selects the Tone to which the two previous parameter settings are applied. "o" turns signifies that the Tone is selected for control, "_" that it is not selected, and "R" that the change being applied is inverted when applied to this Tone.

Effect Settings (EFFECTS)

Refer to "Adjusting Effect Settings in Patch mode" (p. 21).

Saving Patches You Create

Refer to "Saving Patches" (p. 122).

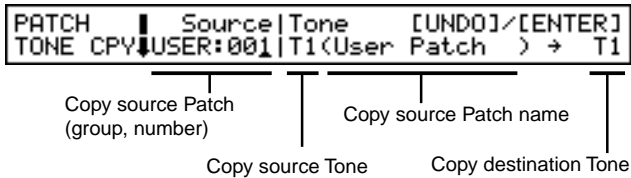
Copying the Settings of Another Patch (Patch Tone Copy)

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 [▲] / [▼] to select the UTIL 1 page.

- Use [◀] / [▶] to make "COPY" blink, and then press [ENTER].

The Patch TONE CPY page will appear.



- Press [◀] / [▶] to move the cursor to the parameter that you wish to set.
- Turn the VALUE dial or press [INC] [DEC] to select the desired value.
- Press [ENTER] to execute the Copy – an asterisk ("*") appears before the copy destination Tone in the display.

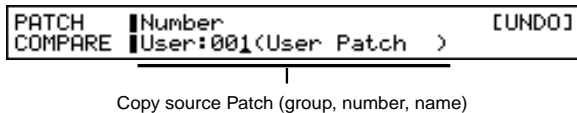


- Press [EXIT] to return to the PATCH PLAY page.

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

Compare Function

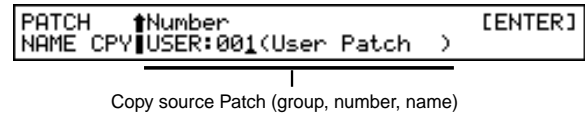
You can use the Compare function during the Patch Tone Copy operation to play the source Patch. To do so, press [UNDO] to access the PATCH COMPARE page. A new source Patch can be selected from the PATCH COMPARE page as well – however, it is not possible to select Patches from XP-A-F. After selecting the desired Patch, return to the previous page by pressing [UNDO] or [EXIT].



- * The Compare function cannot be used with Patch Tone Copy if TEMP patch is selected as the copy-source Patch.
- * Please be aware that when the Compare function plays a Patch, it may sound somewhat different than when it is played normally.

Patch Name Copy

You can copy the name of a Patch to the current Patch.

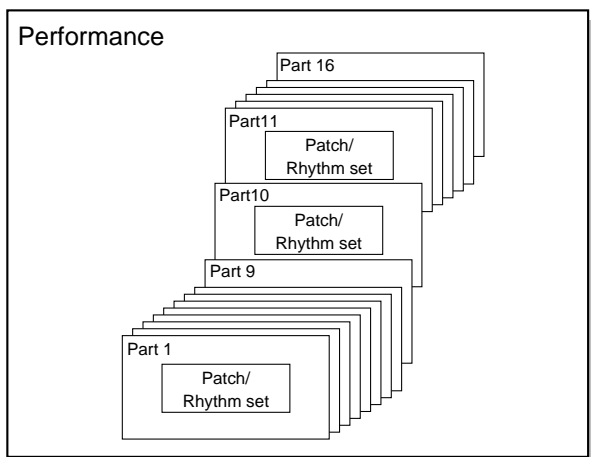


- Select the Patch you want to copy.
- Press [UTILITY] to make its indicator light.
- Press [▲] / [▼] to select the UTIL 1 page.
- Use [◀] / [▶] to make "COPY" blink, and then press [ENTER].
- Press [▲] / [▼] to select the PATCH NAME CPY page.
- Turn the VALUE dial or press [INC] / [DEC] to select the desired source Patch.
- Press [ENTER] to execute the Copy operation.

Chapter 5 Creating a Performance

Creating Performances

In the XV-3080'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-3080 sound generator can play multiple sounds at the same time, it's called a "multitimbral sound generator."



Basic Ways to Use Performances

There are three basic ways to use Performances.

Playing Multiple Patches Together (Layer)

Refer to "QUICK START" (p. 23).

Playing Separate Patches in Different Areas of the Keyboard (Split)

Refer to "QUICK START" (p. 27).

Using the XV-3080 as a Multitimbral Sound Generator

In Performance mode, you can use the XV-3080 as a 16-part multitimbral sound generator. Let's try selecting some Parts and sounds, and then play the multiple Parts together as a Performance.

The basic steps for doing this include:

- Choosing the Parts to Play (p. 102)

- Selecting A Patches to the Parts (p. 104)
- setting the Parts' MIDI reception channels (p. 106).

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

Choosing the Parts to Play

Turn on each Part you wish to use.

1. Select the Performance you wish to use.
2. Press [RX] to make the indicator light.
3. Use PART SELECT [1/9]-[8/16] to switch each Part on – so that its indicator lights – or off so that its indicator goes dark.

To turn Parts 9–16 on or off, press [1-8/9-16] to make the indicator light, and then press PART SELECT [1/9]-[8/16].

4. Press [RX] to make its indicator turn off.
 - * *This setting is linked with the Rx Sw setting (PART MIDI page).*
 - * *If the [RX] indicator is lit when an active Part receives a MIDI message, the Part's indicator will blink.*

Establishing Settings for an Entire Performance (COMMON)

PERFORM NAME (Performance Name)

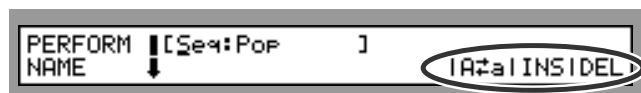
You can give a Performance a name of up to 12 characters in length.

Use [◀]/[▶] to move the cursor, and then turn the [VALUE] knob or press [INC]/[DEC] to select the desired character.

Available characters/symbols:

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

Press [SHIFT] to display the following in the bottom right corner of the screen.

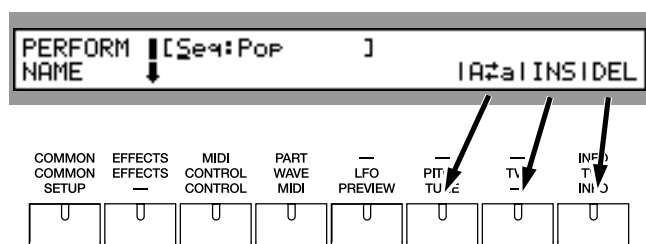


A ↕ a: Switches between uppercase and lowercase characters.

INS: Inserts a space at the cursor location and shifts the remaining text to the right by one character position.

DEL: Deletes the character at the cursor and shifts the remaining text one character position to the left.

Press each of these buttons in order to execute its corresponding function (refer to the figure).



PERFORM MFX CH

MFX Control Channel 1-16/OFF

Sets the channel which will control Multi-effects assigned to the Performance.

Settings for Each Part

The parameters that can be set for each Part in the current Performance are assigned to the function select buttons as follows.

[COMMON]

Setting the Keyboard Range (p. 104)

[EFFECTS]

Effect Settings (p. 26)

[MIDI]

Establishing a Part's MIDI Settings (MIDI) (p. 106)

[PART]

Selecting a Part's Patch or Rhythm Set (p. 104)

Specifying the Volume/Pan/Number of Notes (p. 104)

Editing Sounds' Attack and Release Time (p. 105)

Changing the Pitch (p. 106)

Changing the way in which a Part will sound (p. 106)

[INFO]

Confirming MIDI Information for Each Part (p. 107)

How to Set Performance Parameters:

1. Select the desired Performance.
2. Press the function select button for the type of parameter to be set.
3. Use [▲]/[▼] to select the page containing the parameter you wish to set.
4. Press PART SELECT [1/9]-[8/16] to select the Part you want to set up.
To select a Part 9-16, press [1-8/9-16] so that its indicator lights, and press PART SELECT [1/9]-[8/16].
5. Use [◀]/[▶] to move the cursor to the parameter you want to set.
6. Turn the VALUE dial or press [INC]/[DEC] to select the desired value.
7. Press [EXIT] to return to the PATCH PLAY page.

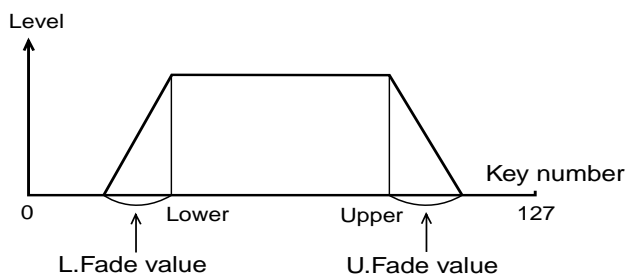
Setting the Keyboard Range ([COMMON]-[PART KEY RANG])

You can set each Part's keyboard range (Key Range), the area on the keyboard that will cause the Part to sound. 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.”

PART KEY RANG (Part key range)

L.Fade (TMT keyboard fade width lower)0-127

This determines what will happen 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.



Lower (TMT keyboard range lower)C -1-G9

This specifies the lowest note that will cause the Part to play its sound.

Upper (TMT keyboard range upper)C -1-G9

This specifies the highest note that will cause 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. If you attempt to do so, the two values will change together.*

U.Fade (TMT keyboard fade width upper)0-127

This determines what will happen 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.

Selecting a Part's Patch or Rhythm Set ([PART]-[PART PATCH])

You can select the Patch or Rhythm Set that will be assigned

to each Part.

PART PATCH

Type (Part Type) PAT/RHY

This selects the Patch (PAT) or Rhythm Set (RHY) the Part will play.

Group (Part group)

Selects the group to which the desired Patch or Rhythm Set belongs.

- * *You can also use the Patch Finder feature. (p. 16)*
- * *You can also select from the FAVORLITE LIST. (p. 121)*
- * *It is not possible to select XP-A-H unless a wave expansion board is inserted into the corresponding slot. (Quick Start p. 2)*
- * *It is not possible to select CARD unless a SmartMedia card is inserted into the XV-3080 CARD slot. (p. 125)*

Number

This selects the desired Patch or Rhythm Set by its number.

- * *You can also use the Patch Finder feature. (p. 16)*
- * *You can also select from the FAVORLITE LIST. (p. 121)*

Specifying the Volume/Pan/Number of Notes ([PART]-[PART SETTING])

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

PART SETTING

Level (Part Level)

This sets the volume of the Part. This setting's main purpose is to adjust the volume balance between Parts.

Pan (Part Pan)

This 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 Reserve

This setting specifies the number of voices that will be reserved for each Part when more than 128 voices are played simultaneously.

* *It is not possible for the settings of all Parts to total an amount greater than 128. The remaining number of available voices will be displayed to the left of this value (Rest=). Pay attention to this readout as you make set the Voice Reserve parameter.*

Calculating the Number of Voices Being Used

The number of notes that the XV-3080 can sound simultaneously depends on the number of Tones in the Patches you are 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 will use up one voice of polyphony. XV-3080 tones may use two Waves, and when Patches are composed of these tones, this doubles the two sounds. When two keys are pressed, and the Patch for each key pressed uses four tones each having two Waves, a total of sixteen voices is used.

This number is obtained by figuring (the number of tones with one Wave + the number of tones with two Waves x 2) x the number of keys pressed.

The XV-3080 is able to play up to 128 Tones simultaneously. When you are using the XV-3080 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 Sounds' Attack and Release Time ([PART]-[PART MODIFY])

You can determine how a Part will play 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.

PART MODIFY

Cut (Part cutoff offset)-63-0-+63

This raises or lowers the TVF cutoff frequency settings for each of the Tones in the Part's sound.

Res (Part resonance offset)-63-0-+63

This raises or lowers the TVF Resonance settings for each of the Tones in the Part's sound.

Atk (Part attack time offset)

This raises or lowers the TVF/TVA attack time (T1) settings for each of the Tones in the Part's sound.

* *Patches also contain an Atk time offset setting. The final TVF/TVA Envelope attack time value is therefore the sum of the*

Tone's TVF/TVA ENVELOPE T1 setting, the Patch's Atk time offset, and the Part's Atk time offset. If the Patch's Atk time offset is already set to 127, there will be no change produced by setting the Part's Atk time offset to a positive value.

Rel (Part release time offset)

This raises or lowers the TVF/TVA release time (T4) settings for each of the Tones in the Part's sound.

* *Patches also contain a Rel time offset setting. The final TVF/TVA Envelope release time value is therefore the sum of the Tone's TVF/TVA ENVELOPE T4 setting, the Patch's Rel time offset, and the Part's Rel time offset. If the Patch's Rel time offset is already set to 127, there will be no change produced by setting the Part's Rel time offset to a positive value.*

Velocity Sens (Part velocity sensitivity offset)

This raises or lowers the VELOCITY V-Cutoff and the TVA V-Sens settings for each of the Tones in the Part's sound.

* *Patches also contain a Velocity Sens offset setting.*

A Tone's ultimate TVF V-Cutoff and TVA V-Sens values are therefore the sum of the Tone's TVF V-Cutoff and TVA V-Sens settings, the Patch's Velocity Sens offset and the Part's Velocity Sens offset. If the Patch's Velocity Sens offset is already set to 127, there will be no change produced by setting the Part's Velocity Sens Offset to a positive value.

Changing the Pitch ([PART]-[PART PITCH])

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

PART PITCH

Octave (Octave shift) -3-0-+3

This adjusts the pitch of the Part's sound up or down in units of an octave (+/-3 octaves).

Coarse (Coarse tune) -48-+48

This adjusts the pitch of the Part's sound up or down in semitone steps over a range of +/-4 octaves.

Fine (Fine tune) -50-+50

This 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.

BendRng (Pitch bend range) 0-24/PATCH

This specifies the amount of pitch change that will occur when you move the Pitch Bend Lever. It overrides the sound's pitch-bend settings.

The amount of pitch change downward or upward that occurs when the lever is tilted is the same for both its left and right directions (or down and up on some MIDI controllers).

When a PATCH is selected, the bend range settings for the assigned Patch will have effect.

Changing the way in which a Part will sound([PART]-[PART MONO/POL])

You can set the MONO/POLY, Legato and Portament each Part will use when playing its sound.

Mno/Pol (Part Mono/Poly)

This sets how the Patch's notes will be played. The SOLO setting is effective when playing a solo instrument Patch such as sax or flute.

MONO: Only one note will sound at a time.

* While only a single note will sound, that note may, as usual, consist of multiple Tones.

POLY: Two or more notes can be played simultaneously.

Legato (Legato Switch) OFF/ON/PATCH

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.

When a PATCH is selected, the settings for the assigned Patch will have effect.

Porta Sw:Time (Portament Switch:Time)

Specify whether the portament effect will be applied (ON) or not (OFF).

And when portament is used, this specifies the time over which the pitch will change. Higher settings will cause the pitch change to the next note to take more time.

What is Portament?

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

Establishing a Part's MIDI Settings (MIDI)

PART MIDI

Channel (MIDI channel) 1-16

This sets the MIDI channel to which the Part will respond.

Rx Sw (Receive switch) OFF/ON

This enables (ON) or disables (OFF) the Part's response to received MIDI messages.

Mute Sw (Mute switch) OFF/ON

This silences, or "mutes," the Part when set to ON.

* 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 a song, the Part continues to keep up with the latest received MIDI data.

CH RxSWITCH (CH receive switch)

Bank Select (Receive bank select switch)

This sets whether the Part will respond to received MIDI Bank Select messages (ON) or not (OFF).

Program Change (Program change switch)

This sets whether the Part will respond to received MIDI Program Change messages (ON) or not (OFF).

Vol (Receive volume switch)

This sets whether the Part will respond to received MIDI Volume messages (ON) or not (OFF).

Pan (Receive pan switch)

This sets whether the Part will respond to received MIDI Pan messages (ON) or not (OFF).

Exp (Receive expression switch)

This sets whether the Part will respond to received MIDI Expression messages (ON) or not (OFF).

Hld (Receive hold 1 switch)

This sets whether the Part will respond to received MIDI Hold 1 messages (ON) or not (OFF).

Bnd (Receive bender switch)

This sets whether the Part will respond to received MIDI Bender messages (ON) or not (OFF).

Mod (Receive modulation switch)

This sets whether the Part will respond to received MIDI Modulation messages (ON) or not (OFF).

Caf (Receive channel aftertouch switch)

This sets whether the Part will respond to received MIDI Aftertouch messages (ON) or not (OFF).

Paf (Receive polyphonic aftertouch switch)

This sets whether the Part will respond to received MIDI Polyphonic Aftertouch messages (ON) or not (OFF).

CH VELO CRV (CH velocity curve)**Velocity Curve OFF/1/2/3/4**

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-3080. Set this to "OFF" if you are using the MIDI keyboard's own velocity curve.

Phase Lock 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 to line them up, turn this feature off when it is not needed.*

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.

For items other than Voice, you may modify the values. When you do so, a MIDI message will be transmitted, and can be recorded on the sequencer, etc.

Mod (Modulation Information)**Breath (Breath Information)****Foot (Foot Information)****Vol (Volume Information)****Pan (Pan Information)****Exp (Expression Information)****Hold (Hold 1 Information)****Bend (Pitch Bend Information)****Aftertouch (Aftertouch Information)****Sys1(System Control 1 Information)****Sys2(System Control 2 Information)****Voices (Voice Information)**

Effect Settings

Refer to “Adjusting Effect Settings in Performance mode” (p. 26).

Saving Performances You Create

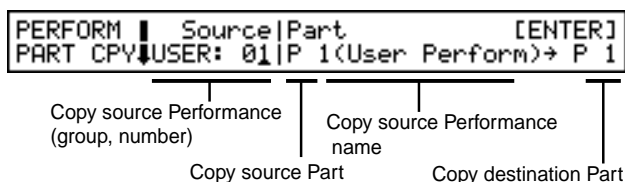
Refer to “Saving Performances” (p. 122).

Copying the Settings of Another Part (Performance Part Copy)

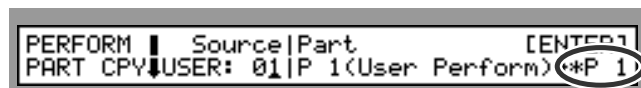
Part settings from any Performance can be copied to the currently selected Part. This can save you time when setting up Parts.

1. Make sure that a Part is selected.
2. Press [UTILITY] to make its indicator light.
3. Press [▲] / [▼] to select the UTIL 1 page.
4. Use [◀] / [▶] to make “COPY” blink, and then press [ENTER].

The PERFORM PART CPY page will appear.



5. Press [◀] / [▶] to move the cursor to the parameter that you wish to set.
6. Turn the VALUE dial or press [INC] / [DEC] to select the desired value.
7. Press [ENTER] to execute the Copy – an asterisk (“*”) is placed before the copy destination Tone in the display.



8. Press [EXIT] to return to the PERFORM PLAY page.

* To specify the currently selected Part as the copy source, set Source to TEMP.

Performance Name Copy

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



Copy source Performance (group, number, name)

1. Select the Performance whose name you wish to copy.
2. Press [UTILITY] to make its indicator light.
3. Press [u] / [d] to select the UTIL 1 page.
4. Use [l] / [r] to make “COPY” blink, and then press [ENTER].
5. Press [u] / [d] to select the PATCH NAME CPY page.
6. Turn the VALUE dial, or press [INC]/[DEC] to select the copy-source Performance.
7. Press [ENTER] to execute the Copy operation.

Editing a Patch or Rhythm Set in the Performance Mode

1. Hold down [SHIFT] and press [PERFORM].
2. Press [PATCH] if you wish to edit a Patch, or [RHYTHM] to edit a Rhythm Set, lighting the respective indicator.
3. Press the function select button for the parameter you want to set.
4. Use [▲]/[▼] to select the page containing the parameter you want to set.
5. Use [◀]/[▶] to move the cursor to the parameter.
6. Turn the VALUE dial or press [INC] / [DEC], to select the desired value.
7. Repeat Steps 3 to 6 to edit.
8. Press [PERFORM] to return to the PERFORM PLAY page.

Palette Function

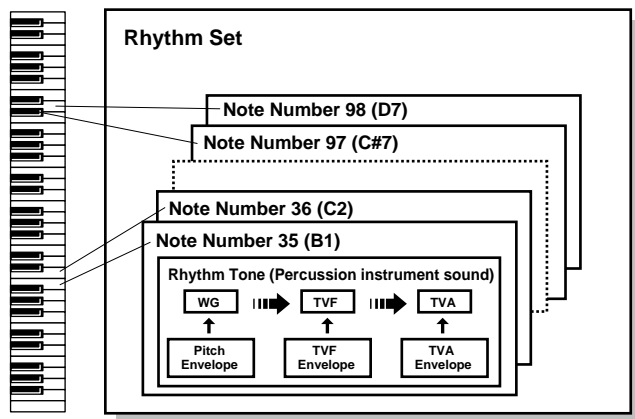
When editing a Part, you can simultaneously view the settings of all eight of its Parts by pressing [PALETTE].

1. When editing a Part, press [PALETTE] to make its indicator light.
2. Press a PART SELECT [1/9]–[8/16] button, [◀] / [▶] to choose the Tone you wish to modify.

Chapter 6. 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-3080 has 1083 different waveforms. (See Waveform List p. 168.)

All Rhythm Sets built into the XV-3080 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 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-3080’s front-panel controls or also by pressing keys on a connected MIDI keyboard.

1. Press [SYSTEM] to make its indicator light.
2. Press [SETUP] to make its indicator light.
3. Use [▲]/[▼] to select the Rhythm Edit Key setting page.
4. Turn the VALUE dial or by press [INC]/[DEC], to select the desired value.

PANEL: Percussion instrument sounds can be selected only by using the XV-3080’s [E]–[H] buttons.

PANEL&MIDI: Percussion instrument sounds can be selected using the XV-3080’s [E]–[H] buttons and by pressing a key on a connected MIDI keyboard.

5. Press [EXIT] to return to the RHYTHM PLAY page.

MEMO

If you’d like to select percussion instruments using the XV-3080’s [E]–[H] buttons while playing the sounds on a MIDI keyboard, select “PANEL.”

Settings Common to an Entire Rhythm Set

Setting Procedure:

1. Select the Rhythm Set you wish to edit.
2. Press the [COMMON] function select button.
3. Use [▲]/[▼] to select the page containing the parameter you want to set.
4. Use [◀]/[▶] to move the cursor to the parameter.
5. Turn the VALUE dial or press [INC]/[DEC] to select the desired value.
6. Press [EXIT] to return to the RHYTHM PLAY page.

RHYTHM NAME

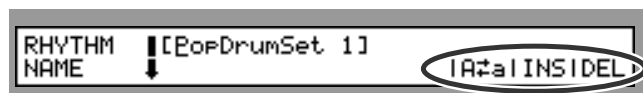
You can name a Rhythm Set using up to 12 alphanumeric characters.

Use [◀]/[▶] to move the cursor, and then turn the [VALUE] knob or press [INC]/[DEC] to select the desired character.

Available characters/symbols:

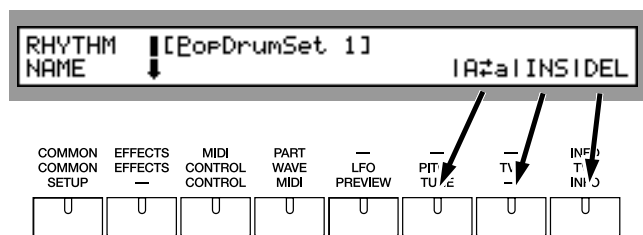
space, A-Z, a-z, 0-9, ! " # \$ % & ' () * + , - . / : ; < = > ? @ [\] ^ _ ? |

Press [SHIFT] to display the following in the bottom right corner of the screen.



- A ↕ a:** Switches between uppercase and lowercase characters.
- INS:** Inserts a space at the cursor location and shifts the remaining text to the right by one character position.
- DEL:** Deletes the character at the cursor and shifts the remaining text one character position to the left.

Press each of these buttons in order to execute its corresponding function (refer to the figure).



RHYTHM COMMON

Level (Rhythm 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. ???).

Output Assign (Rhythm output assign)

This sets the output destination of the Rhythm Set.

MFx: The Rhythm Set is sent into the Multi-Effects.

OUTPUT A-C: The Rhythm Set is sent to the selected pair of OUTPUTS, A-C.

INDIV 1-6: The Rhythm Set is sent to the selected INDIVIDUAL output jack, 1-6.

tone: Each Rhythm Tone in the Rhythm Set is sent to its programmed output destination.

RHYTHM TEMPO

Clock Source (Rhythm clock source)

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.

PATCH: 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 Tempo)

When Clock Source is set to "RHYTHM," this setting establishes the Patch's tempo.

* Clock messages for the Rhythm Tempo are not transmitted from the MIDI OUT jack.

Setting up Individual Rhythm Tones

The parameters which can be set for each Rhythm Tone of the Rhythm Set are assigned to the function select buttons as follows.

[CONTROL]

Other Settings (p. 118)

[WAVE]

Modifying a Rhythm Tone's Waveform and Panning (p. 113)

[PITCH]

Modifying a Rhythm Tone's Pitch (p. 115)

[TVF]

Modifying the Brightness of a Sound with a Filter (p. 116)

[TVA]

Making the Volume Change (p. 117)

Editing Procedure:

1. Select the Rhythm Set you wish to set.
2. Press the function select button for the parameter you want to set.
3. Use [▲]/[▼] to select the page containing the parameter you want to set.
4. Use [E]-[H] to select the percussion instrument sound you wish to edit according to the key that plays it.
 - [E]: Selects the key one octave below the currently selected key.
 - [F]: Selects the key a semitone below the currently selected key.
 - [G]: Selects the key a semitone above the currently selected key.
 - [H]: Selects the key one octave above the currently selected key.

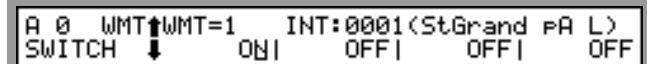
* You can also press a key on a connected MIDI keyboard to select the desired percussion instrument sound (key). (p. 110)
5. Use [◀]/[▶] to move the cursor to the parameter you want to set.
6. Turn the VALUE dial or by press [INC]/[DEC], to select the desired value.
7. Press [EXIT] to return to the RHYTHM PLAY page.

Palette Function

When editing a Rhythm Tone, you can simultaneously view the settings of all four of its Tones by pressing [PALETTE].

1. When editing a Tone, press [PALETTE] to make its indicator light.

The Palette page appears.



2. Press [◀] / [▶] to choose the Tone you wish to modify.
3. Turn the VALUE dial or press [INC] / [DEC] to raise or lower the parameter's current value to the desired setting.
 - * If you make a mistake when selecting a parameter value, or if you do not like a change you have made, press [UNDO] to restore the parameter to its original value.
4. If you wish to edit other parameters, press [▲] / [▼] to select the desired parameter.
5. Repeat Steps 2-4 to adjust the parameter's value.
6. To leave the Palette page, press [PALETTE] to turn off its indicator.
7. Press [EXIT] to return to the RHYTHM PLAY page.

Tips for Selecting Rhythm Tone Waveforms

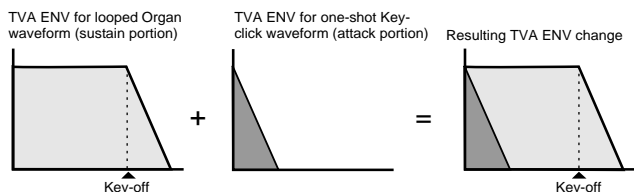
Because the XV-3080 is designed to create completely realistic sounds, the editing process depends heavily on the complex PCM waveforms upon which Tones are based. Therefore, if you try to create a sound that is totally different from the waveform(s) you're working with, the desired result may be difficult or impossible to achieve.

The XV-3080'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-3080's one-shot waveforms are sounds that are complete in themselves, such as percussive instrument sounds. The XV-3080 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-3080's looped waveforms also include components of other sounds, such as piano-string resonant vibrations and the hollow sounds of brass instruments. The following diagram shows an example of a sound – an electric organ – that combines one-shot and looped waveforms.

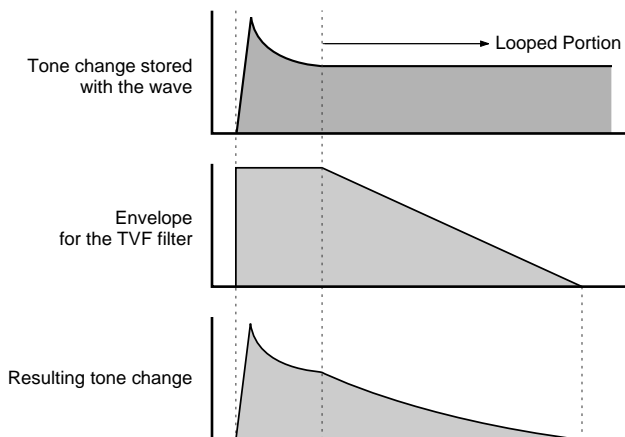


Notes for Editing One-Shot Waveforms

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-3080 provides a variety of waveforms containing realistic acoustic instrument attacks. To obtain the maximum realism when using these waveforms, it is 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 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 using the Color and Depth parameters (FXM) before filtering. This will help you achieve the desired result. To make an entire waveform brighter, try applying effects such as an enhancer and equalizer before modifying the TVF parameter (RHYTHM/TVF).

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

STONE NAME

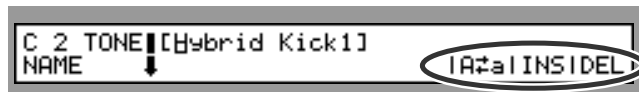
You can name a Rhythm Tone using up to 12 alphanumeric characters.

Use [◀]/[▶] to move the cursor, and then turn the [VALUE] knob or press [INC]/[DEC] to select the desired character.

Available characters/symbols:

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

Press [SHIFT] to display the following in the bottom right corner of the screen.

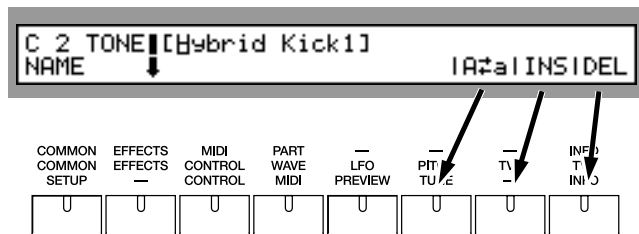


A ↕ a: Switches between uppercase and lowercase characters.

INS: Inserts a space at the cursor location and shifts the remaining text to the right by one character position.

DEL: Deletes the character at the cursor and shifts the remaining text one character position to the left.

Press each of these buttons in order to execute its corresponding function (refer to the figure).



WMT WAVE

With the XV-3080, 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).

Group (Wave group)

This selects the desired waveform's group.

Number (Wave number)

This selects the desired waveform by its number. You can choose a separate waveform for each of the XV-3080's left and right channels.

The selected wave's name will appear to the right of the wave number parameter.

Gain (Wave gain)

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.

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 page) combined with the WMT Wave Tone Level setting. (p. 117)*

Switch (Wave switch)

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.

Wave Tempo Sync

This determines whether the waveform is synchronized (ON) or not synchronized (OFF) to the Patch's tempo.

WMT VEL RANG (WMT Velocity Range)

Lower/Upper (Velocity range lower/upper)

This determines what will happen to the waveform's level when it is played at a velocity lower or higher 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.

L.Fade/U.Fade (Velocity fade width lower/upper)

This sets the lowest and highest velocities 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. If you attempt to do so, the two values will change simultaneously.*

VELO CONTROL

WMT Velocity Control Switch

This determines whether Velocity messages from a MIDI keyboard or sequencer will be recognized (ON), or ignored (OFF).

When set to RANDOM, the Patch's constituent Tones will sound randomly, regardless of any Velocity messages.

WMT PAN (WMT Wave Pan)

Pan (Wave pan)L64–0–63R

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 page), offsetting the WMT Wave Pan value. (p. 117)*

Rnd Pan (Wave random pan switch)

Use this setting to cause the waveform's panning to change randomly each time a key is pressed (ON) or not (OFF).

The range of the panning change is set by the Tone Rhythm Pan Depth setting (TVA page). (p. 117)

Alt Pan (Wave alternate pan switch)

Use this setting to cause the waveform's stereo position to flip from the left to the right each time a key is pressed (ON) or not (OFF).

The stereo width of the change is set by the Tone Rhythm Pan Depth setting (TVA page). (p. 118)

WMT TUNE

Coarse (Wave coarse tune) -48–+48

This adjusts the pitch of Rhythm Tone in semitone steps (-4–+4 octaves).

Fine (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.

WMT FXM (WMT Frequency Cross Modulation)

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.

Switch (Wave FXM switch 1-4)

This sets whether FXM will be used (ON) or not (OFF).

Color (Wave FXM color)

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.

Depth (Wave FXM depth)

This specifies the depth of the modulation produced by FXM.

Modifying a Rhythm Tone's Pitch (PITCH)

PITCH (Tone pitch)

Coarse (Tone coarse tune) C-1 to G9

This selects the basic pitch at which the percussion instrument sound will play.

Fine (Tone fine tune) -50--+50

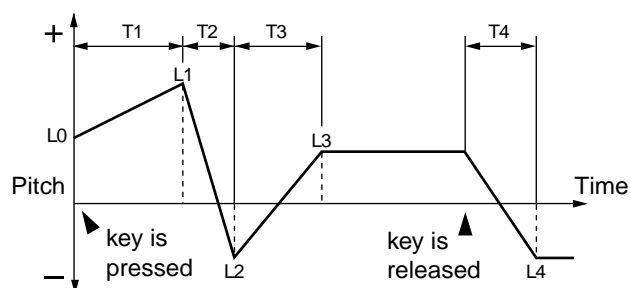
This adjusts the pitch of the percussion instrument sound in 1-cent steps (1/100th of a semitone) over a range of half a semitone up or down.

Random (Tone 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).

PCH ENVELOPE (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.



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.

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.

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.

V-T4 (Pitch envelope time 4 velocity sensitivity) -63--+63

Use this parameter when you want keyboard playing dynamics (velocity) to affect T4 (Time 4) of the pitch envelope. With higher settings, the T4 value will change more significantly depending on whether you play softly or with greater force. For positive (+) settings, keyboard velocity will reduce the T4 setting. For negative (-) settings, keyboard velocity will increase the T4 setting.

L0 (Pitch envelope level 0) -63--+63

This sets the amount of change applied to the Rhythm Tone's basic pitch when a key is first pressed.

T1-T4 (Pitch envelope time 1-4) 0-127

These settings determine the times over which the basic pitch settings will change from one pitch envelope level (L1-L4) to the next.

L1-L4 (Pitch envelope level 1-4) -63--+63

Each pitch envelope level value determines an amount of change to be applied to the Rhythm Tone's basic pitch.

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.

TVF FILTER

Type (TVF filter type)

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 (TVF 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.

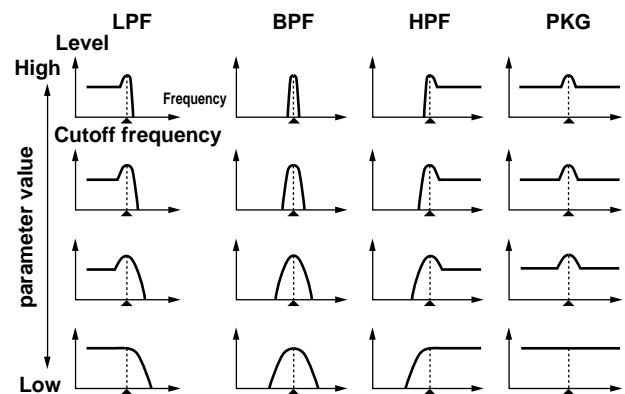
When Filter Type is BPF, the cutoff frequency setting determines the range of frequencies within the Rhythm Tone that will be heard. This can be useful when creating distinctive sounds.

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.

Resonance (TVF 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.



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.

V-Cutoff (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.

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. The selected curve is displayed graphically to the right of its value.

When V-Curve is set to "FIXED," the cutoff frequency remains unchanged regardless of how hard or soft the keys are played.

V-Resonance (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.

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.

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.

V-Curve (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.

VT-1 (TVF envelope time 1 velocity sensitivity) -63-+63

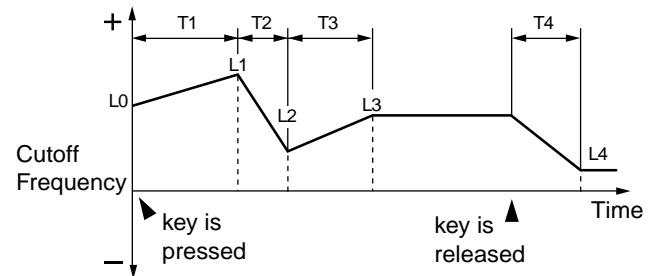
Use this parameter when you want keyboard playing dynamics (velocity) to affect T1 (Time 1) of the TVF envelope. With higher settings, the T1 value will change more significantly depending on whether you play softly or with greater force. With positive (+) settings, greater keyboard velocity will reduce 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.

VT-4 (TVF envelope time 4 velocity sensitivity) -63-+63

Use this parameter when you want keyboard playing

dynamics (velocity) to affect T4 (Time 4) 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 T4 setting. With negative (-) settings, greater keyboard velocity will increase the T4 setting.

**L0 (TVF envelope level 0) 0-127**

This sets the amount of change applied to the cutoff frequency setting when the key is first pressed.

T1-4 (TVA envelope time 1-4) 0-127

These settings determine the times over which the cutoff frequency setting will change from one TVF envelope level (L1-L4) to the next.

L1-L4 (TVF envelope level 1-4) 0-127

Each TVF envelope level value determines an amount of change to be applied to the original cutoff frequency setting.

Making the Volume Change (TVA)

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

TVA**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 Rhythm Level (RHYTHM COMMON page) setting, raising or lowering the Tone level settings of its individual Rhythm Tones by the selected amount. (p. 111)*

Pan (Pan)L64-0-63R

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.

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.

Alternate (Alternate pan depth) L64-63R

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. The selected curve is displayed to the right of its parameter value.

When set to "FIXED," the Rhythm Tone's volume will not be affected by the force with which the keyboard is played.

TVA TIME ENV (TVA time envelope)

This specifies the manner in which keyboard velocity will affect the times of the TVA envelope.

V-T1 (TVA envelope time 1 velocity sensitivity)

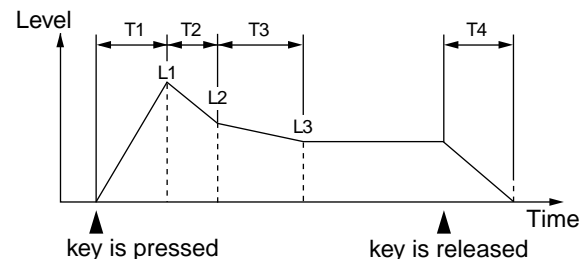
Use this parameter when you want keyboard playing dynamics (velocity) to affect T1 (Time 1) of the TVA envelope. With higher settings, the T1 value will change more significantly depending on whether you play softly or with greater force. With positive (+) settings, greater keyboard velocity will reduce the T1 setting. With negative (-) settings, greater keyboard velocity will increase the T1 setting.

V-T4 (TVA envelope time 4 velocity sensitivity)

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.

TVA ENVELOPE

These parameters set the characteristics of the TVA envelope, which applies changes over time to the Rhythm Tone's TVA level setting.



T1-T4 (TVA envelope time 1-4)

These settings determine the times over which the Rhythm Tone level setting will change from one TVA envelope level (L1-L4) to the next.

L1-L3 (TVA envelope level 1-3)

Each TVA envelope level value determines an amount of change to be applied to the original Rhythm Tone level setting.

Other Settings (CONTROL)

CONTROL

Bend Range (Tone pitch bend range) 0-48

Specifies the amount of pitch change that will occur when you move the Pitch Bend Lever. The left value specifies the pitch change that will occur when the lever is moved fully left (or down on some MIDI controllers). The right value specifies the pitch change that will occur when the lever is moved fully right (or up). The left value has a range of -48-0 (-4-0 octaves), and the right value has a range of 0--+48 (0-4 octaves).

Envelope Mode (Tone envelope mode) NO-SUSTAIN/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 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 – the hi-hat is either open or closed, but not both at the same time. To simulate this behavior on the XV-3080, you can set the open and closed hi-hat Rhythm Tones to the same Mute Group, thus preventing them from being heard at the same time. If, for example, the open hi-hat Rhythm Tone is playing and the closed hi-hat's key is struck, the closed hi-hat Rhythm Tone will turn off the open hi-hat before sounding.

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 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.

Expression (Tone receive expression) OFF/ON

If you want the Rhythm Tone to respond to Expression messages, turn this parameter on. If not, turn it off.

Pan (Tone receive pan mode)

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.

Hold-1 (Tone receive hold 1) OFF/ON

If you want the Tone to respond to Hold 1 messages, turn this parameter on. If not, turn it off.

Effects Settings (EFFECTS)

Refer to "Adjusting Effect Settings in Rhythm Set mode" (p. 31).

Saving Patches You Create

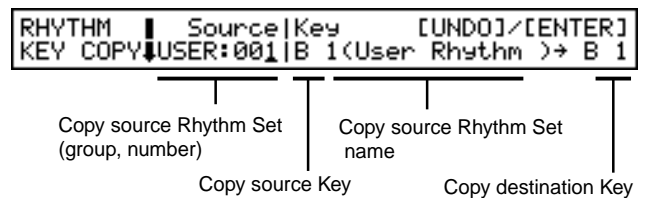
Refer to "Saving a Rhythm Set" (p. 122).

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 [u] / [d] to select the UTIL 1 page.
4. Use [l] / [r] to make "COPY" blink, and then press [ENTER].

The RHYTHM KEY CPY page will appear.



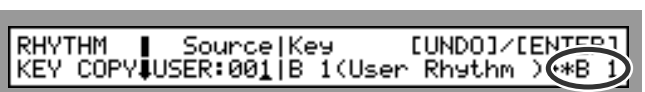
5. Press [l] / [r] to move the cursor to the parameter that you wish to set.
6. Turn the VALUE dial or press [INC] / [DEC] to select the desired value.

You can also select the desired key setting by pressing [E]-[H].

- [E]: This selects the key one octave below the currently selected key.
- [F]: This selects the key a semitone below the currently selected key.
- [G]: This selects the key a semitone above the currently selected key.
- [H]: This selects the key one octave above the currently selected key.

* If a MIDI keyboard is connected, you can select a Rhythm Set key by pressing the corresponding key on the MIDI keyboard.

7. Press [ENTER] to execute the Copy – an asterisk ("*") is placed before the destination Rhythm Tone in the display.



8. Press [EXIT] to return to the RHYTHM PLAY page.
- * To specify the currently selected Patch as the copy source, set Source to TEMP.

Chapter 6. Creating a Rhythm Set

Compare Function

You can use the Compare function during the Rhythm Key Copy operation. The Compare function allows you to play the Rhythm Set currently occupying the copy source.

To do so, press [UNDO] to access the RHYTHM COMPARE page. The new Rhythm Set can also be selected from the RHYTHM COMPARE page – however, it is not possible to select patches from XP-A-F. After selecting the desired Rhythm Set, return to the previous page by pressing [UNDO] or [EXIT].

```
RHYTHM  █Number      [UNDO]
COMPARE █User:001 (User Rhythm >
```

Copy source Rhythm Set (group, number, name)

- * *If one of the TEMP Rhythm Sets is selected as the source Rhythm Set (Source), the Compare function is not available.*
- * *Please be aware that when the Compare function plays a Rhythm Set, it may sound slightly different than when it is played normally.*

Rhythm Set Name Copy

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

```
RHYTHM  █Number      [ENTER]
NAME CPY █USER:001 (User Rhythm >
```

Copy source Rhythm Set (group, number, name)

1. Select the Rhythm Set(destination) whose name you wish to copy.
2. Press [UTILITY] to make its indicator light.
3. Press [u] / [d] to select the UTIL 1 page.
4. Use [l] / [r] to make "COPY" blink, and then press [ENTER].
5. Press [u] / [d] to select the PATCH NAME CPY page.
6. Turn the VALUE dial or press [INC] / [DEC] to select the source Rhythm Set.
7. Press [ENTER] to execute the Copy operation.

Chapter 7 Saving a Sound You Create

Registering Favorite Patches 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 wherever they are stored, whether in the XV-3080 itself, on Wave Expansion Boards, or on memory cards. You can register up to 64 Patches in this list.

NOTE

If a Patch on a Wave Expansion Board or memory card is registered in the list and selected, no sound will be produced for the Patch unless the required Wave Expansion Board or memory card is inserted.

1. On the PATCH PLAY page, choose the Patch you want to register.
2. Press VALUE dial.

The FAVORITE LIST page appears.



3. Turn the VALUE dial or press the [INC] or [DEC] buttons to select the desired registration number.

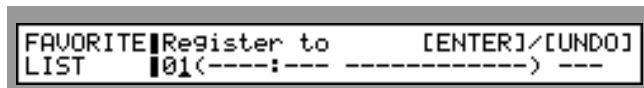
* No data is registered at the factory settings.

MEMO

You can press VOLUME dial to check the sound of the Patch currently being registered.

4. Hold down [SHIFT] and press [ENTER] to execute the registration and return to the PATCH PLAY page.

Pressing [SHIFT] switches the display to the Registration page shown in the figure below.

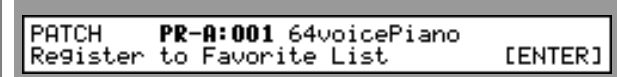


To cancel the registration, press the [EXIT] button.

* To cancel the registration, select the file you want to cancel, and then hold down [SHIFT] and press [UNDO].

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 "COMPLETED" 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 Patches from the FAVORITE LIST

1. Press VALUE dial.

The FAVORITE LIST page appears.

2. Turn the VALUE dial or press [INC]/[DEC] to select the desired Patch.
3. When you press [ENTER], the Patch is selected and you will be returned to the previous page.

* To cancel the selection, press [EXIT].

Saving Edits to the XV-3080's Internal Memory

If you turn the power off or select another Patch, Performance, or Rhythm Set after you have modified a Patch, Performance or Rhythm Set, the changes you have made will be lost. If you wish to preserve the data, store it into the XV-3080's USER memory.

* *Patch, Performance, and Rhythm Set settings cannot be saved directly to memory cards. To save on a memory card, refer to "Transmitting to a Memory Card" (p. 125).*

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  █ Internal Write Protect= ON
PROTECT █
```

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-3080's power is turned off.

Saving Patches (PATCH WRITE)

1. Make sure that the Patch you wish to save is selected.
2. Press [UTILITY] to make its indicator light.
3. Press [▲] or [▼] to select the UTIL 1 page.
4. Use [◀] or [▶] to make "WRITE" blink, and then press [ENTER].
5. Turn the VALUE dial or press [INC]/[DEC] to select the number of the memory location in which you wish to save the Patch (USER area).
6. Press [ENTER] to save the Patch and return to the PATCH PLAY page.

To cancel the procedure, press [EXIT].

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

Compare Function (PATCH)

The Compare function allows you to play the Patch currently occupying the writing destination, so that you can check whether you really want to overwrite it. To play the Patch of the writing destination, press [UNDO] to access the PATCH COMPARE page. You can select the writing destination Patch in this display as well. After selecting the Patch, return to the previous page by pressing [UNDO] or [EXIT].

```
PATCH  █ Number      [UNDO]
COMPARE █ User:001<User Patch >
```

|
Writing destination Patch (group, number, name)

* *Please be aware that when the Compare function plays a Patch, the Patch may sound slightly different than when it is played normally.*

Saving a Performance

1. Make sure that Performance you wish to save is selected.
2. Press [UTILITY] to make its indicator light.
3. Press [▲] or [▼] to select the UTIL 1 page.
4. Use [◀] or [▶] to make "WRITE" blink, and then press [ENTER].
5. Turn the VALUE dial or press [INC]/[DEC] to select the number of the memory location in which you wish to save the Performance (USER area).
6. Press [ENTER] to save the Performance and return to the PERFORM PLAY page.

To cancel the procedure, press [EXIT].

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

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 [▲] or [▼] to select the UTIL 1 page.
4. Use [◀] or [▶] to make "WRITE" blink, and then press [ENTER].

5. Turn the VALUE dial or press [INC]/[DEC] to select the of the memory location in which you wish to save the Rhythm Set (USER area).
6. Press [ENTER] to save the Rhythm Set and return to the RHYTHM PLAY page.

To cancel the procedure, press [EXIT].

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

Compare Function (RHYTHM SET)

The Compare function allows you to play the Rhythm Set currently stored in the selected memory location so that you can make sure you really want to overwrite it. To listen to the stored Rhythm Set, press [UNDO] to display the RHYTHM COMPARE page. On this display, you can also hear a Patch stored in a memory location you are thinking of overwriting. After listening to the Rhythm Set (or Patch), return to the previous page by pressing [UNDO] or [EXIT].

```
RHYTHM  | Number | [UNDO]
COMPARE  | User:001 (User Rhythm )
```

Writing destination Rhythm Set (group, number, name)

* *Please be aware that when the Compare function plays a Patch, it may sound somewhat different than when it is played normally.*

Initializing a Sound

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

* *When you play a Patch, Performance, Rhythm Set or Rhythm Tone, you're actually playing it from the XV-3080'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-3080's settings to their factory values, including the memory locations in its SOUND LIBRARY, perform a Factory Reset. (p. 124)*

Mode (Initialize mode)

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.

* *If the current data is a Patch, Performance or Rhythm Set from PRESET memory (PR-A-F or PR-H(GM)), the factory settings from the same-numbered USER memory location will be copied into the Temporary memory.*

1. Select the Performance, Patch or Rhythm Set you wish to initialize.
2. Press [UTILITY] to make its indicator light.
3. Press [▼] or [▲] to select the UTIL 2 page.
4. Press [◀] or [▶] to make "INIT" blink.
5. Press [ENTER].

The INIT page appropriate to the currently selected data appears in the display.

Patch initialize

```
PATCH  | Mode | [ENTER]
INIT    | DEFAULT
```

Performance initialize

```
PERFORM | Mode | [ENTER]
INIT    | DEFAULT
```

Rhythm Set initialize

```
RHYTHM  | Mode | Key | [ENTER]
KEY INIT | DEFAULT | B 1
```

6. Press [ENTER].

When the initialization is finished, "COMPLETED" appears momentarily in the display, and you are returned to the PATCH PLAY page.

* *The name of the Performance/Patch/Rhythm Set will be displayed as "INIT PERFORM/PATCH/RHYTHM."*

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 Key, and select the percussion instrument sound that you wish to initialize. You can specify the percussion instrument sound by pressing [E]-[H]. (p. 112)

```
RHYTHM | Mode | Key
KEY INIT | DEFAULT | B 1 [ENTER]
```

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.

```
WRITE | Internal Write Protect= ON
PROTECT |
```

Internal (Internal Write Protect)

The Internal Write Protect setting 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-3080'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)

The Exclusive Protect setting prevents System Exclusive messages received from an external MIDI device from rewriting 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.

1. Press [UTILITY] to make its indicator light.
2. Press [▲] or [▼] to select the UTIL 1 page.
3. Use [◀] or [▶] to make "PROTECT" blink, and then press [ENTER].
4. Press [◀] or [▶] to move the cursor beneath the parameter you wish to set.

5. Press [INC] to switch the parameter on; press [DEC] to switch it off.
6. Press [EXIT] to return to the previous page.

Restoring All Settings to Their Defaults

This function resets all the XV-3080's settings to their factory default values.

NOTE

This operation clears the contents of the USER memory. If you wish to preserve any of its contents, you must save them on a commercially available memory card (p. 125) or to an external sequencer (p. 127) or storage device before performing the Factory Reset.

1. Press [UTILITY] to make its indicator light.
2. Press [▼] or [▲] to select the UTIL 2 page.
3. Use [◀] or [▶] to make "FACTORY RESET" blink.
4. Press [ENTER].
The FACTORY RESET page appears.
5. Press [ENTER].
"Are You Sure?" appears.
6. If you're ready to proceed, press [ENTER], and the Factory Reset operation will be executed.

"Executing..." appears in the display, followed by "COMPLETED." You are then returned to the PATCH PLAY page.

* If you wish to cancel the Factory Reset, press [EXIT] in Step 6.

* If Internal Write Protect is turned ON, the following display will appear, and the Factory Reset operation will not be executed.

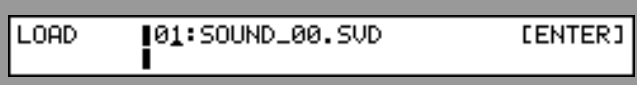
```
WRITE | Internal Write Protect= ON
PROTECT |
```

Change the displayed ON to OFF and press [ENTER] to turn Internal Write Protect off.

"Are You Sure?" will be displayed. Press [ENTER].

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a memory card before loading new data.



```
LOAD | 01: SOUND_00.SVD | [ENTER]
```

1. Press [UTILITY] to make its indicator light.
2. Press [▼] or [▲] to select the UTIL 2 page.
3. Use [◀] or [▶] to make “LOAD” blink, and then press [ENTER].
4. Turn the VALUE dial or press [INC]/[DEC] to select the data file you wish to load.
5. Press [ENTER], and the data will be loaded into the XV-3080.

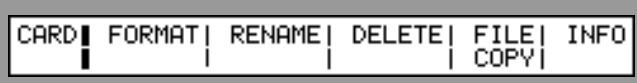
* If you wish to load only a specific portion of the data file, refer to “Transmitting To User Memory” (p. 128).

MEMO

Although Patches, Performances, and Rhythm Sets stored on memory cards can be called up directly for use by using Program Change messages or with the panel controls, they cannot be edited if called up directly using the panel controls or MIDI Exclusive messages. If you want to edit these, first send them to the internal memory before editing.

Other Memory Card-Related Settings (CARD)

The CARD page has the following five functions.



```
CARD | FORMAT | RENAME | DELETE | FILE | INFO  
| | | | | COPY |
```

The following steps describe the basic procedure.

1. Press [UTILITY] to make its indicator light.
2. Press [▼] or [▲] to select the UTIL 2 page.
3. Use [◀] or [▶] to make “CARD” blink, and then press [ENTER].
4. Select the operation – FORMAT, RENAME, DELETE, or INFO – that you want to perform.


For additional instructions, please refer to each item’s description in the manual.

Formatting the Memory Card for the XV-3080 (FORMAT)

Before a newly purchased memory card or a memory card used with another device can be used in the XV-3080, it must be formatted on the XV-3080. Formatting initializes a

memory card so that you can save XV-3080 data on it.

* Please be aware that formatting will erase all the data currently stored on the memory card.



```
CARD | [ENTER]  
FORMAT |
```

Press [ENTER], and the Format operation will be executed.

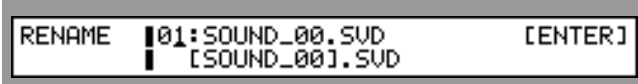
* To cancel the operation, press [EXIT].

Renaming a File (RENAME)

This operation allows you to change the name of a file already stored on the memory card.

You can assign the file a name of up to eight characters. For more detailed information, refer to Step 4 of “Transmitting to a Memory Card (Save)” (p. 125).

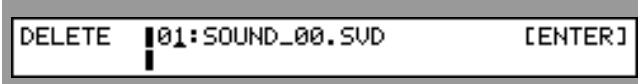
* File name extensions cannot be changed.



```
RENAME | 01: SOUND_00.SVD | [ENTER]  
| [SOUND_00].SVD |
```

Deleting Unwanted Files (DELETE)

Use this operation to delete unwanted files from a memory card.



```
DELETE | 01: SOUND_00.SVD | [ENTER]
```

Turn the VALUE dial to select the unwanted file, and then press [ENTER] to delete it from the card.

* Press [EXIT] to cancel the operation.

Copying Files on One Memory Card to Another Card (File Copy)

You can take files stored on one memory card and copy them to another memory card.

* The copy destination memory card must already be formatted.

NOTE

Always be sure to follow the on-screen instructions when inserting and removing cards during File Copy. Using other procedures in this operation may result in damage to the card.

1. Insert the memory card containing the files you want to copy into the slot, then press [Enter].

```
FILE   | Please Insert Source Card
COPY   |                               [ENTER]
```

2. Rotate the VALUE dial to select the file that will be copied, and then press [ENTER].

```
FILE   | Src 01:SOUND_00.SVD   [ENTER]
COPY   | Please Insert Destination Card
```

3. When the display shown above appears, insert the copy destination card and press [ENTER].
4. Press [◀] or [▶] to move the cursor, and then create the name by turning the VALUE dial or pressing the [INC] or [DEC] buttons to select the desired characters (up to 8 characters). For more detailed information, refer to Step 4 of "Transmitting to a Memory Card (Save)" (p. 125).

```
FILE   | Src 01:SOUND_00.SVD   [ENTER]
COPY   | Dst 00:[SOUND_00].SVD [SHIFT]
```

5. Press [ENTER] to execute the File Copy, and the following display will appear.

```
FILE   | Continue? YES=[ENTER]/NO=[EXIT]
COPY   | Dst 01:SOUND_00.SVD
```

When repeating the copy procedure with another file or other data, press [ENTER]. To exit the operation, press [EXIT].

Checking the Contents of Memory Card (INFO)

You can view the number of files on a memory card, its remaining free memory, and the size of each file. You can also change and delete registration of groups (CD-A through CD-H).

```
CARD   | 01:SOUND_00.SVD (A)   65KB
INFO   | 1files 3844KB free [SHIFT]
```

Pressing [A]-[H] in this window displays the files registered to the applicable group. The display does not change if there is no data registered to the group corresponding to the button pressed.

Pressing [SHIFT] switches the display to the display shown in the figure below.

```
CARD   | 01:SOUND_00.SVD (A)   65KB
INFO   | ***DEFGH Xchg=[A]-[H]/[UNDO]
```

The registered group will be indicated as "*".

- Changing Groups

Rotate the VALUE dial to select the source file to be changed. Hold down [SHIFT] and press one of the buttons [A]-[H] to substitute the files for the files registered in the applicable group.

- Deleting Groups

Rotate the VALUE dial to select the file to be deleted. Hold down [SHIFT] and press [UNDO] to execute the deletion of the group.

Transmitting Data to an External MIDI Device (XFER)

You can transmit sound generator or System settings that are in the XV-3080's memory – or stored on a memory card – to an external MIDI device or to the XV-3080'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-3080s 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-3080 data.

```
TRANSFER | Type | Block | [ENTER]
TO MIDI  | ALL | USER | →MIDI
```

Data type
Source block
Destination

While data is being transmitted, the following display will appear.

```
TRANSFER | Executing...
TO MIDI  | ↓PERFORMUSER: 01 →MIDI
```

To cancel data transmission, press [EXIT].

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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 “PATCH USER:001–020.”

Type	Block		
ALL	USER		
	TEMP		
PERFORM	USER	01–64	
	TEMP	-PATCH	*1
		+PATCH	*2
	CTRL		
PATCH	USER	001–128	
	TEMP		
RHYTHM	USER	001–002	
	TEMP		
SYSTEM	USER		

* 1 The current Performance

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

Type (Data Type)

This specifies the type of data to be transmitted.

- ALL** : Performance, Patch, and Rhythm Set
PERFORM : Performance
PATCH : Patch
RHYTHM : Rhythm Set
SYSTEM : System

Block (Source Block)

This specifies the source of the data to be transmitted.

- USER**: Data from USER memory will be transmitted.
TEMP: Data in Temporary memory will be transmitted.
CTRL: Transmit messages for Performance Bank Select, Performance Program Change, and Volume and Pan messages for the Parts whose Rx parameter (PERFORM/MIDI/MIDI) is turned on.

Destination

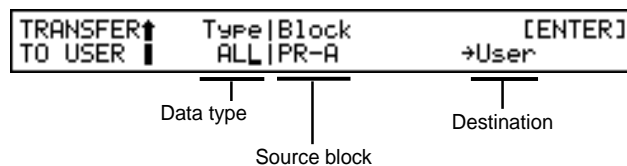
This sets the MIDI transmission destination.

1. Press [UTILITY] to make its indicator light.
2. Press [▼] / [▲] to select the UTIL 1 page.
3. Press [◀] / [▶] to make “XFER” blink.

4. Press [ENTER].
5. Press [◀] / [▶] to move the cursor to the Destination position, and then select MIDI by turning the VALUE dial.
6. Press [◀] / [▶] to move the cursor to any other desired parameter.
7. Turn by the VALUE dial or by press [INC]/[DEC], select the desired value.
8. Press [ENTER] to execute the data transmission.
 * To interrupt the transmission of data, press [EXIT].
9. Press [EXIT] to return to the previous page.

Transmitting to User Memory

You can transmit Patch, Performance or Rhythm Set settings to the USER memory and System settings to the System memory. By loading sound data from a memory card or Wave Expansion Boards to USER memory, you can bring new sounds into a Performance.



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 “PATCH PR-A:001–001.”

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)

Block PATCH PR-A:001–005

Destination User: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		
ALL	PR-A, B		*1
PERFORM	USER *2	01-64	
	PR-A, B *3	01-32	
	CARD	01-64	*6
PATCH	USER *2	001-128	
	PR-A-F *3	001-128	
	CARD	001-128	*5
	XP-A-F		*4
RHYTHM	USER *2	1-4	
	PR-A-F*3	1-2	
	CARD	1-4	*5
	XP-A-F		*4
SYSTEM	CARD		*6
F-LIST	CARD		*6

*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 PR-H uses GM data, and cannot be transmitted.

*4 Depends on the Wave Expansion Board installed

*5 After designating the file, set the range specifications for the block being transmitted.

*6 Specify the file.

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

Type (Data Type)

This specifies the type of data to be transmitted.

ALL	:Performance, Patch, and Rhythm Set
PERFORM	:Performance
PATCH	:Patch
RHYTHM	:Rhythm Set
SYSTEM	:System
F-LIST	:Favorite List

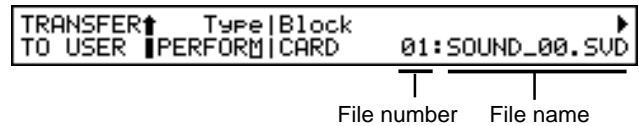
Block (Source Block)

This specifies the source of the data to be transmitted.

- USER**:Data from USER memory will be transmitted.
- PR-A-F**:Preset A-F data will be transmitted.
- XP-A-F**: Data from a Wave Expansion Board will be transmitted.

* XP-A-F can be selected only if the corresponding Wave Expansion Board is installed.

CARD: Performance/Patch/Rhythm Set/Favorite List/System data stored on a memory card will be transmitted.



Destination

This 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.

1. Press [UTILITY] to make its indicator light.
 2. Press [▼] / [▲] to select the UTIL 1 page.
 3. Press [◀] / [▶] to make "XFER" blink.
 4. Press [ENTER].
 5. Press [▼] / [▲] to select the TRANSFER TO MIDI page.
 6. Press [◀] / [▶] to move the cursor to the next desired parameter.
 7. Turn the VALUE dial or by press [INC]/[DEC], select the desired value.
 8. Press [ENTER] to execute the data transmission.
- * To interrupt the transmission of data, press [EXIT].
9. Press [EXIT] to return to the previous page.

Chapter 8 Other Settings and Checking Status

Adjusting the Overall Tuning of the XV-3080

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.

Master Tune

This adjusts the overall tuning of the XV-3080. The setting is expressed as the frequency played by the A4 key.

KeyShift (Master Key Shift)

This shifts the overall pitch of the XV-3080 in semitone steps.

1. Press [SYSTEM] to make its indicator light.
2. Press the [TUNE] function select button (displayed in gray) to make its button indicator light.
3. Use [▲]/[▼] to select the SYSTEM TUNE page.
4. Press [◀]/[▶] to move the cursor to the number underneath the item you wish to set.
5. Turn the VALUE dial or press [INC] / [DEC] to select the desired value.

* *If making a mistake requires you to press [UNDO], the current parameter's value will return to the setting that was in effect when the cursor was first moved to the parameter. Press [UNDO] again to restore the new setting value.*

6. Press [EXIT] to return to the previous page.

Scale Tune

The XV-3080 allows you to use temperaments other than equal temperament. The pitch of each note can be adjusted in 1-cent steps (1/100th of a semitone) relative to its equal-tempered pitch.

One set of Scale Tune settings can be created in Patch mode. In Performance mode and GM system 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.*

Scale Tune (Scale Tune Switch)

Turn this on when you wish to use a tuning scale other than equal temperament.

●The settings in Patch mode (PATCH SCALE)

1. Press [PATCH] to make its indicator light.
2. Press [SYSTEM] to make its indicator light.
3. Press the [TUNE] function select button to make its indicator light.
4. Use [▲]/[▼] to select the SYSTEM TUNE page.
5. Use [◀]/[▶] to move the cursor to "Scale Tune."
6. Press [Inc] to turn the parameter on.
7. Use [▲]/[▼] to select the PATCH SCALE page.
8. Press [◀]/[▶] to move the cursor to the number underneath the note you wish to re-tune.
9. Use the VALUE dial or [INC] / [DEC] to select the desired value.

* *If you made a mistake in setting the parameter value, press [UNDO] to restore the parameter to its original value.*

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

●The Setting In Performance mode/GM mode (KEY SCALE)

1. Press [PERFORM] or [GM] to make its indicator light.
2. Press [SYSTEM] to make its indicator light.
3. Press the [TUNE] function select button to make its indicator light.
4. Use [▲]/[▼] to select the SYSTEM TUNE page.
5. Use [◀]/[▶] to move the cursor to "Scale Tune."
6. Press [Inc] to turn the parameter on.
7. Use [▲]/[▼] to select the KEY SCALE page corresponding to the note you wish to set.
8. Use [◀]/[▶] to select the Part for which you wish to make settings.
9. Use the VALUE dial or [INC] / [DEC] to select the desired value.

* *If you make a mistake in setting the parameter value, you can press [UNDO] to restore the parameter to its original value.*

10. Press [EXIT] to return to the PERFORM/GM PLAY page.

<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 (Tonic is C)>

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-3080, you can use Arabian temperament in the three keys of G, C and F.

Example:

Note name	Equal temperament	Pure temperament (tonic C)	Arabian scale
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
Eb	0	+16	-12
E	0	-14	-51
F	0	-2	-8
F#	0	-10	+43
G	0	+2	-4
G#	0	+14	+47
A	0	-16	0
Bb	0	+14	-10
B	0	-12	-49

Making MIDI-Related Settings

Setting the MIDI Channel

The XV-3080 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, it is necessary to match the MIDI channels of the transmitting device (MIDI keyboard etc.) to the XV-3080's MIDI reception channels.

Patch/Rhythm Set

When using an external MIDI device – such as a MIDI keyboard – to play a Patch or Rhythm Set, use the following procedure to set up the XV-3080 so that it can switch Patches or Rhythm Sets in response to received MIDI messages.

1. Press [SYSTEM] to make its indicator light.
2. Press the [MIDI] function select button (displayed in gray) to make its button indicator light.
3. Use [▲]/[▼] to select the setting page for "Patch/Rhythm Rx Ch."
4. Press [◀]/[▶] to move the cursor to the number underneath "Patch/Rhythm Rx Ch."
5. Use the VALUE dial or [INC]/[DEC] to select the desired MIDI reception channel.
6. Press [EXIT] to return to the previous page.

Parts of a Performance

Refer to "Establishing a Part's MIDI Settings (MIDI) (p. 106)."

Selecting Performances Using MIDI Messages

If you wish to use MIDI messages from an external device to select Performances on the XV-3080, you must set the transmission channel of the external device to match the XV-3080's **Perform Ctrl Ch** – the Performance Control channel.

* When you perform a Factory Reset operation, **Perform Ctrl Ch** is reset to "16." If you wish to change this, use the following procedure.

1. Press [SYSTEM] to make its indicator light.
2. Press the [MIDI] function select button (displayed in gray) to make its button indicator light.

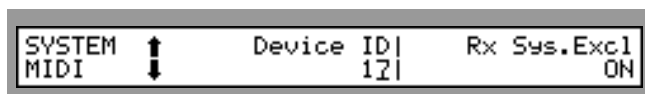
3. Use [▲]/[▼] to select the setting page for Perform Ctrl Ch.
4. Press [◀]/[▶] to move the cursor to the number underneath "Perform Ctrl Ch."
5. Use the VALUE dial or [INC] / [DEC] to select the desired Performance Control channel.
6. Press [EXIT] to return to the previous page.

Making Global Settings

Device ID Number Setting

When transmitting or receiving System Exclusive messages, set this parameter to match the device ID number of the other MIDI device.

1. Press [SYSTEM] to make its indicator light.
2. Press the [MIDI] function select button (displayed in gray) to make its button indicator light.
3. Use [▲]/[▼] to select the setting page for Device ID.



4. Press [◀]/[▶] to move the cursor to the number underneath "Device ID."
5. Use the VALUE dial or [INC] / [DEC] to select the desired device ID number.
6. Press [EXIT] to return to the previous page.

MIDI Transmit/Receive Switch Settings (SYSTEM MIDI)

You can set the following parameters by pressing [SYSTEM] – lighting its indicator – and then pressing the [MIDI] function select button.

Rx Program Chg (Receive Program Change Switch)

This specifies whether Program Change messages will be received (ON) or not (OFF).

Rx Bank Select (Receive Bank Select Switch)

This specifies whether Bank Select messages will be received (ON) or not (OFF).

Rx GM On (Receive GM-ON Exclusive Switch)

This specifies whether GM-ON (General MIDI System On) messages will be received (ON) or not (OFF).

Rx GM2 On (Receive GM2-ON Exclusive Switch)

This specifies whether GM Level2-ON (General MIDI Level 2 System On) messages will be received (ON) or not (OFF).

Rx GS Reset (Receive GS Reset Exclusive Switch)

This specifies whether GS Reset messages will be received (ON) or not (OFF).

Rx Excl (Receive System Exclusive Switch)

This specifies whether System Exclusive messages will be received (ON) or not (OFF).

Tx Edit (Transmit Edit Data Switch)

When Patch, Performance or Rhythm Set settings are modified, you can specify whether the modified settings will be transmitted as System Exclusive data (ON) or not (OFF).

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 (MIDI) (p. 106)."

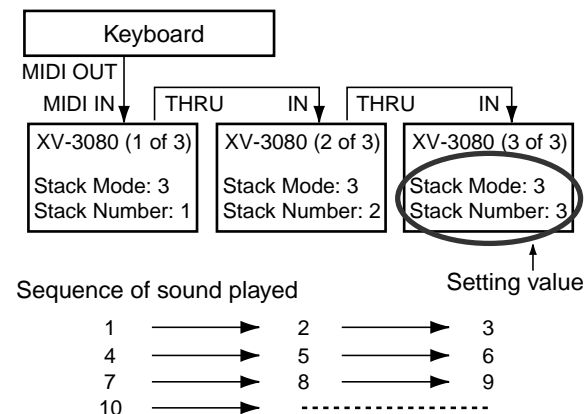
For more about setting the MIDI response of Tones in a Patch, refer to "CTRL Rx MIDI (Tone control receive MIDI) (p. 99)."

For more about setting the MIDI response of Rhythm Tones in a Rhythm Set, refer to "Other Settings (CONTROL)/Rx MIDI (Receive MIDI)" (p. 119).

Connecting Two or More XV-3080s to Increase Polyphony

The Stack function allows you to combine two or more XV-3080 units to increase the number of voices that can be played simultaneously. You can connect and use up to eight XV-3080s.

Usage with Three Connected Units



Stack Mode OFF/2-8

When using more than one XV-3080, set this parameter to 2-8. When not using the Stack feature, set the parameter to OFF.

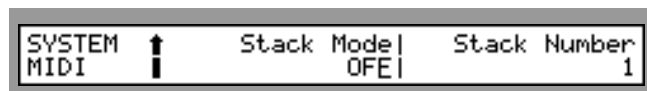
If Stack mode is turned off, the Stack function will not operate, and each XV-3080 will attempt to sound all of the note messages which it receives.

Stack Number 1-8

When the Stack feature is enabled, this parameter selects the XV-3080 that is to function as the primary/first unit - this is the XV-3080 that will sound the first 128 voices.

* *The Stack function will not operate when using Patches in which KEY MODE Assign is set to MONO or whose PORTAMNT (Portamento) Switch is on (PATCH KEY MODE page), or for Rhythm Sets. Patches for which the KEY MODE Assign is MONO or whose PORTAMNT (Portamento) Switch is on will be sounded by the first XV-3080, and Rhythm Sets will be sounded by the second XV-3080.*

1. Press [SYSTEM] to make its indicator light.
2. Press the [MIDI] function select button (displayed in gray) to make its button indicator light.
3. Use [▲]/[▼] to select the setting page for Stack Mode.



4. Use [◀]/[▶] to move the cursor to "Stack Mode."
5. Rotate the VALUE dial or press [INC] / [DEC] to set the number of units.
6. Use [◀]/[▶] to move the cursor to "Stack Number."
7. Turn the VALUE dial or press [INC] / [DEC] to designate the first XV-3080.
8. Press [EXIT] to return to the previous page.

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.

SYS CTRL ASSIGN 1/2 (System Control Assign)

Control 1-4 (Control Source)

OFF: No Controller is used.

CC01-95: Controller numbers 1-95 (except for 32).

BENDER: Bender

AFTERTOUC: Aftertouch

1. Press [SYSTEM] to make its indicator light.
2. Press the [CONTROL] function select button (displayed in gray) to make its button indicator light.
3. Use [▲]/[▼] to select the setting page for SYS CTRL ASSIGN1/2.
4. Use [◀]/[▶] to move the cursor to "Control(Control Source)."
5. Use the VALUE dial or [INC]/[DEC] to select the desired MIDI controller.
6. Press [EXIT] to return to the previous page.

* *The functions normally performed by many of the MIDI control-change messages are defined in the MIDI specification. The XV-3080 allows you to use control-change messages without regard to their officially defined function, so consider carefully the ramifications when choosing controllers.*

Making Overall Settings

The following three overall settings can be made.

Adjusting the Display Brightness

LCD (LCD Contrast) 1-10

This adjusts the contrast/brightness of the display. Higher values will make the characters darker.

Setting the State of the XV-3080 When Its Power Is Turned On

PowerUp (Power Up Mode)

This sets the condition of the XV-3080 when its power is turned on.

DEFAULT: The XV-3080 will be ready to play Patch USER:001.

LAST: The XV-3080 will power up exactly as it was when it was turned off.

Setting What Happens to Notes When a New Patch or Rhythm Set is Selected

Patch Remain (Patch remain switch)

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 PATCH KEY MODE and other settings received via MIDI are passed on. For details, refer to the "MIDI Implementation (p. 173)."

Use the following procedure to perform the three actions listed above.

1. Press [SYSTEM] to make its indicator light.
2. Press the [SETUP] function select button (displayed in gray) to make its button indicator light.
3. Use [▲]/[▼] to select the page containing the parameter you wish to set.
4. Use [◀]/[▶] to move the cursor to the parameter.
5. Use the VALUE dial or [INC] / [DEC] to select the desired value.
6. Press [EXIT] to return to the previous page.

Confirming the Current Conditions (INFO)

On this display, you can view the names of the installed Wave Expansion Boards and check the status of the XV-3080's internal battery.

INFO EXP (Information Expansion Board)

The display shows the names of Wave Expansion Boards installed in slots EXP A-F.

Slots without any boards installed are shown as "-----."

BATTERY CHECK

The XV-3080 contains a battery that retains the data in its internal memory when the unit's power is turned off. This display allows you to check the battery voltage. If the display says "OK," there is sufficient voltage. If the display says "LOW," the battery voltage has run down. Contact your nearby Roland service station as soon as possible to have the battery replaced.

The following procedure is used for both purposes.

1. Press [SYSTEM] to make its indicator light.
2. Press the [INFO] function select button (displayed in gray) to make its button indicator light.
3. Press [▲] / [▼] to select the screen containing the parameter you want to check.
4. Press [EXIT] to return to the previous page.

Chapter 9 Examples of Applications Using the XV-3080

Controlling the XV-3080 in Realtime With 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 the Multi-Effects Settings From an External MIDI Device

The parameters that can be changed via MIDI are predetermined according to the selected Multi-Effects (MFX) Type.

This applies to the MFX Type parameters described in pages 36 to 70 that have an appended “#” mark.

1. Select the Patch or Performance you wish to use.
2. Press [EFFECTS] to make its indicator light.
3. Press [▲] / [▼] to select the MFX TYPE page, and select the type of Multi-Effect you wish to use.

In a Performance, you can select the Multi-Effects for a Part using the Source parameter.

4. Use [▲] / [▼] to select the PATCH MFX CTRL page for a Patch, or select the PERFORM MFX CTRL page for a Performance Part.

* *You cannot select these pages when the Type is set to “THROUGH.”*

5. Press [◀] / [▶] to move the cursor to the parameter that you wish to adjust.
6. Turn the VALUE dial or press [INC] / [DEC] to select the desired value.

PATCH MFX CTRL (Patch MFX Control)

Control 1–4 (MFX Control 1–4 Source)

OFF: No controller is used.

CC01–95: Controller numbers 1–95 (except for 32)

BENDER: Pitch Bend

AFTERTOUC: Aftertouch

SYS-CTRL 1–4: System control (Control 1–4)

Destination

This selects the Multi-Effects parameter to be controlled using the MFX Control 1–4 source.

Sens (MFX Control Sens) -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.

Modifying Tone Settings

You can use the Matrix Control parameter to control Tone settings in realtime.

Selecting the MIDI Messages Used for Control and the Parameters to Be Changed

1. Select the Patch you wish to use.
2. Press [CONTROL] to make its indicator light.
3. Press [▲] / [▼] to select the MATRIX CTRL SRC page.
4. Turn the VALUE dial or press [INC] / [DEC] to set Control 1–4.
5. Press [▲] / [▼] to select the MATRIX CONTROL page containing the control source destination you want to set.
6. Press [◀] / [▶] to move the cursor to the parameter you wish to set.
7. Turn the VALUE dial or press [INC] / [DEC] to specify the parameter to be controlled (Dest), the control sensitivity (Sns) and the desired Tone (Tone).

MATRIX CTRL SRC (Matrix control source)

If you wish to use controllers to control a specific Tone parameter, select the controller on this page. Four control sources are assigned to each Patch.

Control 1-4 (Matrix control 1-4 source)

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 specified here, select SYS-CTRL1-4, and then select 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

AFTERTOUCH

SYS-CTRL1: Syetem Control 1

SYS-CTRL2: Syetem Control 2

SYS-CTRL3: Syetem Control 3

SYS-CTRL4: Syetem Control 4

VELOCITY

KEYFOLLOW

TEMPO

LFO1

LFO2

PITCH-ENV: Pitch Envelope

TVF-ENV: TVF Envelope

TVA-ENV: TVA Envelope

MATRIX CTR1-4 (Matrix control 1-4)

This selects the parameters controlled in Matrix Control Source 1-4 and the Sens settings, as well as the Tone to which they are applied. Up to four parameters can be specified for each controller and controlled simultaneously.

The upper line of the display shows the name of the Control Source selected on the MATRIX CTRL SRC page.

DEST1-4 (Destination 1-4)

Dest: This selects the parameters to be controlled.

OFF: No control

PITCH

TMT

EFFECTS parameters ([PATCH]-[EFFECTS] p. 21)

DRY LEVEL

CHORUS SEND

REVERB SEND

AFX CTRL1

AFX CTRL2

AFX CTRL3

AFX CTRL4

WAVE parameter ([PATCH]-[WAVE] p. 91)

FXM DEPTH

LFO parameters ([PATCH]-[LFO] p. 97)

LFO1 PCH DEPTH

LFO2 PCH DEPTH

LFO1 TVF DEPTH

LFO2 TVF DEPTH

LFO1 TVA DEPTH

LFO2 TVA DEPTH

LFO1 PAN DEPTH

LFO2 PAN DEPTH

LFO1 RATE

LFO2 RETE

PITCH parameters ([PATCH]-[PITCH] p. 92)

PIT ENV A-TIME

PIT ENV D-TIME

PIT ENV R-TIME

TVF parameters ([PATCH]-[TVF] p. 93)

CUTOFF

RESONANCE

TVF ENV A-TIME

TVF ENV D-TIME

TVF ENV R-TIME

TVA parameters ([PATCH]-[TVA] p. 95)

LEVEL

PAN

TVA ENV A-TIME

TVA ENV D-TIME

TVA ENV R-TIME

Sns: This adjusts the amount of change that will occur 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 selected. 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.

Tone: This selects the Tone to be controlled using the two previous parameter settings. “*” activates the control of a Tone, “*” de-activates it, and “R” reverses the (+) or (-) characteristic of the change being applied.

Applications for Patches

Syncing the LFO Cycle to System Tempo

1. Select the Patch you wish to synchronize on the PATCH PLAY page.
2. Set the Clock Source parameter (PATCH TEMPO page ([PATCH]-[COMMON])) to SYSTEM.
3. Set the beat length of the RATE (LFO 1, 2 WAVE page ([PATCH]-[LFO])) of each Tone to match the System Tempo. This establishes a 1:1 relationship between the LFO Rate and System Tempo. If, for example, you wanted the LFO Rate to always be twice the speed of the System Tempo, you would set its Rate to a value that is twice the value of the System Tempo.
4. Set the Clock Source parameter (SYSTEM SETUP page (SYSTEM)-[SETUP]) to INT.
 - * *When the Clock Source parameter is set to MIDI, you can synchronize the LFO cycle to an external MIDI device.*
5. If the System Tempo (SYSTEM SETUP page (SYSTEM)-[SETUP]) changes, the LFO Rate changes along with it.
6. Set the modulation depth as desired using LFO DEPTH1:2 page ([PATCH]-[LFO]) for each Tone.

Modifying Multi-Effects to Match the System’s Tempo

You can modify Multi-Effects parameter values in time with the System Tempo when you have selected the following values for the Type MFX parameter.

Type	MFX Parameter
16: STEP-FLANGER	Step Rate
19: TRIPLE-TAP-DELAY	Delay L-R
20: QUADRUPLE-TAP-DELAY	Delay 1-4

Here is an example in which STEP-FLANGER is used for the Multi-Effects.

1. Select a Patch on the PATCH PLAY page.
2. Set its Clock Source (PATCH TEMPO page ([PATCH]-[COMMON])) to SYSTEM.
3. Make sure that Type (PATCH MFX TYPE page ([PATCH]-[EFFECTS])) is set to STEP-FLANGER. If not, reset it so that it is.
4. Make sure that Step Rate (PATCH MFX TYPE page ([PATCH]-[EFFECTS])) is set to a note – not a numerical – value. If necessary, reset it so that it is.
5. Set Clock Source (SYSTEM SETUP page (SYSTEM)-[SETUP]) to INT.
 - * *When 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 SETUP page (SYSTEM)-[SETUP]) changes, the STEP-FLANGER’s Step Rate will change along with it.

Making a Tone’s Delay Time Match the System Tempo

1. Select a Patch on the PATCH PLAY page.
2. Set Clock Source (PATCH TEMPO page ([PATCH]-[COMMON])) to SYSTEM.
3. Set Time (PATCH/WAVE/TONE DELAY) to a note length – not a numerical value – in relation to the synchronization tempo.
4. Set Clock Source (SYSTEM SETUP page (SYSTEM)-[SETUP]) to INT.
 - * *When Clock Source is set to MIDI, you can synchronize the Tone’s delay to the tempo of an external MIDI device.*
5. When the System Tempo (SYSTEM SETUP page (SYSTEM)-[SETUP]) changes, the Tone’s delay time changes along with it.

Using a Pedal Switch to Modify the Rotary Speed of the Rotary Effect

1. Connect a pedal switch (DP-2, DP-6, etc.) to your external device (MIDI keyboard, etc.).
2. Set the pedal switch of the external MIDI device to generate FOOT-TYPE (CC4) control-change messages.
 - * To learn how to set up the pedal switch, refer to the external MIDI device's owner's manual.
3. Select PR-A:050 Perky B on the PATCH PLAY page. This Patch uses ROTARY as its Multi-Effect.
4. Go to the PATCH MFX CTRL page ([PATCH]-[EFFECTS]) and set 1:Source to FOOT-TYPE.
5. Set Destination to SPEED, and Sens 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 page, select a Patch that uses a phrase loop.
2. Set Clock Source (PATCH TEMPO page ([PATCH]-[COMMON])) to SYSTEM.
3. Call up the WAVE page ([PATCH]-[WAVE]). Press TONE SELECT [1]-[4] to find the Tone that uses phrase-loop waveforms. The waveform name appears at the right side of the display (the upper line shows the left side of the stereo wave; the lower line shows its right side). Waveform names that have a BPM number in the first part of the name (such as "132:WAVE NAME") are phrase loop waveforms.
4. Go to the TONE DELAY page ([PATCH]-[WAVE]).
5. Set Time to 0.

If you select a value other than 0, a delay will be applied, and you will not be able to play the Patch normally.

6. Set Clock Source (SYSTEM SETUP page ([SYSTEM]-[SETUP])) to INT.
 - * When Clock Source is set to MIDI, you can synchronize the phrase loop to the tempo of an external MIDI device.
7. When the System Tempo (SYSTEM SETUP page ([SYSTEM]-[SETUP])) changes, the speed of the phrase loop changes along with it.
 - * The phrase loop will sound at the system's tempo regardless of which key you press. The settings for pitch and FXM will be ignored.

Changing the 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 from an external MIDI device connected to the XV-3080. This lets you control fade-ins and fade-outs, open and close filters, and exercise other controls in real time 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. 173).
- * To changing multi-effects, reverb, or chorus effects from an external MIDI device, send a "System Exclusive message" (p. 176).

Making the Volume Change (p. 173)

- Level: Controller number 7

Changing the Stereo Location (p. 174)

- Pan: Controller number 10

Applying Portamento (p. 174)

- Portament: Controller number 65 (Portamento switch), Controller number 5 (Portamento time)

Changing Sounds' Attack and Release Time (p. 174)

- Rel: Controller number 72
- Atk: Controller number 73

Changing the Cutoff Frequency (p. 174)

- Cut: Controller number 74

Changing the Resonance(p. 174)

- Res: Controller number 71

Changing the Amount of Internal Chorus/ Reverb (p. 175)

- Chorus: Controller number 93
- Reverb: Controller number 91

Changing the Pitch (p. 175)

- 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 with the 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 the more the value decreases below 64.*
- * *When changing the Fine parameter, set the amount of change in pitch with the 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.*

Specifying the Range of Pitch Bend (p. 175)

- BendRng: 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 the volume of which you want to change.

- * *For information on how to make the settings, refer to the owner’s manual for your external MIDI device.*
2. Operate the external MIDI device (adjust the controls, play back using the sequencer, etc.) to send the settings.
- * *Not only is the actual sound played changed, but the values appearing in the display are changed as well.*

About RPN

“RPN” (Registered Parameter Number) is an extension message prepared by Control Change message.

Use RPN when using an external MIDI device to change the XV-3080’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-3080 that a setting using RPN is to follow, and the RPN LSB (Control Number 100) value tells the which parameter is to be set. Lastly, the Data Entry (Control Change 6) value sets the degree of change.

Once the XV-3080 has been received an RPN parameter, all further Data Entry messages on that MIDI channel are considered to apply to that parameter. In order to prevent accidents, when the desired setting has been made for the parameter, it is recommended 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, please refer to the “MIDI Implementation” (p. 173).

Controlling the TMT with the LFO and Changing the Tone's Cycle Time

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 is played is based on the LFO1's amplitude value.

1. Select "PR-E:043 Morph Pad" on the PATCH PLAY page.
2. In the TMT VEL RANGE page (PATCH-COMMON, p. 86), set the Lower and Upper Velocity Range values for Tones 1 and 2.

* In this case, you can use the Palette function (p. 90) to display the Velocity Range settings of four Tones in one screen, making it easier to adjust these settings.

Set the Velocity Range for both of the tones as follows.

	L	:	U
tone = 1	1	:	64
tone = 2	65	:	127

3. In the TMT VEL RANGE page (PATCH-COMMON, set the Velocity Fade L.Fade and U.Fade settings to 10 for Tones 1 and 2.

This makes the Tones fade in and out smoothly outside their velocity ranges.

4. On the TMT VELO CONTROL page (PATCH-COMMON), set the TMT Velocity Control to OFF.

This setting disables the Velocity Range 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. In the CTRL&BENDER page (PATCH-MIDI, p. 99), set TMT Ctrl Sw 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 Velocity Control]	ON	OFF	ON	OFF
[TMT Ctrl 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 by 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 Velocity Control settings are given priority when both TMT Velocity Control and TMT Ctrl Sw are set to ON.

6. Select LFO1 as the Control1 source in the MATRIX CTRL SRC page (PATCH-CONTROL, p. 100).
7. In the MATRIX CONTROL1 page (PATCH-CONTROL), set DEST1 as shown below.

Dest: TMT

Sns: +63

Tone: o o _ _ (applied to Tone 1 and 2)

8. In each Tone's LFO1 WAVE page (PATCH-CONTROL), set the Form and Rate for each of the Tones as shown below.

	tone=1	tone=2
Form:	SIN	SIN
Rate:	64	127

9. Select the Number for Tones 1 and 2 on the WAVE page ([PATCH]-[WAVE], p. 91).

* You can use the Palette function (p. 90) to display the Number for four Tones in one window, making it easier to make these settings.

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

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.

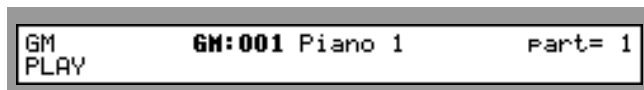
Using the XV-3080 as a General MIDI Sound Module

The XV-3080 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. Press [GM] in MODE to call up the GM PLAY page. When you switch the XV-3080 into GM mode, the sound generator initializes itself for basic GM System settings.
2. To change the current Part, press [◀] or [▶].
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-3080's sound generator is initialized in the following situations:

- When the XV-3080 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-3080's power is turned on.

- When you execute the GM Initialize function (p. 145).

Playing Back a GM Score

When the XV-3080 is in GM mode, it plays back GM scores correctly. But beyond this, the XV-3080 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.

In addition, although the XV-3080 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.

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-3080 will switch itself to GM mode. But if you play back a GM score starting in the middle of a song, XV-3080 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-3080 to GM mode before playing back a GM score.

Muting a Specific Part

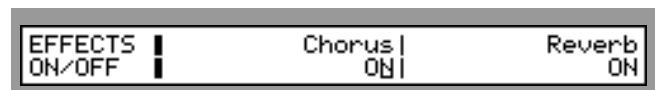
When you switch over to GM mode, all Parts will be set to receive MIDI messages. To turn off a specific Part so that it will not sound, set the Receive Switch to OFF for the Part.

First, press [RX] to make its indicator light.

At this time, the on/off setting of each Part will be shown by the indicators of PART SELECT [1/9]–[8/16]. When the [1-8/9-16] indicator is dark, the function button indicators will indicate the status of Parts 1–8. When the [1-8/9-16] indicator is lit, the function button indicators will indicate the status of Parts 9–16. Lit is on, and dark is off.

Press PART SELECT [1/9]–[8/16] to turn the Part on/off.

Turning Effects On/Off



1. Press [EFFECTS ON/OFF].

- Use [◀] or [▶] to select the effect that you wish to turn on/off.
- Pressing [INC] turns it on and pressing [DEC] turns it off.

Chorus

Chorus adds depth and spaciousness to the sound.

Reverb

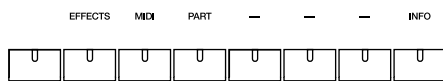
Reverb adds reverberation characteristics of hall or auditorium ambiances.

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.

* When GM mode is initialized (p. 145), all these settings will be lost.

- Press [GM] to enter GM mode.
- Press the FUNCTION SELECT buttons to choose the page group you want to set.



- Press [▲] or [▼] to choose the page.
 - If you have selected a parameter display that can be set independently for each Part, the number of the Part selected for editing will be shown in the display. To select a different Part, use [1-8/9-16] and [1/9]-[8/16] to select a Part.
 - Use [◀] or [▶] to move the cursor to the parameter you wish to modify.
 - Use the VALUE dial or [INC] / [DEC] to modify the value.
- * If you've made a mistake in setting the parameter value or you don't like the changes, just press [UNDO] to restore the value to what it was.
- If you wish to move to another page group, use the desired Function Select button to choose a group.
- * You can also move to another display group by holding down [SHIFT] and using [◀] or [▶].
- Repeat steps 2-8 to complete a GM mode settings.
 - When you finish making settings, press [EXIT] to return to the GM PLAY page.

* You can also use the Palette display in the same manner when you edit in Performance mode (p. 109).

■ Making Settings for Each Part (PART)

PART PATCH

```
PART 1 | Type | Number
PATCH ↓ | PAI | 001 (64voicePiano)
```

You can select the Patch or Rhythm Set that will be assigned to each Part.

Type (Part Type) PAT/RHY

Selects the Patch (PAT) or Rhythm Set (RHY) the Part will play.

Number

Specifies the number of the Patches (1-256) or Rhythm Set (1-4) that is assigned to each Part.

PART SETTING

```
PART 1 | Volume | Pan | Coarse | Fine
SETTING ↓ | 100 | 0 | 0 | 0
```

Make volume, pan, and pitch settings for each Part.

Volume 0-127

Specifies the volume of each Part.

Pan RANDOM/L63-63R

Specifies the stereo location of the sound of each Part. L63 is hard left, 0 is center, and 63R is hard right.

If you modify the settings of the Volume parameter or Pan parameter, they will be reflected in the following INFO group displays.

Coarse (Coarse Tune) -48- +48

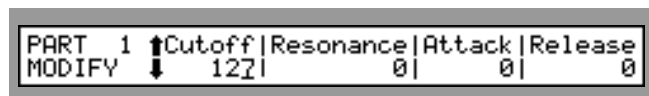
Adjusts the pitch of the Part's sound up or down in semitone steps over a range of +/-4 octaves.

Fine (Fine Tune) -50-+50

Make fine adjustments in 1-cent steps to the pitch specified in Coarse Tune.

One cent is 1/100th of a semitone.

PART MODIFY



You can determine how a Part will pay 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.

Cutoff (Part Cutoff Offset) -64--+63

This sets ratio by which the relative change in the TVF cutoff frequency value for the tone selected for the part is determined.

Resonance (Part Resonance Offset) -64--+63

This sets ratio by which the relative change in the TVF Resonance value for the tone selected for the part is determined.

Attack (Part Attack Time Offset) -64--+63

This sets ratio by which the relative change in the TVF/TVA envelope attack time value for the tone selected for the part is determined.

* Depending on the tone, there may be less change in some cases.

Release (Part Release Time Offset) -64--+63

This sets ratio by which the relative change in the TVF/TVA envelope release time value for the tone selected for the part is determined.

* Depending on the tone, there may be less change in some cases.

PART CONTROL



This sets the Bend Range, voicing method (MONO/POLY), and Portamento for each Part.

BendRng (Pitch Bend Range) 0-24

Specifies the amount of pitch change that will occur when you move the Pitch Bend Lever.

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

Specifies whether the Part will play polyphonically (POLY) or monophonically (MONO). The MONO setting is effective when playing a solo instrument Patch such as sax or flute.

Porta Sw:Time (Portamento Switch : Time)

Determines whether the Portamento effect will be applied (ON) or not (OFF). When portamento is used, this also specifies 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?

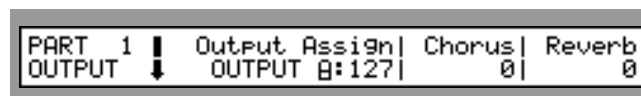
Portamento is an effect which smoothly changes the pitch from the first-played key to the next-played key. With the Mono/Poly parameter set to MONO, portamento is especially effective when simulating playing techniques such as a violin glissandos. Portamento can also be applied when this parameter is polyphonic (POLY).

■Making Effects Settings (EFFECTS)

Make settings for the Chorus/Reverb effects used in GM mode.

If an "x" mark is displayed at the right of the display name, the effect for that display has been turned off. Turn the corresponding effect on before you make settings (p. 141).

PART OUTPUT



This specifies how each Part will be output.

Output Assign (Output Assign/Output Level)

Sets the output destination for each Part.

The Output Level parameter adjusts the volume of each Part.

Chorus (Chorus Send Level) 0-127

Adjusts the amount of Chorus for each Part.

Reverb (Reverb Send Level) 0-127

Adjusts the amount of Reverb for each Part.

GM CHORUS

GM	↑	Type	Rate	Depth	Fbk	Rev	Out
CHORUS	↓	CHORUS	3	3	19	8	0
							A

Make settings for the Chorus effect used in GM mode.

In GM mode, the Chorus effect settings for the GM Patch assigned to each Part will be ignored (except for the Send Level parameter).

Type (Chorus Type)

Selects the type of Chorus.

Chorus 1-4

FB Chorus: Feedback Chorus

Flanger: Flanger

Rate (Chorus Rate) 0-127

Sets the modulation speed of the Chorus.

Depth (Chorus Depth) 0-127

Adjusts modulation depth for the Chorus.

Fbk (Chorus Feedback Level) 0-127

Adjusts the amount of chorus sound that is returned (fed back) to the chorus. Higher settings will result in a more intense effect.

Rev (Reverb Send Level) 0-127

Sets the send level to Reverb.

Out (Chorus Output Assign) OUTPUT A-C

Sets the output destination for Chorus.

GM REVERB

GM	↑	Type	Time	Out
REVERB	↓	LARGE HALL	64	A

Make GM mode reverb settings.

In GM mode, the reverb effect settings for the GM Patch assigned to each Part will be ignored (except for the Send Level parameter).

Type (Reverb Type)

Selects the type of Reverb effect.

Small Room: Reverb obtained in a small sized room.

Medium Room: Reverb obtained in a somewhat larger room.

Large Room: Large room reverb.

Medium Hall: Reverb sound found in a medium sized concert hall.

Large Hall: Reverb sound found in a large concert hall.

Plate: Plate reverb effect

Time (Reverb Time) 0-127

Adjusts the time over which the reverberation will continue.

Out (Reverb Output Assign) OUTPUT A-C

Sets the output destination of the chorus sound.

■ Making MIDI Settings for Each Part (MIDI)

PART	1	Channel	Rx Sw	Mute Sw
MIDI	↓	1	ON	OFF

PART MIDI

You can make MIDI settings.

Channel (MIDI Channel)

Specifies the MIDI channel for each Part.

Rx Sw (Receive Switch)

Sets whether each Part will respond to received MIDI messages (ON) or not (OFF) from external MIDI devices.

Mute Sw (Mute Switch)

Turns muting of each part on (ON) or off (OFF).

■ Confirming MIDI Information for Each Part (INFO)

PART	1	Mod	Breath	Foot	Vol	Pan	Exp
INFO	↓	0	0	0	100	0	127

PART	1	Hold	Bend	Aftertouch	Voices
INFO	↓	0	0	0	0

* Press [▲] / [▼] to select page.

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.

For items other than Voice, you may modify the values. When you do so, a MIDI message will be transmitted, and can be recorded on the sequencer, etc.

Mod (Modulation Information)

Breath (Breath Information)

Foot (Foot Information)

Vol (Volume Information)

Pan (Pan Information)

Exp (Expression Information)

Hold (Hold 1 Information)

Bend (Pitch Bend Information)

Aftertouch (Aftertouch Information)

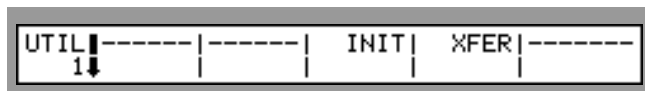
Voices (Voice Information)

Utility Functions in GM Mode

In the GM mode, you can initialize GM mode, and transmit GM mode settings, using the Utility functions.

Setting Procedure:

1. In the GM mode, press [UTILITY] so its indicator blinks. The XV-3080 will switch to Utility mode.
2. Press [◀] or [▶] to select the UTIL 1 page.



* The functions of the UTIL 2 group can also be executed from GM mode. The operation is the same as in other modes.

3. Use [◀] or [▶] to make the desired function blink, and then press [ENTER].

The display of the function you've selected will appear.

4. Set parameters as necessary on each function's display.

* To cancel the operation, press [EXIT]. To return to the GM PLAY display, press [UTILITY] to make the indicator go dark.

5. Press [ENTER] to execute the function.

When the write operation is finished, "COMPLETED" will appear in the display just for a moment before the GM PLAY page returns.

Initializing GM Mode (INIT)



* As GM Initialize initializes only GM mode data, data stored in user memory will not be initialized. If you want to restore all settings to their factory values, carry out Factory Reset (p. 124).

There are two initialize methods.

- GM:** Makes the basic General MIDI system settings using a GM System On message.
- GM2:** Makes the basic General MIDI 2 system settings using a GM2 System On message.

Transmitting GM Mode Settings (XFER)



GM mode settings cannot be stored in user memory. If you wish to keep your GM mode settings, you can transmit them as a MIDI message to an external MIDI device.

Prepare the external MIDI device to record data, and press [ENTER].

For more on the transmitted settings, refer to "MIDI Implementation" (p. 173).

* If you do not want the settings of a specific Part to be transmitted, turn off the Receive Switch for that Part (p. 144).

MEMO

XV-3080

128 VOICES 6x EXPANSION

Appendices

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. 150).*

No sound

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-3080. (**Setting the XV-3080's MIDI Reception Channels** (p. 14))

Are the Tone, Patch and Part level settings excessively low?

- Check the level settings of each Tone, Patch and each Part. (Tone p. 95, Patch p. 85, Part p. 104)

Are Tones or Parts turned off?

- Check the on/off settings of each Tone and each Part. (Tone p. 84, Part p. 102)

Are the key range settings correct?

- Check the key range settings of each Tone and each Part. (Tone p. 87, Part p. 104)

Has the volume been lowered by volume/ expression messages received from an external device?

- The volume will return to normal when the power is turned on once again. When a Performance or Rhythm Set is selected, the reception status for each type of message can be viewed in the PART INFO page. (p. 107)

Are the effect settings correct?

- Check settings such as Effect On/Off (p. 21), and Effect Balance and Level (p. 22—34).

Are the output destination settings correct?

- Check the Output Assign and MFX Output Assign settings. (p. 72—81)

Can't select Performances

Is [RX] on?

- When [RX] is on in the PERFORM PLAY page, [A]—[H] (PART SELECT [1/9]—[8/16]) act as buttons which turn Parts on/off. (p. 102) Turn [RX] off.

Can't select the Part for which to make settings

Is [RX] on?

- When [RX] is on in the various Performance setting pages, PART SELECT [1/9]—[8/16] function as buttons to switch each Part on/off. (p. 102) Turn [RX] off.

Pitch is wrong

Is the Master Tune setting correct?

- Check the setting. (p. 130)

Is Scale Tune selected?

- Check the setting. (p. 130)

Are the pitch settings for each Tone and each Part correct?

- Check each setting. (Tone p. 92, Part p. 106)

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 or Rhythm Set is selected, the PART INFO page allows you to check the reception status of each type of messages. (p. 107)

Effects do not apply

Are [MFX], [CHORUS], and [REVERB] turned off?

- Press the corresponding button to turn on the indicator. (p. 21)

Are the various effect settings correct?

- If the send levels to each effect are at 0, effects will not apply. Check each setting. (p. 22, p. 26, p. 31)
- 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. 22, p. 26, p. 31)
- 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. 86)

MIDI messages are not received correctly

Are the receive channel and receive switch settings correct?

- Check the settings for the MIDI receive channel (p. 14) and the various switches for reception of MIDI messages (p. 132).

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. 132) Also, if you wish to rewrite data in the USER group, the System Exclusive message Protect Switch must be turned off as well. (p. 124)

Is the DEMO PLAY page displayed?

- When the DEMOPLAY page is displayed, MIDI messages received from an external device will be ignored.

Memory Card cannot be used

Has the Memory Card (SmartMedia) been initialized?

- An uninitialized Memory Card cannot be used. Perform the initialize operation. (p. 126)

Are you using a card which the XV-3080 does not support?

- It is not possible to read the contents of a card which is for the XV-3080. Also, it is not possible to write data to a Memory Card which was formatted on a device other than the XV-3080.

Song data does not playback correctly

Are you playing back from the middle of the song?

- The beginning of a GM score song contains a GM System On message. In some cases, a GM Score cannot be played back correctly unless this message is received.

Are you playing back GS format song data?

- Since the XV-3080 is a GM system compatible sound source, there may be cases in which GS format song data will not playback correctly.

Error Messages

If there has been a mistake in operation, or if the XV-3080 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.

Battery Low

Situation: The internal backup battery that is preserving the contents of user memory has run down.

Action: Consult your dealer or a nearby Roland service station to have the battery replaced.

File Format Error

Situation: The XV-3080 cannot handle this file.

File I/O Error

Situation: It was not possible to save/load a file.

Action: Try the operation once again. If the same message appears, that file has been damaged. Delete the damaged file.

File Name Duplicate

Situation: A file of the same name exists on the memory card.

Action: Use a different file name.

File Name Format Error

Situation: A file name has not been assigned.

Action: Assign a file name.

File not Found

Situation: The specified file was not found.

Action: Insert the memory card that contains the specified file, and try the operation once again.

Memory Card Full

Situation: There is insufficient space available on the memory card to save the data.

Action: Either insert a different memory card, or delete unnecessary data and try the operation once again.

Memory Card I/O Error

Situation: It is possible that the memory card has been scratched or otherwise damaged.

Action: If the memory card has been damaged, do not use that memory card. If the same error message appears repeatedly, consult your dealer or a nearby Roland service station.

Memory Card not Ready

Situation: A memory card is not inserted in the MEMORY

CARD slot.

Action: Turn off the power, and insert a memory card.

Memory Card Write Protected

Situation: Since a write protect sticker is affixed to the memory card, data cannot be saved to the card bank.

Action: Remove the write protect sticker from the memory card.

MIDI Buffer Full

Situation: Due to an inordinate volume of MIDI messages received, the XV-3080 has failed to process them properly.

Action: Reduce the amount of MIDI messages to be transmitted.

MIDI Communication Error

Situation: A problem has occurred with the MIDI cable connections.

Action: Check that MIDI cables are not broken or pulled out.

Receive Data Error

Situation: A MIDI message was received incorrectly.

Action: If the same error message is displayed repeatedly, there is a problem with the MIDI messages that are being transmitted to the XV-3080.

Unformatted Memory Card

Situation: This memory card cannot be used by the XV-3080.

Action: Format the memory card on the XV-3080.

User Memory Damaged

Situation: The data in user memory has been lost.

Action: Use the Factor Reset function (UTILITY/UTIL 2/FACTORY RESET) to initialize the memory to the factory settings.

User Memory Write Protected

Situation 1: The Internal parameter (UTILITY/UTIL 1/PROTECT/WRITE PROTECT) is turned ON.

Action 1: Turn the Internal parameter OFF.

Situation 2: The Exclusive parameter (UTILITY/UTIL 1/PROTECT/WRITE PROTECT) is turned ON, and Exclusive messages cannot be received.

Action 2: Turn the Exclusive parameter OFF.

Parameter List

■ Patch Parameters

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

COMMON Group(p. 84)

Display	Parameter	Value		
PATCH NAME	----	Patch name	ASCII Characters (max. 12)	
PATCH CATEGORY	Category	Patch category	(*1)	
PATCH LVL&PAN	Level	Level	0-127	
	Pan	Pan	L64-0-63R	
	Analog Feel	Analog feel depth	0-127	
	PATCH OCT&TUNE	Octave	Octave shift	-3-0+3
PATCH COMMON	Coarce	Coarce tune	-48+48	
	Fine	Fine tune	-50+50	
	Stretch	Stretch tune depth	OFF, 1, 2, 3	
	Priority	Voice priority	LAST, LOUDEST	
	Output Assign	Patch output assign	MFX, OUTPUT A-C, INDIV 1-6, TONE	
PATCH TEMPO	Clock Source	Patch clock source	PATCH, SYSETEM	
	Tempo	Patch tempo	20-250	
PATCH MODIFY	Cut	Patch cutoff offset	-63+63	
	Res	Patch resonance offset	-63+63	
	Atk	Patch attack time offset	-63+63	
	Rel	Patch release time offset	-63+63	
	Velocity Sens	Patch velocity sens	-63+63	
TMT VELO CONTROL	TMT Velocity Control	TMT Velocity control	OFF, ON, RANDOM	
TMT VEL RANG	L.Fade	Velocity fade width lower	0-127	T
	Lower	Velocity range lower	1-UPPER	T
	Upper	Velocity range upper	LOWER-127	T
	U.Fade	Velocity fade width upper	0-127	T
TMT KEY RANG	L.Fade	Key fade width lower	0-127	T
	Lower	Key range lower	C-1-UPPER	T
	Upper	Key range upper	LOWER-G9	T
	U.Fade	Key fade width upper	0-127	T
STRUCT	Type	Structure type1&2, 3&4	1-10	T
	Booster	Booster gain1&2, 3&4	0, +6, +12, +18 dB	T

1:NO ASSIGN, AC.PIANO, EL.PIANO, KEYBOARDS, BELL, MALLET, ORGAN, ACCORDION, AC.GUITAR, EL.GUITAR, DIST.GUITAR, BASS, SYNTH BASS, STRINGS, ORCHESTRA, HIT&STAB, WIND, FLUTE, AC.BRASS, SYNTH BRASS, SAX, HARD LEAD, SOFT LEAD, TECHNO SYNTH, PULSATING, SYNTH FX, OTHER SYNTH, BRIGHT PAD, SOFT PAD, VOX, PLUCKED, ETHNIC, FRETTED, PERCUSSION, SOUND FX, BEAT&GROOVE, DRUMS, COMBINATION

EFFECTS Group(p. 21)

Display	Parameter	Value		
OUTPUT	Output Assign	Output assign	MFX, OUTPUT A-C, INDIV1-6	T
		Output level	0-127	T
	Chorus	Chorus send level	0-127	T
	Reverb	Reverb send level	0-127	T
PATCH MFX TYPE	Type	MFX type	(*1)	
PATCH MFX PRM	(*1)	MFX parameters		
PATCH MFX CTRL	Source	MFX control source1, 2, 3, 4	(*2)	
	Destination	Destination1, 2, 3, 4	(*1)	
	Sens	MFX control sens1, 2, 3, 4	-63+63	
PATCH MFX OUT	Output	Output assign	A, B, C	
	Dry	MFX output level	0-127	
	Chorus	Chorus send level	0-127	
	Reverb	Reverb send level	0-127	
	PATCH CHO TYPE	Type	Chorus type	OFF, CHORUS, DELAY
PATCH CHO PRM	(*3)	Chorus parameters		
PATCH CHO OUT	Output Assign	Chorus output assign	A, B, C	
	Level	Chorus level	0-127	
	Select	Chorus output select	MAIN, REV, M+R	
PATCH REV TYPE	Type	Reverb type	OFF, CHORUS, DELAY	
PATCH REV PRM	(*4)	Reverb parameters		
PATCH REV OUT	Output Assign	Reverb output assign	A, B, C	
	Level	Reverb level	0-127	

1:Refer to MFX parameters.

2:OFF, CC01-95(except 32), BENDER, AFTERTOUCH, SYS-CTRL1, SYS-CTRL2, SYS-CTRL3,SYS-CTRL4

3:Refer to Chorus parameters.

4:Refer to Reverb parameters.

Parameter List

CONTROL Group(p. 98)

Display	Parameter	Value	
PATCH KEY MODE	Assign	Key assign mode	POLY, MONO
	Legato	Legato switch	OFF, ON
	Legato Retrigger	Legato retrigger switch	OFF, ON
PATCH PORTAMENTO	Sw	Portament switch	OFF, ON
	Time	Portament time	0–127
	Mode	Portament mode	NORMAL, LEGATO
	Type	Portament type	RATE, TIME
	Start	Portament start pitch	PITCH, NOTE
	CTRL Rx MIDI	Bender	Recieve pitch bend switch	OFF, ON T
Expression		Recieve expression switch	OFF, ON T
Pan Mode		Recieve pan mode switch	CONTINUOUS, KEY-ON T
Hold-1		Recieve hold-1 switch	OFF, ON T
Redamper		Recieve redamper switch	OFF, ON T
Envelope Mode		Envelope mode	NO SUSTAIN, SUSTAIN T
TMT CTRL & BENDER	TMT Ctrl Sw	TMT control switch	OFF, ON
	Bend Range	Bend range down Bend range up	-48–0 semitone 0–+12 semitone
MATRIX CTRL SRC	Control 1	Control source1	(*1)
	Control 2	Control source2	(*1)
	Control 3	Control source3	(*1)
	Control 4	Control source4	(*1)
MATRIX CONTROL 1	Destination	Control1 Destination1–4	(*2)
	Sns	Control1 sens1–4	-63–+63
	Tone	Tone select1–4	OFF, ON, R T
MATRIX CONTROL 2	Destination	Control2 Destination1–4	(*2)
	Sns	Control2 sens1–4	-63–+63
	Tone	Tone select1–4	OFF, ON, R T
MATRIX CONTROL 3	Destination	Control3 Destination1–4	(*2)
	Sns	Control3 sens1–4	-63–+63
	Tone	Tone select1–4	OFF, ON, R T
MATRIX CONTROL 4	Destination	Control4 Destination1–4	(*2)
	Sns	Control4 sens1–4	-63–+63
	Tone	Tone select1–4	OFF, ON, R T

1:OFF, CC01–95(except 32), BENDER, AFTERTOUCH, SYS-CTRL1, SYS-CTRL2, SYS-CTRL3, SYS-CTRL4, VELOCITY, KEYFOLLOW, TEMPO, LFO1, LFO2, PITCH-ENV, TVF-ENV, TVA-ENV

2:OFF, PITCH, CUTOFF, RESONANCE, LEVEL, PAN, DRY LEVEL, CHORUS SEND, REVERB SEND, LFO1 PCH DEPTH, LFO2 PCH DEPTH, LFO1 TVF DEPTH, LFO2 TVF DEPTH, LFO1 TVA DEPTH, LFO2 TVA DEPTH, LFO1 PAN DEPTH, LFO2 PAN DEPTH, LFO1 RATE, LFO2 RATE, PIT ENV A-TIME, PIT ENV D-TIME, PIT ENV R-TIME, TVF ENV A-TIME, TVF ENV D-TIME, TVF ENV R-TIME, TVA ENV A-TIME, TVA ENV D-TIME, TVA ENV R-TIME, TMT, FXM DEPTH, MFX CTRL1, MFX CTRL2, MFX CTRL3, MFX CTRL4

WAVE Group(p. 91)

Display	Parameter	Value	
WAVE	Group	Wave group	INT, XP-A, XP-B, XP-C, XP-D, XP-E, XP-F T
	Number	Wave number(L, R)	0001–1083 T
	Gain	Wave gain	-6, 0, +6, +12 dB T
	Switch	Tone switch	OFF, ON T
	Wave Tempo Sync	Wave tempo sync	OFF, ON T
FXM	Switch	Frequency cross modulation switch	OFF, ON T
	Color	Frequency cross modulation color	1–4 T
	Depth	Frequency cross modulation depth	1–17 T
TONE DELAY	Mode	Tone delay mode	(*1) T
	Time	Tone delay time	0–127(*2) T

1:NORMAL, HOLD, KEY-OFF-NORMAL, KEY-OFF-DECAY

2:It can also be set in terms of notes.

LFO Group(p. 97)

Display	Parameter	Value	
LFO1 WAVE	Form	LFO form	SIN,TRI, SAW-UP, SAW-DW, SQR, RND, UP, DW, TRP, S&H, CHS T
	Offset	LFO offset	-100, -50, 0, +50, +100 T
	Rate	LFO rate	0-127(*1) T
	Detune	LFO detune	0-127 T
	Key Sync	LFO key sync	OFF, ON T
LFO1 FADE	Fade Mode	LFO fade mode	ON-IN, ON-OUT, OFF-IN, OFF-OUT T
	Time	LFO fade time	0-127 T
LFO1 DELAY	Delay Time	LFO delay time	0-127 T
	Delay Keyfollow	LFO delay keyfollow	-100-100 T
LFO2	(*2)		T
LFO DEPTH1:2	Pitch	Pitch LFO depth1, 2	-63-63 T
	TVF	TVF LFO depth 1, 2	-63-63 T
	TVA	TVA LFO depth 1, 2	-63-63 T
	Pan	Pan LFO depth1, 2	-63-63 T

1:It can also be set in terms of notes.

2:Same as LFO1.

PITCH Group(p. 92)

Display	Parameter	Value	
PITCH	Coarse	Coarse tune	-48-48 semitone T
	Fine	Fine tune	-50-50 cent T
	Random	Random pitch depth	0-1200 cent(*1) T
	Keyfollow	Pitch keyfollow	-200-200(*2) T
PCH ENVELOPE	Depth	Pitch envelope depth	-12-12 T
	V-Sens	Pitch envelope velocity sens-63-63	T
	Time Keyfollow	Pitch envelope time keyfollow	-100-100(*3) T
	V-T1	Pitch envelope time1 velocity sens	-63-63 T
	V-T4	Pitch envelope time4 velocity sens	-63-63 T
	L0	Pitch envelope level 0	-63-63 T
	T1, T2, T3, T4	Pitch envelope time 1-4	0-127 T
	L1, L2, L3, L4	Pitch envelope level 1-4	-63-63 T

1:0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200

2:-200, -190, -180, -170, -160, -150, -140, -130, -120, -110, -100, -90, -80, -70, -60, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +60, +70, +80, +90, +100, +110, +120, +130, +140, +150, +160, +170, +180, +190, +200

3:-100, -90, -80, -70, -60, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +60, +70, +80, +90, +100

TVF Group(p. 93)

Display	Parameter	Value	
TVF FILTER	Type	Filter type	OFF, LPF, BPF, HPF, PKG, LPF2, LPF3 T
	Cutoff	Cutoff frequency	0-127 T
	Resonance	Resonance	0-127 T
	Keyfollow	Cutoff frequency keyfollow	-200-200(*1) T
TVF VELOCITY	V-Cutoff	TVF cutoff velocity sens	-63-63 T
	V-Curve	TVF cutoff velocity curve	FIXED, 1-7 T
	V-Resonance	TVF resonance velocity sens	-63-63 T
TVF ENVELOPE	Depth	TVF envelope depth	-63-63 T
	V-Sens	TVF envelope velocity sens	-63-63 T
	V-Curve	TVF envelope velocity curve	FIXED, 1-7 T
	Time KF	TVF envelope time keyfollow	-100-100(*2) T
	V-T1	TVF envelope time1 velocity sens	-63-63 T
	V-T4	TVF envelope time4 velocity sens	-63-63 T
	L0	TVF envelope level 0	0-127 T
	T1, T2, T3, T4	TVF envelope time 1, 2, 3, 4	0-127 T
L1, L2, L3, L4	TVF envelope level 1, 2, 3, 4	0-127 T	

1:-200, -190, -180, -170, -160, -150, -140, -130, -120, -110, -100, -90, -80, -70, -60, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +60, +70, +80, +90, +100, +110, +120, +130, +140, +150, +160, +170, +180, +190, +200

2:-100, -90, -80, -70, -60, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +60, +70, +80, +90, +100

Parameter List

TVA Group(p. 95)

Display	Parameter	Value		
TVA	Level	Level	0-127	T
	Pan	Pan	L64-0-63R	T
	V-Sens	TVA envelope velocity sens	-63+63	T
	V-Curve	TVA envelope velocity curve	FIXED, 1-7	T
BIAS	Bias	TVA Bias level	-100+100(*1)	T
	Point	TVA Bias point	C-1-G9	T
	Direction	TVA Bias direction	LOWER, UPPER, LOWER&UPPER, ALL	T
PAN MODULATE	Keyfollow	Pan keyfollow	-100+100(*1)	T
	Random	Random pan depth	0-63	T
	Alternate	Alternate pan depth	L63-0-63R	T
TVA TIME ENV	V-T1	TVA envelope time1 velocity sens	-63+63	T
	V-T4	TVA envelope time4 velocity sens	-63+63	T
	Time Keyfollow	TVA envelope time keyfollow	-100+100(*1)	T
TVA ENVELOPE	T1, T2, T3, T4	TVA envelope time 1, 2, 3, 4	0-127	T
	L1, L2, L3	TVA envelope level 1, 2, 3	0-127	T

1:-100, -90, -80, -70, -60, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +60, +70, +80, +90, +100

■ Performance Parameters

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

COMMON Group(p. 103)

Display	Parameter		Value	
PERFORM NAME	----	Performance name	ASCII Characters (max. 12)	
PART KEY RANG	L.Fade	Part fade width lower	0-127	P
	Lower	Key range lower	C-1-G9	P
	Upper	Key range upper	C-1-G9	P
	U.Fade	Part fade width upper	0-127	P
PERFORM MFX CH	MFX Control Channel	MFX control channel	1-16, OFF	P

EFFECTS Group(p. 26)

Display	Parameter		Value	
PART OUTPUT	Output Assign	Output assign	MFX, OUTPUT A-C, INDIV 1-6, PATCH	P
		Output level	0-127	P
	Chorus	Chorus send level	0-127	P
	Reverb	Reverb send level	0-127	P
PERFORM MFX TYPE	Type	MFX type	(*1)	
	Source	MFX source	1-16, PERFORM	
PERFORM MFX PRM	(*1)	MFX parameters		
PERFORM MFX CTRL	Source	MFX control source 1, 2, 3, 4	(*2)	
	Destination	Destination 1, 2, 3, 4	(*1)	
	Sens	MFX control sens 1, 2, 3, 4	-63+63	
PERFORM MFX OUT	Output	Output Assign	A, B, C	
	Dry	MFX Output level	0-127	
	Chorus	Chorus send level	0-127	
	Reverb	Reverb send level	0-127	
PERFORM CHO TYPE	Type	Chorus type	OFF, CHORUS, DELAY	
	Source	Chorus source	1-16, PERFORM	
PERFORM CHO PRM	(*3)	Chorus parameters		
PERFORM CHO OUT	Output Assign	Chorus output assign	A, B, C	
	Level	Chorus level	0-127	
	Select	Chorus output select	MAIN, REV, M+R	
PERFORM REV TYPE	Type	Reverb type	OFF, CHORUS, DELAY	
	Source	Reverb source	1-16, PERFORM	
PERFORM REV PRM	(*4)	Reverb parameters		
PERFORM REV OUT	Output Assign	Reverb output assign	A, B, C	
	Level	Reverb level	0-127	

1:Refer to MFX parameters.

2:OFF, CC01-95(except 32), BENDER, AFTERTOUCHE, SYS-CTRL1, SYS-CTRL2, SYS-CTRL3,SYS-CTRL4

3:Refer to Chorus parameters.

4:Refer to Reverb parameters.

MIDI Group(p. 106)

Display	Parameter		Value	
MIDI	Channel	MIDI channel	1-16	P
	Rx Sw	Receive switch	OFF, ON	P
	Mute Sw	Mute switch	OFF, ON	P
CH RxSWITCH	BankSelect	Transmit bank select switch	OFF, ON	P
	Program Change	Receive program change switch	OFF, ON	P
	Vol	Receive volume switch	OFF, ON	P
	Pan	Receive pan switch	OFF, ON	P
	Exp	Receive expression switch	OFF, ON	P
	Hld	Receive hold-1 switch	OFF, ON	P
	Bnd	Receive bend switch	OFF, ON	P
	Mod	Receive modulation switch	OFF, ON	P
	Caf	Receive channel aftertouch switch	OFF, ON	P
	Paf	Receive polyphonic aftertouch switch	OFF, ON	P
	CH VELO CRV	Velocity Curve	Velocity curve	OFF, 1, 2, 3, 4
Phase Lock		Phase lock	OFF, ON	P

Parameter List

PART Group(p. 103)

Display	Parameter		Value	
PART PATCH	Type	Part type	PAT/RHY	
	Group	Patch group	USER, PR-A, PR-B, PR-C, PR-D, PR-E, XP-A, XP-B, XP-C, XP-D, XP-E, XP-F, CD-A-H	P
PART SETTING	Number	Patch number	001-128	P
	Level	Level	0-127	P
	Pan	ÉpÉi	L64-0-63R	P
PART MODIFY	Voice Reserve	Voice reserve	0-128	P
	Cut	Part cutoff offset	-64+63	P
	Res	Part resonance offset	-64+63	P
	Atk	Part attack time offset	-64+63	P
	Rel	Part release time offset	-64+63	P
PART PITCH	Velocity Sens	Part velocity sens offset	-63+63	P
	Octave	Octave shift	-3+3	P
	Coarse	Coarse tune	-48+48 semitone	P
	Fine	Fine tune	-50+50 cent	P
PART MONO/POL	BendRng	Pitch bend range	0-48, PATCH	P
	Mno/Pol	Part MONO/POLY	MONO, POLY, PATCH	P
	Legato	Legato switch	OFF, ON, PATCH	P
	Portament Sw:Tm	Portament switch:time	OFF, ON:0-127, PATCH	P

INFORMATION Group(p. 107)

Display	Parameter		Value	
INFO	Mod	Modulation information	0-127	P
	Breath	Breath information	0-127	P
	Foot	Foot information	0-127	P
	Vol	Volume information	0-127	P
	Pan	Pan information	L64-0-63R	P
	Exp	Expression information	0-127	P
	Hold	Hold1 information	0-127	P
	Bend	Pitch bend information	-128+127	P
	Aft	Aftertouch information	0-127	P
	Sys1	System control 1 information	0-127/-128+127	P
	Sys2	System control 2 information	0-127/-128+127	P
	Sys3	System control 3 information	0-127/-128+127	P
	Sys4	System control 4 information	0-127/-128+127	P
	Voices	Voice information	0-64	P

■Rhythm Set Parameters

* Parameters that can be set independently for each Tone are indicated by "T." COMMON Group(P.**)

COMMON Group(p. 111)

Display	Parameter		Value
RHYTHM NAME	----	Rhythm set name	ASCII Characters (max. 12)
RHYTHM COMMON	Level	Rhythm level	0-127
	Output Assign	Rhythm output assign	MFx, A-C, 1-6, TONE
RHYTHM TEMPO	Clock Source	Rhythm clock source	RHYTHM, SYSETEM
	Tempo	Rhythm tempo	20-250

EFFECTS Group(p. 31)

Display	Parameter		Value
OUTPUT	Output Assign	Output assign	MFx, OUTPUT A-C, INDIV1-6
		Output level	0-127
	Chorus	Chorus send level	0-127
	Reverb	Reverb send level	0-127
RHYTHM MFx TYPE	Type	MFx type	(*1)
RHYTHM MFx PRM	(*1)	MFx parameters	
RHYTHM MFx CTRL	Source	MFx control source1, 2, 3, 4	(*2)
	Destination	Destination 1, 2, 3, 4	(*1)
	Sens	MFx control sens 1, 2, 3, 4	-63+63
RHYTHM MFx OUT	Output	Output assign	A, B, C
	Dry	MFx Output level	0-127
	Chorus	Chorus send level	0-127
	Reverb	Reverb send level	0-127
RHYTHM CHO TYPE	Type	Chorus type	OFF, CHORUS, DELAY
RHYTHM CHO PRM	(*3)	Chorus parameters	
RHYTHM CHO OUT	Output Assign	Chorus output assign	A, B, C
	Level	Chorus level	0-127
	Select	Chorus output select	MAIN, REV, M+R
RHYTHM REV TYPE	Type	Reverb type	OFF, CHORUS, DELAY
RHYTHM REV PRM	(*4)	Reverb parameters	
RHYTHM REV OUT	Output Assign	Reverb output assign	A, B, C
	Level	Reverb level	0-127

1:Refer to MFx parameters.

2:OFF, CC01-95(except 32), BENDER, AFERTOUCHE, SYS-CTRL1, SYS-CTRL2, SYS-CTRL3,SYS-CTRL4

3:Refer to Chorus parameters.

4:Refer to Reverb parameters.

CONTROL Group(p. 118)

Display	Parameter		Value
CONTROL	Bend Range	Bend range	0-48
	Envelope Mode	Envelope mode	NO-SUS, SUSTAIN
	Mute Group	Mute group	OFF, 1-31
	Assign Type	Assign type	MULTI, SINGLE
Rx MIDI	Expression	Receive expression switch	OFF, ON
	Pan	Receive pan control switch	CONTINUOUS, KEY-ON
	Hold-1	Receive hold-1 switch	OFF, ON

Parameter List

WAVE Group(p. 113)

Display	Parameter	Value	
TONE NAME	----	Tone name	ASCII Characters (max. 12) T
WMT WAVE	Group	Wave group	INT, XP-A, XP-B, XP-C, XP-D, XP-E T
	Number	Wave number(L, R)	001-255 T
	Gain	Wave gain	-6, 0, 6, 12 dB T
	Switch	Key switch	OFF, ON T
	Wave Tempo Sync	Wave tempo sync	OFF, ON T
WMT LVL&PAN	Level	Level	0-127 T
	Pan	Pan	L64-0-63R T
	Rnd Pan	Random pan switch	OFF, ON T
	Alt Pan	Alternate pan switch	OFF, ON T
WMT TUNE	Coarse	Coarse tune	-48-+48 semitone T
	Fine	Fine tune	-50-+50 cent T
WMT FXM	Switch	FXM switch	OFF, ON T
	Color	FXM color	1-4 T
	Depth	FXM depth	1-17 T
WMT VEL RANG	L.Fade	Velocity fade width lower	0-127 T
	Lower	Velocity range lower	1-127 T
	Upper	Velocity range upper	1-127 T
	U.Fade	Velocity fade width upper	0-127 T
VELO CONTROL	WMT Velocity Control	WMT velocity control	OFF, ON, RANDOM T

PITCH Group(p. 115)

Display	Parameter	Value	
PITCH	Coarse	Coarse tune	-48-+48 semitone T
	Fine	Fine tune	-50-+50 cent T
	Random	Random pitch depth	0-1200 cent(*1) T
PCH ENVELOPE	Depth	Pitch envelope depth	-12-+12 T
	V-Sens	Pitch envelope velocity sens	-63-+63 T
	V-T1	Pitch envelope time 1 velocity sens	-63-+63 T
	V-T4	Pitch envelope time 4 velocity sens	-63-+63 T
	L0	Pitch envelope level 0	-63-+63 T
	T1, T2, T3, T4	Pitch envelope time 1-4	0-127 T
	L1, L2, L3, L4	Pitch envelope level 1-4	-63-+63 T

*1: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200

TVF Group(p. 116)

Display	Parameter	Value	
TVF FILTER	Type	Filter type	OFF, LPF, BPF, HPF, PKG, LPF2, LPF3 T
	Cutoff	Cutoff frequency	0-127 T
	Resonance	Resonance	0-127 T
TVF VELOCITY	V-Cutoff	TVF cutoff velocity sens	-63-+63 T
	V-Curve	TVF cutoff velocity curve	FIXED, 1-7 T
	V-Resonance	TVF resonance velocity sens	-63-+63 T
TVF ENVELOPE	Depth	TVF Envelope depth	-63-+63 T
	V-Sens	TVF envelope velocity sens	-63-+63 T
	V-Curve	TVF envelope velocity curve	FIXED, 1-7 T
	V-T1	TVF envelope time 1 velocity sens	-63-+63 T
	V-T4	TVF envelope time 4 velocity sens	-63-+63 T
	L0	TVF envelope level 0	0-127 T
	T1, T2, T3, T4	TVF envelope time 1, 2, 3, 4	0-127 T
	L1, L2, L3, L4	TVF envelope level 1, 2, 3, 4	0-127 T

TVA Group(p. 117)

Display	Parameter	Value	
TVA	Level	Level	0-127
	Pan	Pan	L64-0-63R
	Random	Random pan depth	0-63
	Alternate	Alternate pan depth	L63-0-63R
TVA VELOCITY	Velocity Sens	TVA envelope velocity sens	-63-+63
	Velocity Curve	TVA envelope velocity curve	FIXED, 1-7
TVA TIME ENV	V-T1	TVA envelope time 1 velocity sens	-63-+63
	V-T4	TVA envelope time 4 velocity sens	-63-+63
TVA ENVELOPE	T1-4	TVA envelope time 1-4	0-127
	L1-3	TVA envelope level 1-3	0-127

■GM Mode Parameters

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

EFFECTS Group(p. 143)

Display	Parameter	Value		
PART OUTPUT	Output Assign	Output assign	OUTPUT A-C, INDIV 1-6	P
		Output level	0-127	P
	Chorus	Chorus send level	0-127	P
	Reverb	Reverb send level	0-127	P
GM CHORUS	Type	Chorus type	Chorus1-4, FB Chorus, Flanger	
	Rate	Chorus rate	0-127	
	Depth	Chorus depth	0-127	
	Fbk	Chorus feedback level	0-127	
	Rev	Reverb send level	0-127	
	Out	Chorus output assign	OUTPUT A-C	
GM REVERB Large Hall, Plate	Type	Reverb/Delay type	Small Room, Medium Room, Large Room, Medium Hall,	
	Time	Reverb/Delay time	0-127	
	Out	Reverb output assign	OUTPUT A-C	

MIDI Group(p. 144)

Display	Parameter	Value		
PART MIDI	Channel	MIDI channel	1-16	P
	Rx Sw	Receive switch	OFF, ON	P
	Mute Sw	Mute switch	OFF, ON	P

PART Group(p. 142)

Display	Parameter	Value		
PART PATCH	Type	Part type	PAT, RHY	
	Number	GM patch number	001-256	P
PART SETTING	Volume	Volume	0-127	P
	Pan	Pan	L64-0-63R	P
	Coarse	Coarse tune	-48+48 semitone	P
	Fine	Fine tune	-50+50 cent	P
PART MODIFY	Cutoff	Cutoff offset	-64+63	P
	Resonance	Resonance offset	-64+63	P
	Attack	Attack time offset	-64+63	P
	Release	Release time offset	-64+63	P
PART CONTROL	BendRng	Pitch bend range	0-48	P
	Mono/Poly	MONO/POLY	MONO, POLY	P
	Porta Sw:Time	Portament switch:time	OFF, ON : -0-127	P

INFO Group(p. 144)

Display	Parameter	Value		
INFO	Mod	Modulation information	0-127	P
	Breath	Breath information	0-127	P
	Foot	Foot information	0-127	P
	Vol	Volume information	0-127	P
	Pan	Pan information	L64-0-63R	P
	Exp	Expression information	0-127	P
	Hold	Hold1 information	0-127	P
	Bend	Pitch bend information	-128+127	P
	Aftertouch	Aftertouch information	0-127	P
	Voices	Voice information	0-64	P

Parameter List

■MFX Prameters

1:STEREO EQ(p. 38)

Parameter		Value
LowFreq	Low frequency	200, 400 Hz
LowGain	Low gain	-15→+15 dB
Hi Freq	High frequency	4000, 8000 Hz
Hi Gain	High gain	-15→+15 dB
Mid1 Freq	Middle 1 frequency	200–8000Hz(*1)
Mid1 Q	Q	0.5, 1.0, 2.0, 4.0, 8.0
Mid1 Gain	Middle 1 gain	-15→+15 dB
Mid2 Freq	Middle 2 frequency	200–8000 Hz(*1)
Mid2 Q	Q	0.5, 1.0, 2.0, 4.0, 8.0
Mid2 Gain	Middle 2 gain	-15→+15 dB
Level	Output level	0–127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz

2:OVERDRIVE(p. 38)

Parameter		Value
Drive	Drive	0-127
Level	Output level	0-127
LowGain	Low gain	-15→+15 dB
Hi Gain	High gain	-15→+15 dB
AmpType	Amp simulator type	SMALL, BUILT-IN, 2-STACK, 3-STACK
Pan	Output pan	L64-0-63R

3:DISTORTION(p. 39)

Parameter		Value
Drive	Drive	0-127
Level	Output level	0-127
LowGain	Low gain	-15→+15 dB
Hi Gain	High gain	-15→+15 dB
AmpType	Amp simulator type	SMALL, BUILT-IN, 2-STACK, 3-STACK
Pan	Output pan	L64-0-63R

4:PHASER(p. 39)

Parameter		Value
Manual	Manual	100-8000 Hz
Rate	Rate	0.05-10.00 Hz
Depth	Depth	0-127
Res	Resonance	0-127
Mix	Mix level	0-127
Pan	Output pan	L64-0-63R
Level	Output level	0-127

5:SPECTRUM(p. 40)

Parameter		Value
Band 1	Band1 gain	-15→+15 dB
Band 2	Band2 gain	-15→+15 dB
Band 3	Band3 gain	-15→+15 dB
Band 4	Band4 gain	-15→+15 dB
Band 5	Band5 gain	-15→+15 dB
Band 6	Band6 gain	-15→+15 dB
Band 7	Band7 gain	-15→+15 dB
Band 8	Band8 gain	-15→+15 dB
Q	Q	0.5, 1.0, 2.0, 4.0, 8.0
Pan	Output pan	L64-0-63R
Level	Output level	0-127

6:ENHANCER(p. 40)

Parameter		Value
Sens	Sens	0-127
Mix	Mix level	0-127
Low Gain	Low gain	-15→+15 dB
Hi Gain	High gain	-15→+15 dB
Level	Output level	0-127

7:AUTO WAH(p. 40)

Parameter		Value
Filter	Filter type	LPF, BPF
Sens	Sens	0-127
Manual	Manual	0-127
Peak	Peak	0-127
Rate	Rate	0.05-10.00 Hz
Depth	Depth	0-127
Level	Output level	0-127

8:ROTARY(p. 41)

Parameter		Value
LowSlow	Low frequency slow rate	0.05-10.00 Hz
LowFast	Low frequency fast rate	0.05-10.00 Hz
LowAccl	Low frequency acceleration	0-15
Low Lvl	Low frequency level	0-127
Hi Slow	High frequency slow rate	0.05-10.00 Hz
Hi Fast	High frequency fast rate	0.05-10.00 Hz
Hi Accl	High frequency acceleration	0-15
Hi Lvl	High frequency level	0-127
Separation	Separation	0-127
Speed	Speed	SLOW, FAST
Level	Output level	0-127

9:COMPRESSOR(p. 42)

Parameter		Value
Attack	Attack	0-127
Sustain	Sustain	0-127
Post Gain	Post gain	0, +6, +12, +18 dB
LowGain	Low gain	-15→+15 dB
Hi Gain	High gain	-15→+15 dB
Pan	Output pan	L64-0-63R
Level	Output level	0-127

10:LIMITER(p. 42)

Parameter		Value
Thresh	Threshold level	0-127
Ratio	Compression ratio	1.5:1, 2:1, 4:1, 100:1
Release	Release time	0-127
Gain	Post gain	0, +6, +12, +18 dB
LowGain	Low gain	-15→+15 dB
Hi Gain	High gain	-15→+15 dB
Pan	Output pan	L64-0-63R
Level	Output level	0-127

11:HEXA-CHORUS(p. 42)

Parameter		Value
Pre Dly	Pre delay time	0.0-100.0 ms
Rate	Rate	0.05-10.00 Hz
Depth	Depth	0-127
Dly Dev	Pre delay deviation	0-20
Dpt Dev	Depth deviation	-20→+20
Pan Dev	Pan deviation	0-20
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

12:TREMOLO CHORUS(p. 43)

Parameter		Value
Pre Dly	Pre delay time	0.0-100.0 ms
ChoRate	Chorus rate	0.05-10.00 Hz
Cho Dpt	Chorus depth	0-127
Phase	Tremolo phase	0-180 degree
TrmRate	Tremolo rate	0.05-10.00 Hz
Trm Sep	Tremolo separation	0-127
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

13:SPACE-D(p. 43)

Parameter		Value
Pre Dly	Pre delay time	0.0-100.0 ms
Rate	Rate	0.05-10.00 Hz
Depth	Depth	0-127
Phase	Phase	0-180 degree
LowGain	Low gain	-15+15 dB
Hi Gain	High gain	-15+15 dB
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

14:STEREO CHORUS(p. 44)

Parameter		Value
Pre Dly	Pre delay time	0.0-100.0 ms
Rate	Rate	0.05-10.00 Hz
Depth	Depth	0-127
Phase	Phase	0-180 degree
Filter Type	Filter type	OFF, LPF, HPF
Cutoff	Cutoff frequency	200-8000 Hz (*1)
LowGain	Low gain	-15+15 dB
Hi Gain	High gain	-15+15 dB
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz

15:STEREO FLANGER(p. 44)

Parameter		Value
Pre Dly	Pre delay time	0.0-100.0 ms
Rate	Rate	0.05-10.00 Hz
Depth	Depth	0-127
Fbk	Feedback level	-98+98%
Phase	Phase	0-180 degree
Filter Type	Filter type	OFF, LPF, HPF
Cutoff	Cutoff frequency	200-8000 Hz (*1)
LowGain	Low gain	-15+15 dB
Hi Gain	High gain	-15+15 dB
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz

16:STEP FLANGER(p. 45)

Parameter		Value
Pre Dly	Pre delay time	0.0-100.0 ms
Rate	Rate	0.05-10.00 Hz
Depth	Depth	0-127
Fbk	Feedback level	-98+98%
Phase	Phase	0-180 degree
Step Rate	Step rate	0.10-20.00 Hz, note
LowGain	Low gain	-15+15 dB
Hi Gain	High gain	-15+15 dB
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

17:STEREO DELAY(p. 46)

Parameter		Value
Delay L	Delay time left	0.0-500.0 ms
Delay R	Delay time right	0.0-500.0 ms
Fbk	Feedback level	-98+98%
Mode	Feedback mode	NORMAL, CROSS
Phase L	Feedback phase left	NORMAL, INVERT
Phase R	Feedback phase right	NORMAL, INVERT
HF Damp	HF damp	200-8000 Hz, BYPASS (*1)
LowGain	Low gain	-15+15 dB
Hi Gain	High gain	-15+15 dB
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

18:MODULATION DELAY(p. 47)

Parameter		Value
Delay L	Delay time left	0.0-500.0 ms
Delay R	Delay time right	0.0-500.0 ms
Fbk	Feedback level	-98+98%
Mode	Feedback mode	NORMAL, CROSS
Rate	Rate	0.05-10.00 Hz
Depth	Depth	0-127
Phase	Phase	0-180 degree
HF Damp	HF damp	200-8000 Hz, BYPASS (*1)
LowGain	Low gain	-15+15 dB
Hi Gain	High gain	-15+15 dB
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

19:TRIPLE TAP DELAY(p. 48)

Parameter		Value
Delay C	Delay time center	200-1000 ms, note
Delay L	Delay time left	200-1000 ms, note
Delay R	Delay time right	200-1000 ms, note
Fbk	Feedback level	-98+98%
Level C	Center level	0-127
Level L	Left level	0-127
Level R	Right level	0-127
HF Damp	HF damp	200-8000 Hz, BYPASS (*1)
LowGain	Low gain	-15+15 dB
Hi Gain	High gain	-15+15 dB
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

Parameter List

20:QUADRUPLE TAP DELAY(p. 48)

Parameter		Value
Delay 1	Delay time 1	200-1000 ms, note
Delay 2	Delay time 2	200-1000 ms, note
Delay 3	Delay time 3	200-1000 ms, note
Delay 4	Delay time 4	200-1000 ms, note
Level 1	Level 1	0-127
Level 2	Level 2	0-127
Level 3	Level 3	0-127
Level 4	Level 4	0-127
Fbk	Feedback level	-98+98%
HF Damp	HF damp	200-8000 Hz, BYPASS (*1)
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

21:TIME CONTROL DELAY(p. 49)

Parameter		Value
Delay	Delay time	200-1000 ms
Accel	Acceleration	0-15
Fbk	Feedback level	-98+98%
HF Damp	HF damp	200-8000 Hz, BYPASS (*1)
Pan	Output pan	L64-0-63R
LowGain	Low gain	-15+15 dB
Hi Gain	High gain	-15+15 dB
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

22:2 VOICE PITCH SHIFTER(p. 50)

Parameter		Value
CoarseA	Coarse pitch A	-24+12 semitone
Fine A	Fine pitch A	-100+100 cent
Pan A	Output pan A	L64-0-63R
PreDlyA	Pre delay time A	0.0-500.0 ms
CoarseB	Coarse pitch B	-24+12 semitone
Fine B	Fine pitch B	-100+100 cent
Pan B	Output pan B	L64-0-63R
PreDlyB	Pre delay time B	0.0-500.0 ms
Mode	Pitch shifter mode	1, 2, 3, 4, 5
Lvl Bal	Level balance	A100:0B-A0:100B
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

23:FBK PITCH SHIFTER(p. 50)

Parameter		Value
Coarse	Coarse pitch	-24+12 semitone
Fine	Fine pitch	-100+100 cent
Fbk	Feedback level	-98+98%
Pre Dly	Pre delay time	0.0-500.0 ms
Mode	Pitch shifter mode	1, 2, 3, 4, 5
Pan	Output pan	L64-0-63R
LowGain	Low gain	-15+15 dB
Hi Gain	High gain	-15+15 dB
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

24:REVERB(p. 51)

Parameter		Value
Type	Reverb type	ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2
Pre Dly	Pre delay time	0.0-100.0 ms
Time	Gate time	0-127
HF Damp	HF damp	200-8000 Hz, BYPASS (*1)
LowGain	Low gain	-15+15 dB
Hi Gain	High gain	-15+15 dB
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

25:GATED REVERB(p. 52)

Parameter		Value
Type	Gated Reverb type	NORMAL, REVERSE, SWEEP1, SWEEP2
Pre Dly	Pre delay time	0.0-100.0 ms
Gate Time	Gate time	5-500 ms
LowGain	Low gain	-15+15 dB
Hi Gain	High gain	-15+15 dB
Balance	Effect balance	D100:0W-D0:100W
Level	Output level	0-127

26:OVERDRIVE→CHORUS(p. 52)

Parameter		Value
OD Drive	Drive	0-127
OD Pan	Over drive pan	L64-0-63R
Cho Dly	Chorus pre delay time	0.0-100.0 ms
ChoRate	Chorus Rate	0.05-10.00 Hz
Chorus Depth	Chorus depth	0-127
Chorus Balance	Chorus balance	D100:0W-D0:100W
Level	Output level	0-127

27:OVERDRIVE→FLANGER(p. 52)

Parameter		Value
OD Drive	Drive	0-127
OD Pan	Over drive pan	L64-0-63R
Flg Dly	Flanger pre delay time	0.0-100.0 ms
FlgRate	Flanger rate	0.05-10.00 Hz
Flg Dpt	Flanger depth	0-127
Flg Fbk	Flanger feedback level	-98+98%
Flanger Balance	Flanger balance	D100:0W-D0:100W
Level	Output level	0-127

28:OVERDRIVE→DELAY(p. 53)

Parameter		Value
OD Drive	Drive	0-127
OD Pan	Over drive pan	L64-0-63R
DlyTime	Delay time	0.0-500.0 ms
Dly Fbk	Delay feedback level	-98+98%
Delay HF Damp	Delay HF damp	200-8000 Hz, BYPASS (*1)
Delay Balance	Delay balance	D100:0W-D0:100W
Level	Output level	0-127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

29: DISTORTION → CHORUS (p. 53)

The parameters are essentially the same as "26: OVERDRIVE → CHORUS," with the exception of the following two.

OD Drive → Dist Drive, OD Pan → Dist Pan
 OD Drive → Dist Drive, OD Pan → Dist Pan

30: DISTORTION → FLANGER (p. 54)

The parameters are essentially the same as "27: OVERDRIVE → FLANGER," with the exception of the following two.

OD Drive → Dist Drive, OD Pan → Dist Pan
 OD Drive → Dist Drive, OD Pan → Dist Pan

31: DISTORTION → DELAY (p. 54)

The parameters are essentially the same as "28: OVERDRIVE → DELAY," with the exception of the following two.

OD Drive → Dist Drive, OD Pan → Dist Pan
 OD Drive → Dist Drive, OD Pan → Dist Pan

32: ENHANSER → CHORUS (p. 54)

Parameter		Value
Enhancer Sens	Enhancer sens	0-127
Enhancer Mix	Enhancer mix level	0-127
Cho Dly	Chorus pre delay time	0.0-100.0 ms
ChoRate	Chorus rate	0.05-10.00 Hz
Chorus Depth	Chorus depth	0-127
Chorus Balance	Chorus balance	D100:0W-D0:100W
Level	Output level	0-127

33: ENHANSER → FLANGER (p. 54)

Parameter		Value
Enhancer Sens	Enhancer sens	0-127
Enhancer Mix	Enhancer mix level	0-127
Flg Dly	Flanger pre delay time	0.0-100.0 ms
FlgRate	Flanger rate	0.05-10.00 Hz
Flg Dpt	Flanger depth	0-127
Flg Fbk	Flanger feedback level	-98-+98%
Flanger Balance	Flanger balance	D100:0W-D0:100W
Level	Output level	0-127

34: ENHANSER → DELAY (p. 55)

Parameter		Value
Enhancer Sens	Enhancer sens	0-127
Enhancer Mix	Enhancer mix level	0-127
Delay	Delay time	0.0-500.0 ms
Dly Fbk	Delay feedback level	-98-+98%
Delay HF Damp	Delay HF damp	200-8000 Hz, BYPASS (*1)
Delay Balance	Delay balance	D100:0W-D0:100W
Level	Output level	0-127
1:		200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

35: CHORUS → DELAY (p. 55)

Parameter		Value
Cho Dly	Chorus pre delay time	0.0-100.0 ms
ChoRate	Chorus rate	0.05-10.00 Hz
Cho Dpt	Chorus depth	0-127
Cho Bal	Chorus balance	D100:0W-D0:100W
DlyTime	Delay time	0.0-500.0 ms
Dly Fbk	Delay Feedback level	-98-+98%
Delay HF Damp	Delay HF damp	200-8000 Hz, BYPASS (*1)
Delay Balance	Delay balance	D100:0W-D0:100W
Level	Output level	0-127
1:		200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

36: FLANGER → DELAY (p. 56)

Parameter		Value
Flg Dly	Flanger pre delay time	0.0-100.0 ms
FlgRate	Flanger rate	0.05-10.00 Hz
Flg Dpt	Flanger depth	0-127
Flg Fbk	Flanger feedback level	-98-+98%
Flg Bal	Flanger balance	D100:0W-D0:100W
DlyTime	Delay time	0.0-500.0 ms
Dly Fbk	Delay feedback level	-98-+98%
HF Damp	HF damp	200-8000 Hz, BYPASS (*1)
Delay Balance	Delay balance	D100:0W-D0:100W
Level	Output level	0-127
1:		200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

37: CHORUS → FLANGER (p. 56)

Parameter		Value
Cho Dly	Chorus pre delay time	0.0-100.0 ms
ChoRate	Chorus rate	0.05-10.00 Hz
Cho Dpt	Chorus depth	0-127
Cho Bal	Chorus balance	D100:0W-D0:100W
Flg Dly	Flanger pre delay time	0.0-100.0 ms
FlgRate	Flanger rate	0.05-10.00 Hz
Flg Dpt	Flanger depth	0-127
Flg Fbk	Flanger feedback level	-98-+98%
Flanger Balance	Flanger balance	D100:0W-D0:100W
Level	Output level	0-127

38: CHORUS/DELAY (p. 57)

Refer to "35: CHORUS?DELAY."

39: FLANGER/DELAY (p. 57)

Refer to "36: FLANGER?DELAY."

40: CHORUS/FLANGER (p. 57)

Refer to "37: CHORUS?FLANGER."

41: STEREO PHASER (p. 57)

Parameter		Value
Type	Phaser type	1, 2
Mode	Mode	4 stage, 8 stage
Pol	Polarity	INVERSE, SYNCHRO
Man	Manual	0 - 127
Rate	Phaser rate	0.05 - 10.00 Hz
Depth	Phaser depth	0 - 127
Res	Phaser resonance	0 - 127
X-Fbk	Cross feedback level	-98 - +98 %
Step Rate	Step rate (*1)	OFF, ON:0.1-20.0 Hz
Mix	Mix level	0 - 127
LowGain	Low gain	-15 - +15 dB
Hi Gain	High gain	-15 - +15 dB
Level	Output level	0 - 127
1:	Step switch:Step rate	

Parameter List

42:KEYSYNC FLANGER(p. 58)

Parameter		Value
Pre Dly	Pre delay time	0.0 – 100 ms
Rate	LFO rate	0.05 – 10.00 Hz
Depth	LFO depth	0 – 127
Fbk	Feedback	-98 – +98 %
Phase	Phase	0 – 180 degree
Filter	Filter type	OFF, LPF, HPF
Cutoff	Cutoff frequency	200–8000 H(*1)
Step Rate	Step rate (*2)	OFF, ON:0.1–20.0 Hz
Keysync	Keysync switch	OFF, ON
Thres	Keysync threshold	0 – 127
Keysync Phase	Keysync phase	0 – 360 degree
LowGain	Low gain	-15 – +15 dB
Hi Gain	High gain	-15 – +15 dB
Balance	Balance	D100:0W – D0:100W
Level	Output level	0 – 127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz

2: Step switch:Step rate

43:FORMANT FILTER(p. 59)

Parameter		Value
Drive	Drive	OFF, ON:0 – 127
Vowel	Vowel 1:2	a, e, i, o, u
Rate	Rate	0.05 – 10.00 Hz
Depth	Depth	0 – 127
Keysync	Keysync switch	OFF, ON
Threshold	Keysync threshold	0 – 127
Manual	Manual	0 – 100
LowGain	Low gain	-15 – +15 dB
Hi Gain	High gain	-15 – +15 dB
Pan	Output pan	L64 – 63R
Level	Output level	0 – 127

44:RING MODULATOR(p. 60)

Parameter		Value
Freq	Frequency	0 – 127
Mod	Modulator	OFF, Source, A, B, C
Mon	Modulator monitor	OFF, ON
Sens	Sens	0 – 127
Pol	Polarity	UP, DOWN
LowGain	Low gain	-15 – +15 dB
Hi Gain	High gain	-15 – +15 dB
Balance	Effect balance	D100:0E – D0:100E
Level	Output level	0 – 127

45:MULTI TAP DELAY(p. 60)

Parameter		Value
Delay 1	Delay time 1	0 – 1800 ms
Delay 2	Delay time 2	0 – 1800 ms
Delay 3	Delay time 3	0 – 1800 ms
Delay 4	Delay time 4	0 – 1800 ms
Pan 1	Output pan 1	L64 – 63R
Pan 2	Output pan 2	L64 – 63R
Pan 3	Output pan 3	L64 – 63R
Pan 4	Output pan 4	L64 – 63R
Level 1	Level ÇP	0 – 127
Level 2	Level 2	0 – 127
Level 3	Level 3	0 – 127
Level 4	Level 4	0 – 127
Fbk	Feedback	-98 – +98 %
HF Damp	HF Damp	200–8000 Hz, BYPASS(*1)
LoG	Low gain	-15 – +15 dB
HiG	High gain	-15 – +15 dB
Balance	Effect balance	D100:0E – D0:100E
Lev	Output level	0 – 127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

46:REVERSE DELAY(p. 61)

Parameter		Value
Delay 1	Delay time 1	0 – 900 ms
Delay 2	Delay time 2	0 – 900 ms
Delay 3	Delay time 3	0 – 900 ms
Delay 4	Delay time 4	0 – 900 ms
Feedback 1:4	Feedback 1:4	-98 – +98 %
HF Damp	HF Damp	200–8000 Hz, BYPASS(*1)
Thr	Threshold level	0 – 127
Pan 1:2:3	Output pan 1:2:3	L64 – 63R
Level 1:2:3	Level ÇP:2:3	0 – 127
Balance	Effect balance	D100:0E – D0:100E
LowGain	Low gain	-15 – +15 dB
Hi Gain	High gain	-15 – +15 dB
Level	Output level	0 – 127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

47:SHUFFLE DELAY(p. 62)

Parameter		Value
Delay	Delay time	0 – 1800 ms
Shuffle	Shuffle rate	0 – 100 %
Accel	Acceleration	0 – 15
Fbk	Feedback	-98 – +98 %
HF Damp	HF Damp	200–8000 Hz, BYPASS(*1)
Pan A	Pan A	L64 – 63R
Pan B	Pan B	L64 – 63R
Level Balance	Level balance	A100:0B – A0:100B
LowGain	Low gain	-15 – +15 dB
Hi Gain	High gain	-15 – +15 dB
Balance	Effect balance	D100:0E – D0:100E
Level	Output level	0 – 127

1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

48:3D DELAY(p. 62)

Parameter		Value
Delay C	Delay time center	0 – 1800 ms
Delay L	Delay time left	0 – 1800 ms
Delay R	Delay time right	0 – 1800 ms
Fbk	Feedback	-98 – +98 %
Level C	Level center	0 – 127
Level L	Level left	0 – 127
Level R	Level right	0 – 127
HF Damp	HF Damp	200–8000 Hz, BYPASS(*1)
Out	Output mode Speaker, Phones	
Lo G	Low gain	-15 – +15 dB
Hi G	High gain -15 – +15 dB	
Balance	Effect balance	D100:0E – D0:100E
Level	Output level	0 – 127
1:		200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

49:3VOICE PITCH SHIFTER(p. 63)

Parameter		Value
Coarse 1:2:3	Coarse pitch CP:2:3	-24 – +12
Fine 1:2:3	Fine pitch 1:2:3	-100 – +100 [cent]
Pre Delay 1:2:3	Pre Delay time 1:2:3	0.0 – 500 [ms]
Fbk 1:2:3	Feedback level1:2:3	-98 – +98 %
Pan 1:2:3	Output pan 1:2:3	L64 – 63R
Level 1:2:3	Level 1:2:3	0 – 127
Balance	Effect balance	D100:0E – D0:100E
Level	Output level	0 – 127

50:LOFI COMPRESS(p. 64)

Parameter		Value
Type	LOFI type	1 – 9
Pre Filter	Pre Filter type	1 – 6
Post Filter 1	Post Filter 1 type	1 – 6
Post Filter 2	Post Filter 2 type	OFF, LPF, HPF:(*1)
LowGain	Low gain	-15 – +15 dB
Hi Gain	High gain	-15 – +15 dB
Balance	Effect balance	D100:0E – D0:100E
Pan	Output pan	L64 – 63R
Level	Output level	0 – 127
1:		Post Filter cutoff frequency:200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz

51:LOFI NOISE(p. 64)

Parameter		Value
Type	LOFI type	1 – 9
Post Filtr	Post Filter type	OFF, LPF, HPF:(*1)
Radio Detune	Radio detune	0 – 127:0 – 127 (*2)
Disc:LPF:Lev	Disc:LPF:Level	*3:*4:*5
LowGain	Low gain	-15 – +15 dB
Hi Gain	High gain	-15 – +15 dB
Balance	Effect balance	D100:0E – D0:100E
Pan	Output pan	L64 – 63R
Level	Output level	0 – 127
*1:		Post Filter cutoff frequency:200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz
*2:		Radio detune:Radio noise level
*3:		Disc noise type:LP, EP, SP, RND
*4:		Disc noise LPF:200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS
*5:		Disc noise level:0 – 127

52:SPEAKER SIMULATOR(p. 65)

Parameter		Value
Speaker Type	Speaker type	(*1)
Mic Set	Mic setting	1, 2, 3
Mic:Dir	Mic level:Direct level	0 – 127:0 – 127 (*2)
Level	Output level	0 – 127
1:		Small 1, Small 2, Middle, JC-120, Built In 1, Built In 2, Built In 3, Built In 4, Built In 5, BG Stack 1, BG Stack 2, MS Stack 1, MS Stack 2, Metal Stack, 2 Stack, 3 Stack

53:OVERDRIVE 2(p. 65)

Parameter		Value
Drive	Drive	0 – 127
Level	Output level	0 – 127
LowGain	Low gain	-15 – +15 dB
Hi Gain	High gain	-15 – +15 dB
Amp Type	Amp. simulator type	OFF,ON:SMALL, BUILT-IN, 2-STACK, 3-STACK (*1)
Tone	Tone	0 – 127
Pan	Output pan	L64 – 63R

*1: Amp. simulator switch:Amp. simulator type

54:DISTORTION 2(p. 66)

Parameter		Value
Drive	Drive	0 – 127
Level	Output level	0 – 127
LowGain	Low gain	-15 – +15 dB
Hi Gain	High gain	-15 – +15 dB
Amp Type	Amp. simulator type	OFF,ON:SMALL, BUILT-IN, 2-STACK, 3-STACK (*1)
Tone	Tone	0 – 127
Pan	Output pan	L64 – 63R

*1: Amp. simulator switch:Amp. simulator type

55:STEREO COMPRESSOR(p. 66)

Parameter		Value
Sustain	Sustain	0 – 127
Attack	Attack time	0 – 127
Post Gain	Post gain	0, +6, +12, +18
LowGain	Low gain	-15 – +15
Hi Gain	High gain	-15 – +15
Level	Output level	0 – 127

56:STEREO LIMITER(p. 66)

Parameter		Value
Thre	Threshold level	0 – 127
Release	Release time	0 – 127
Ratio	Compression ratio	1.5:1, 2:1, 4:1, 100:1
Gain	Post gain	0, +6, +12, +18
LowGain	Low gain	-15 – +15
Hi Gain	High gain	-15 – +15
Level	Output level	0 – 127

Parameter List

57:GATE(p. 67)

Parameter		Value
Key	Key	Source, A, B, C
Thre	Key threshold	0 – 127
Monitor	Key monitor	OFF, ON
Mode	Mode	GATE, DUCK
Atk	Attack time	0 – 127
Hold	Hold time	0 – 127
Rel	Release time	0 – 127
Balance	Effect balance	D100:0E – D0:100E
Level	Output level	0 – 127

58:SLICER(p. 67)

Parameter		Value
Beat 1-1-4-4	Beat 1-1- 4-4	0 – 127
Rate	Rate	0.05 – 10.0
Attack	Attack	0 – 127
Reset	Reset	OFF, Source, A, B, C
Thre	Reset threshold	0 – 127
Mon	Reset monitor switch	OFF, ON
Mode	Mode	LEGATO, SLASH
Shuffle	Shuffle	0 – 127
Level	Output level	0 – 127

59:ISOLATOR(p. 68)

Parameter		Value
High	Level high	-60 – +4 dB
Middle	Level middle	-60 – +4 dB
Low	Level low	-60 – +4 dB
Anti Phase Mid	(*1)	OFF, ON:0 – 127
Anti Phase Low	(*2)	OFF, ON:0 – 127
Low Boost	Low Booster switch/level	OFF, ON:0 – 127
Level	Output level	0 – 127

- 1: Anti phase middle switch:level
 2: Anti phase low switch:level

60:3D CHORUS(p. 68)

Parameter		Value
Pre Dly	Pre delay time	0.0 – 100 ms
Rate	LFO rate	0.05 – 10.00 Hz
Depth	LFO depth	0 – 127
Phase	Phase	0 – 180 degree
Filter Type	Filter Type	OFF, LPF, HPF
Cutoff	Cutoff frequency	200–8000 Hz (*1)
Out	Output mode	Speaker, Phones
Lo G	Low gain	-15 – +15 dB
Hi G	High gain	-15 – +15 dB
Balance	Effect balance	D100:0W – D0:100W
Lev	Output level	0 – 127

- 1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz

61:3D FLANGER(p. 69)

Parameter		Value
Pre Dly	Pre delay time	0.0 – 100 ms
Rate	LFO rate	0.05 – 10.00 Hz
Depth	LFO depth	0 – 127
Fbk	Feedback	-98 – +98 %
Phase	Phase	0 – 180 degree
Filter	Filter Type	OFF, LPF, HPF
Cutoff	Cutoff frequency	200–8000 Hz (*1)
Step Rate	Step rate (*2)	OFF, ON:0.1–20.0 Hz
Out	Output mode	Speaker, Phones
LoG	Low gain	-15 – +15 dB
Hi G	High gain	-15 – +15 dB
Balance	Effect balance	D100:0W – D0:100W
Level	Output level	0 – 127

- 1: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz
 2: Step switch:Step rate

62:TREMOLO(p. 70)

Parameter		Value
Mod Wave	Modulation wave	TRI, SQU, SIN, SAW1, SAW2
Rate	Rate	0.05 – 10.0 Hz
Depth	Depth	0 – 127
LowGain	Low gain	-15 – +15 dB
Hi Gain	High gain	-15 – +15 dB
Level	Output level	0 – 127

63:AUTO PAN(p. 70)

Parameter		Value
Mod Wave	Modulation wave	TRI, SQU, SIN, SAW1, SAW2
Rate	Rate	0.05 – 10.0 Hz
Depth	Depth	0 – 127
LowGain	Low gain	-15 – +15 dB
Hi Gain	High gain	-15 – +15 dB
Level	Output level	0 – 127

■ System Parameters

SETUP Group(p. 134)

Display	Parameter	Value	
SYSTEM SETUP	LCD	LCD contrast	1–10
	Power Up Mode	Power up mode	LAST-SET, DEFAULT
	Master Level	Master level	0–127
	Clock Source	Clock source	INT, MIDI
	System Tempo	System tempo	20–250
	Mix/Parallel	Mix/Parallel	MIX, PARALLEL
	Patch Remain	Patch remain switch	OFF, ON
	Rhythm Edit Key	Rhythm edit key	PANEL, PANEL&MIDI

CONTROL Group(p. 133)

Display	Parameter	Value	
SYS CTRL ASSIGN1	Control 1/2	System control assign 1/2	(*1)
SYS CTRL ASSIGN2	Control 3/4	System control assign 3/4	(*1)
1:CC01–95(except 32), BENDER, AFTERTOUC			

MIDI Group(p. 131)

Display	Parameter	Value	
SYSTEM MIDI	Control Channel	Performance control channel	1–16, OFF
	Patch/Rhy Ch	Patch/Rhythm set receive channel	1–16
	Rx Program Chg	Receive program change switch	OFF, ON
	Rx Bank Select	Receive bank select switch	OFF, ON
	Rx GM1 On	Receive GM1-ON switch	OFF, ON
	Rx GM2 On	Receive GM2-ON switch	OFF, ON
	Rx GS Reset	Receive GS Reset switch	OFF, ON
	Device ID	Device ID number	17–32
	Rx Sys. Excl	Receive exclusive switch	OFF, ON
	Transmit Edit Data	Transmit edit data switch	OFF, ON
	Stack Mode	Stack mode	OFF, 2–8
	Stack Number	Stack number	1–8

PREVIEW Group(p. 13)

Display	Parameter	Value	
PREVIEW MODE	Mode	Preview sound mode	SINGLE, CHORD, PHRASE
PREVIEW KEY	Note 1–4	Preview Note Set 1–4	C-1–G9
PREVIEW VELOCITY	Note 1–4	Preview velocity 1–4	0–127

TUNE Group(p. 130)

Display	Parameter	Value	
SYSTEM TUNE	Master	Master tune	427.4–452.6 Hz
	Key Shift	Key shift	-12–+12 semitone
	Scale Tune	Scale tune switch	OFF, ON
PATCH SCALE	C–B	Scale tune C–B	-64–+63ÉZÉiÉg
KEY SCALE	C–B	Scale tune C–B	-64–+63ÉZÉiÉg

INFO Group(p. 134)

Display	Parameter	Value	
INFO EXP	Expansion A–F	Expansion board name A–F	----
BATTERY CHECK	Internal Battery	Battery check	LOW, OK

Waveform List

No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name
1	StGrand pA L	51	E.Piano 1C	101	RockOrg1 A R	151	Jazz Gtr B	201	Syn Gtr B
2	StGrand pA R	52	E.Piano 2A	102	RockOrg1 B L	152	Jazz Gtr C	202	Syn Gtr C
3	StGrand pB L	53	E.Piano 2B	103	RockOrg1 B R	153	LP Rear A	203	Harp 1A
4	StGrand pB R	54	E.Piano 2C	104	RockOrg1 C L	154	LP Rear B	204	Harp 1B
5	StGrand pC L	55	E.Piano 3A	105	RockOrg1 C R	155	LP Rear C	205	Harp 1C
6	StGrand pC R	56	E.Piano 3B	106	RockOrg2 A L	156	Rock lead 1	206	Harp Harm
7	StGrand fA L	57	E.Piano 3C	107	RockOrg2 A R	157	Rock lead 2	207	Pluck Harp
8	StGrand fA R	58	MK-80 EP A	108	RockOrg2 B L	158	Comp Gtr A	208	Banjo A
9	StGrand fB L	59	MK-80 EP B	109	RockOrg2 B R	159	Comp Gtr B	209	Banjo B
10	StGrand fB R	60	MK-80 EP C	110	RockOrg2 C L	160	Comp Gtr C	210	Banjo C
11	StGrand fC L	61	EP Hard	111	RockOrg2 C R	161	Comp Gtr A+	211	Sitar A
12	StGrand fC R	62	EP Distone	112	RockOrg3 A L	162	Mute Gtr 1	212	Sitar B
13	Ac Piano2 pA	63	Clear Keys	113	RockOrg3 A R	163	Mute Gtr 2A	213	Sitar C
14	Ac Piano2 pB	64	D-50 EP A	114	RockOrg3 B L	164	Mute Gtr 2B	214	E.Sitar A
15	Ac Piano2 pC	65	D-50 EP B	115	RockOrg3 B R	165	Mute Gtr 2C	215	E.Sitar B
16	Ac Piano2 fA	66	D-50 EP C	116	RockOrg3 C L	166	Muters	216	E.Sitar C
17	Ac Piano2 fB	67	Celesta	117	RockOrg3 C R	167	Pop Strat A	217	Santur A
18	Ac Piano2 fC	68	Music Box	118	Dist. Organ	168	Pop Strat B	218	Santur B
19	Ac Piano1 A	69	Music Box 2	119	Rot.Org Slw	169	Pop Strat C	219	Santur C
20	Ac Piano1 B	70	Clav 1A	120	Rot.Org Fst	170	JC Strat A	220	Dulcimer A
21	Ac Piano1 C	71	Clav 1B	121	Pipe Organ	171	JC Strat B	221	Dulcimer B
22	Piano Thump	72	Clav 1C	122	Soft Nylon A	172	JC Strat C	222	Dulcimer C
23	Piano Up TH	73	Clav 2A	123	Soft Nylon B	173	JC Strat A+	223	Shamisen A
24	Piano Atk	74	Clav 2B	124	Soft Nylon C	174	JC Strat B+	224	Shamisen B
25	MKS-20 P3 A	75	Clav 2C	125	Nylon Gtr A	175	JC Strat C+	225	Shamisen C
26	MKS-20 P3 B	76	Clav 3A	126	Nylon Gtr B	176	Clean Gtr A	226	Koto A
27	MKS-20 P3 C	77	Clav 3B	127	Nylon Gtr C	177	Clean Gtr B	227	Koto B
28	SA Rhodes 1A	78	Clav 3C	128	Nylon Str	178	Clean Gtr C	228	Koto C
29	SA Rhodes 1B	79	Clav 4A	129	6-Str Gtr A	179	Stratus A	229	Taishokoto A
30	SA Rhodes 1C	80	Clav 4B	130	6-Str Gtr B	180	Stratus B	230	Taishokoto B
31	SA Rhodes 2A	81	Clav 4C	131	6-Str Gtr C	181	Stratus C	231	Taishokoto C
32	SA Rhodes 2B	82	Clav Wave	132	StIGtr mp A	182	Scrape Gut	232	Pick Bass A
33	SA Rhodes 2C	83	MIDI Clav	133	StIGtr mp B	183	Strat Sust	233	Pick Bass B
34	Dyn Rhd mp A	84	HarpsiWave A	134	StIGtr mp C	184	Strat Atk	234	Pick Bass C
35	Dyn Rhd mp B	85	HarpsiWave B	135	StIGtr mf A	185	OD Gtr A	235	Fingerd Bs A
36	Dyn Rhd mp C	86	HarpsiWave C	136	StIGtr mf B	186	OD Gtr B	236	Fingerd Bs B
37	Dyn Rhd mf A	87	Jazz Organ 1	137	StIGtr mf C	187	OD Gtr C	237	Fingerd Bs C
38	Dyn Rhd mf B	88	Jazz Organ 2	138	StIGtr ff A	188	OD Gtr A+	238	E.Bass
39	Dyn Rhd mf C	89	Organ 1	139	StIGtr ff B	189	Heavy Gtr A	239	P.Bass 1
40	Dyn Rhd ff A	90	Organ 2	140	StIGtr ff C	190	Heavy Gtr B	240	P.Bass 2
41	Dyn Rhd ff B	91	Organ 3	141	StIGtr sld A	191	Heavy Gtr C	241	Stick
42	Dyn Rhd ff C	92	Organ 4	142	StIGtr sld B	192	Heavy Gtr A+	242	Fretless A
43	Wurly soft A	93	60's Organ1	143	StIGtr sld C	193	Heavy Gtr B+	243	Fretless B
44	Wurly soft B	94	60's Organ2	144	StIGtr Hrm A	194	Heavy Gtr C+	244	Fretless C
45	Wurly soft C	95	60's Organ3	145	StIGtr Hrm B	195	PowerChord A	245	Fretless 2A
46	Wurly hard A	96	60's Organ4	146	StIGtr Hrm C	196	PowerChord B	246	Fretless 2B
47	Wurly hard B	97	Full Organ	147	Gtr Harm A	197	PowerChord C	247	Fretless 2C
48	Wurly hard C	98	Full Draw	148	Gtr Harm B	198	EG Harm	248	UprightBs 1
49	E.Piano 1A	99	Rock Organ	149	Gtr Harm C	199	Gt.FretNoise	249	UprightBs 2A
50	E.Piano 1B	100	RockOrg1 A L	150	Jazz Gtr A	200	Syn Gtr A	250	UprightBs 2B

Waveform List

No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name
251	UprightBs 2C	301	Oboe mf A	351	OrcUnisonA L	401	Violin 2 B	451	Voice Aahs B
252	Ac.Bass A	302	Oboe mf B	352	OrcUnisonA R	402	Violin 2 C	452	Voice Aahs C
253	Ac.Bass B	303	Oboe mf C	353	OrcUnisonB L	403	Cello A	453	Voice Oohs1A
254	Ac.Bass C	304	Oboe f A	354	OrcUnisonB R	404	Cello B	454	Voice Oohs1B
255	Slap Bass 1	305	Oboe f B	355	OrcUnisonC L	405	Cello C	455	Voice Oohs1C
256	Slap & Pop	306	Oboe f C	356	OrcUnisonC R	406	Cello 2 A	456	Voice Oohs2A
257	Slap Bass 2	307	E.Horn A	357	BrassSectA L	407	Cello 2 B	457	Voice Oohs2B
258	Slap Bass 3	308	E.Horn B	358	BrassSectA R	408	Cello 2 C	458	Voice Oohs2C
259	Jz.Bs Thumb	309	E.Horn C	359	BrassSectB L	409	Cello Wave	459	Choir 1A
260	Jz.Bs Slap 1	310	Bassoon A	360	BrassSectB R	410	Pizz	460	Choir 1B
261	Jz.Bs Slap 2	311	Bassoon B	361	BrassSectC L	411	STR Attack A	461	Choir 1C
262	Jz.Bs Slap 3	312	Bassoon C	362	BrassSectC R	412	STR Attack B	462	Oohs Chord L
263	Jz.Bs Pop	313	T_Recorder A	363	Tpt Sect. A	413	STR Attack C	463	Oohs Chord R
264	Funk Bass1	314	T_Recorder B	364	Tpt Sect. B	414	DolceStr.A L	464	Male Ooh A
265	Funk Bass2	315	T_Recorder C	365	Tpt Sect. C	415	DolceStr.A R	465	Male Ooh B
266	Syn Bass A	316	Sop.Sax A	366	Tb Sect A	416	DolceStr.B L	466	Male Ooh C
267	Syn Bass C	317	Sop.Sax B	367	Tb Sect B	417	DolceStr.B R	467	Org Vox A
268	Syn Bass	318	Sop.Sax C	368	Tb Sect C	418	DolceStr.C L	468	Org Vox B
269	Syn Bass 2 A	319	Sop.Sax mf A	369	T.Sax Sect A	419	DolceStr.C R	469	Org Vox C
270	Syn Bass 2 B	320	Sop.Sax mf B	370	T.Sax Sect B	420	JV Strings L	470	Org Vox
271	Syn Bass 2 C	321	Sop.Sax mf C	371	T.Sax Sect C	421	JV Strings R	471	ZZZ Vox
272	Mini Bs 1A	322	Alto mp A	372	Flugel A	422	JV Strings A	472	Bell VOX
273	Mini Bs 1B	323	Alto mp B	373	Flugel B	423	JV Strings C	473	Kalimba
274	Mini Bs 1C	324	Alto mp C	374	Flugel C	424	JP Strings1A	474	JD Kalimba
275	Mini Bs 2	325	Alto Sax 1A	375	FlugelWave	425	JP Strings1B	475	Klmba Atk
276	Mini Bs 2+	326	Alto Sax 1B	376	Trumpet 1A	426	JP Strings1C	476	Wood Crak
277	MC-202 Bs A	327	Alto Sax 1C	377	Trumpet 1B	427	JP Strings2A	477	Block
278	MC-202 Bs B	328	T.Breathy A	378	Trumpet 1C	428	JP Strings2B	478	Gamelan 1
279	MC-202 Bs C	329	T.Breathy B	379	Trumpet 2A	429	JP Strings2C	479	Gamelan 2
280	Hollow Bs	330	T.Breathy C	380	Trumpet 2B	430	PWM	480	Gamelan 3
281	Flute 1A	331	SoloSax A	381	Trumpet 2C	431	Pulse Mod	481	Log Drum
282	Flute 1B	332	SoloSax B	382	HarmonMute1A	432	Soft Pad A	482	Hooky
283	Flute 1C	333	SoloSax C	383	HarmonMute1B	433	Soft Pad B	483	Tabla
284	Jazz Flute A	334	Tenor Sax A	384	HarmonMute1C	434	Soft Pad C	484	Marimba Wave
285	Jazz Flute B	335	Tenor Sax B	385	Trombone 1	435	Fantasynth A	485	Xylo
286	Jazz Flute C	336	Tenor Sax C	386	Trombone 2 A	436	Fantasynth B	486	Xylophone
287	Flute Tone	337	T.Sax mf A	387	Trombone 2 B	437	Fantasynth C	487	Vibes
288	Piccolo A	338	T.Sax mf B	388	Trombone 2 C	438	D-50 HeavenA	488	Bottle Hit
289	Piccolo B	339	T.Sax mf C	389	Tuba A	439	D-50 HeavenB	489	Glockenspiel
290	Piccolo C	340	Bari.Sax f A	390	Tuba B	440	D-50 HeavenC	490	Tubular
291	Blow Pipe	341	Bari.Sax f B	391	Tuba C	441	Fine Wine	491	Steel Drums
292	Pan Pipe	342	Bari.Sax f C	392	French 1A	442	D-50 Brass A	492	Pole Ip
293	BottleBlow	343	Bari.Sax A	393	French 1C	443	D-50 Brass B	493	Fanta Bell A
294	Rad Hose	344	Bari.Sax B	394	F.Horns A	444	D-50 Brass C	494	Fanta Bell B
295	Shakuhachi	345	Bari.Sax C	395	F.Horns B	445	D-50 BrassA+	495	Fanta Bell C
296	Shaku Atk	346	Syn Sax	396	F.Horns C	446	Doo	496	FantaBell A+
297	Flute Push	347	Chanter	397	Violin A	447	Pop Voice	497	Org Bell
298	Clarinet A	348	Harmonica A	398	Violin B	448	Syn Vox 1	498	AgogoBells
299	Clarinet B	349	Harmonica B	399	Violin C	449	Syn Vox 2	499	FingerBell
300	Clarinet C	350	Harmonica C	400	Violin 2 A	450	Voice Aahs A	500	DIGI Bell 1

Waveform List

No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name	No.	Wave Name
501	DIGI Bell 1+	551	DualSquare A	601	TVF_Trig	651	Thunder 2	701	Jazz Rim ffR
502	JD Cowbell	552	DualSquare C	602	Org Click	652	AmbientSN pL	702	Brush Slap
503	Bell Wave	553	DualSquareA+	603	Cut Noiz	653	AmbientSN pR	703	Brush Swish
504	Chime	554	JD SynPulse1	604	Bass Body	654	AmbientSN fL	704	Jazz Swish p
505	Crystal	555	JD SynPulse2	605	Flute Click	655	AmbientSN fR	705	Jazz Swish f
506	2.2 Bellwave	556	JD SynPulse3	606	Gt&BsNz MENU	656	Wet SN p L	706	909 SN 1
507	2.2 Vibwave	557	JD SynPulse4	607	Ac.BassNz 1	657	Wet SN p R	707	909 SN 2
508	Digiwave	558	Synth Pulse1	608	Ac.BassNz 2	658	Wet SN f L	708	808 SN
509	DIGI Chime	559	Synth Pulse2	609	El.BassNz 1	659	Wet SN f R	709	Rock Roll L
510	JD DIGIChime	560	JD SynPulse5	610	El.BassNz 2	660	Dry SN p	710	Rock Roll R
511	BrightDigi	561	Sync Sweep	611	DistGtrNz 1	661	Dry SN f	711	Jazz Roll
512	Can Wave 1	562	Triangle	612	DistGtrNz 2	662	Sharp SN	712	Brush Roll
513	Can Wave 2	563	JD Triangle	613	DistGtrNz 3	663	Piccolo SN	713	Dry Stick
514	Vocal Wave	564	Sine	614	DistGtrNz 4	664	Maple SN	714	Dry Stick 2
515	Wally Wave	565	Metal Wind	615	SteelGtrNz 1	665	Old Fill SN	715	Side Stick
516	Brusky Ip	566	Wind Agogo	616	SteelGtrNz 2	666	70s SN	716	Woody Stick
517	Wave Scan	567	Feedbackwave	617	SteelGtrNz 3	667	SN Roll	717	RockStick pL
518	Wire String	568	Spectrum	618	SteelGtrNz 4	668	Natural SN1	718	RockStick pR
519	Nasty	569	CrunchWind	619	SteelGtrNz 5	669	Natural SN2	719	RockStick fL
520	Wave Table	570	ThroatWind	620	SteelGtrNz 6	670	Ballad SN	720	RockStick fR
521	Klack Wave	571	Pitch Wind	621	SteelGtrNz 7	671	Rock SN p L	721	Dry Kick
522	Spark VOX	572	JD Vox Noise	622	Sea	672	Rock SN p R	722	Maple Kick
523	JD Spark VOX	573	Vox Noise	623	Thunder	673	Rock SN mf L	723	Rock Kick p
524	Cutters	574	BreathNoise	624	Windy	674	Rock SN mf R	724	Rock Kick mf
525	EML 5th	575	Voice Breath	625	Stream	675	Rock SN f L	725	Rock Kick f
526	MMM VOX	576	White Noise	626	Bubble	676	Rock SN f R	726	Jazz Kick p
527	Lead Wave	577	Pink Noise	627	Bird	677	Rock Rim p L	727	Jazz Kick mf
528	Synth Reed	578	Rattles	628	Dog Bark	678	Rock Rim p R	728	Jazz Kick f
529	Synth Saw 1	579	Ice Rain	629	Horse	679	Rock Rim mfL	729	Jazz Kick
530	Synth Saw 2	580	Tin Wave	630	Telephone 1	680	Rock Rim mfR	730	Pillow Kick
531	Syn Saw 2inv	581	Anklungs	631	Telephone 2	681	Rock Rim f L	731	JazzDry Kick
532	Synth Saw 3	582	Wind Chimes	632	Creak	682	Rock Rim f R	732	Lite Kick
533	JD Syn Saw 2	583	Orch. Hit	633	Door Slam	683	Rock Gst L	733	Old Kick
534	FAT Saw	584	Tekno Hit	634	Engine	684	Rock Gst R	734	Hybrid Kick
535	JP-8 Saw A	585	Back Hit	635	Car Stop	685	Snare Ghost	735	Hybrid Kick2
536	JP-8 Saw B	586	Philly Hit	636	Car Pass	686	Jazz SN p L	736	Verb Kick
537	JP-8 Saw C	587	Scratch 1	637	Crash	687	Jazz SN p R	737	Round Kick
538	P5 Saw A	588	Scratch 2	638	Gun Shot	688	Jazz SN mf L	738	MpILmtr Kick
539	P5 Saw B	589	Scratch 3	639	Siren	689	Jazz SN mf R	739	70s Kick 1
540	P5 Saw C	590	Shami	640	Train	690	Jazz SN f L	740	70s Kick 2
541	P5 Saw2 A	591	Org Atk 1	641	Jetplane	691	Jazz SN f R	741	Dance Kick
542	P5 Saw2 B	592	Org Atk 2	642	Starship	692	Jazz SN ff L	742	808 Kick
543	P5 Saw2 C	593	Sm Metal	643	Breath	693	Jazz SN ff R	743	909 Kick 1
544	D-50 Saw A	594	StrikePole	644	Laugh	694	Jazz Rim p L	744	909 Kick 2
545	D-50 Saw B	595	Thrill	645	Scream	695	Jazz Rim p R	745	Rock TomL1 p
546	D-50 Saw C	596	Switch	646	Punch	696	Jazz Rim mfL	746	Rock TomL2 p
547	Synth Square	597	Tuba Slap	647	Heart	697	Jazz Rim mfR	747	Rock Tom M p
548	JP-8 SquareA	598	Plink	648	Steps	698	Jazz Rim f L	748	Rock Tom H p
549	JP-8 SquareB	599	Plunk	649	Machine Gun	699	Jazz Rim f R	749	Rock TomL1 f
550	JP-8 SquareC	600	EP Atk	650	Laser	700	Jazz Rim ffL	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	801	Jazz PdHH p	851	Cabasa Down	901	REV Wet SNfR	951	REV JzRoll
752	Rock Tom H f	802	Jazz PdHH f	852	Cabasa Cut	902	REV Dry SN	952	REV Dry Stk
753	Rock Flm L1	803	Pedal HiHat	853	Maracas	903	REV PiccloSN	953	REV DrySick
754	Rock Flm L2	804	Pedal HiHat2	854	Long Guiro	904	REV Maple SN	954	REV Side Stk
755	Rock Flm M	805	Dance Cl HH	855	Tambourine 1	905	REV OldFilSN	955	REV Wdy Stk
756	Rock Flm H	806	909 NZ HiHat	856	Tambourine 2	906	REV 70s SN	956	REV RkStk1L
757	Jazz Tom L p	807	70s Cl HiHat	857	Open Triangl	907	REV SN Roll	957	REV RkStk1R
758	Jazz Tom M p	808	70s Op HiHat	858	Cuica	908	REV NatrISN1	958	REV RkStk2L
759	Jazz Tom H p	809	606 Cl HiHat	859	Vibraslap	909	REV NatrISN2	959	REV RkStk2R
760	Jazz Tom L f	810	606 Op HiHat	860	Timpani	910	REV BalladSN	960	REV Thrill
761	Jazz Tom M f	811	909 Cl HiHat	861	Timp3 pp	911	REV RkSNpL	961	REV Dry Kick
762	Jazz Tom H f	812	909 Op HiHat	862	Timp3 mp	912	REV RkSNpR	962	REV Mpl Kick
763	Jazz Flm L	813	808 Claps	863	Applause	913	REV RkSNmfL	963	REV RkKik p
764	Jazz Flm M	814	HumanClapsEQ	864	Syn FX Loop	914	REV RkSNmfR	964	REV RkKik mf
765	Jazz Flm H	815	Tight Claps	865	Loop 1	915	REV RkSNfL	965	REV RkKik f
766	Maple Tom 1	816	Hand Claps	866	Loop 2	916	REV RkSNfR	966	REV JzKik p
767	Maple Tom 2	817	Finger Snaps	867	Loop 3	917	REV RkRimpL	967	REV JzKik mf
768	Maple Tom 3	818	Rock RdCym1p	868	Loop 4	918	REV RkRimpR	968	REV JzKik f
769	Maple Tom 4	819	Rock RdCym1f	869	Loop 5	919	REV RkRimmfL	969	REV Jaz Kick
770	808 Tom	820	Rock RdCym2p	870	Loop 6	920	REV RkRimmfR	970	REV Pillow K
771	Verb Tom Hi	821	Rock RdCym2f	871	Loop 7	921	REV RkRimfL	971	REV Jz Dry K
772	Verb Tom Lo	822	Jazz RdCym p	872	R8 Click	922	REV RkRimfR	972	REV LiteKick
773	Dry Tom Hi	823	Jazz RdCymmf	873	Metronome 1	923	REV RkGstL	973	REV Old Kick
774	Dry Tom Lo	824	Jazz RdCym f	874	Metronome 2	924	REV RkGstR	974	REV Hybrid K
775	Rock ClHH1 p	825	Ride 1	875	MC500 Beep 1	925	REV SnareGst	975	REV HybridK2
776	Rock ClHH1mf	826	Ride 2	876	MC500 Beep 2	926	REV JzSNpL	976	REV 70s K 1
777	Rock ClHH1 f	827	Ride Bell	877	Low Saw	927	REV JzSNpR	977	REV 70s K 2
778	Rock ClHH2 p	828	Rock CrCym1p	878	Low Saw inv	928	REV JzSNmfL	978	REV Dance K
779	Rock ClHH2mf	829	Rock CrCym1f	879	Low P5 Saw	929	REV JzSNmfR	979	REV 909 K 2
780	Rock ClHH2 f	830	Rock CrCym2p	880	Low Pulse 1	930	REV JzSNfL	980	REV RkTomL1p
781	Jazz ClHH1 p	831	Rock CrCym2f	881	Low Pulse 2	931	REV JzSNfR	981	REV RkTomL2p
782	Jazz ClHH1mf	832	Rock Splash	882	Low Square	932	REV JzSNffL	982	REV RkTomM p
783	Jazz ClHH1 f	833	Jazz CrCym p	883	Low Sine	933	REV JzSNffR	983	REV RkTomH p
784	Jazz ClHH2 p	834	Jazz CrCym f	884	Low Triangle	934	REV JzRimpL	984	REV RkTomL1f
785	Jazz ClHH2mf	835	Crash Cymbal	885	Low White NZ	935	REV JzRimpR	985	REV RkTomL2f
786	Jazz ClHH2 f	836	Crash 1	886	Low Pink NZ	936	REV JzRimmfL	986	REV RkTomM f
787	Cl HiHat 1	837	Rock China	887	DC	937	REV JzRimmfR	987	REV RkTomH f
788	Cl HiHat 2	838	China Cym	888	REV Orch.Hit	938	REV JzRimfL	988	REV RkFlmL1
789	Cl HiHat 3	839	Cowbell	889	REV TeknoHit	939	REV JzRimfR	989	REV RkFlmL2
790	Cl HiHat 4	840	Wood Block	890	REV Back Hit	940	REV JzRimffL	990	REV RkFlm M
791	Cl HiHat 5	841	Claves	891	REV PhillHit	941	REV JzRimffR	991	REV RkFlm H
792	Rock OpHH p	842	Bongo Hi	892	REV Steel DR	942	REV Brush 1	992	REV JzTomL p
793	Rock OpHH f	843	Bongo Lo	893	REV Tin Wave	943	REV Brush 2	993	REV JzTomM p
794	Jazz OpHH p	844	Cga Open Hi	894	REV AmbiSNpL	944	REV Brush 3	994	REV JzTomH p
795	Jazz OpHH mf	845	Cga Open Lo	895	REV AmbiSNpR	945	REV JzSwish1	995	REV JzTomL f
796	Jazz OpHH f	846	Cga Mute Hi	896	REV AmbiSNfL	946	REV JzSwish2	996	REV JzTomM f
797	Op HiHat	847	Cga Mute Lo	897	REV AmbiSNfR	947	REV 909 SN 1	997	REV JzTomH f
798	Op HiHat 2	848	Cga Slap	898	REV Wet SNpL	948	REV 909 SN 2	998	REV JzFlm L
799	Rock PdHH p	849	Timbale	899	REV Wet SNpR	949	REV RkRoll L	999	REV JzFlm M
800	Rock PdHH f	850	Cabasa Up	900	REV Wet SNfL	950	REV RkRoll R	1000	REV JzFlm H

Waveform List

<u>No.</u>	<u>Wave Name</u>	<u>No.</u>	<u>Wave Name</u>
1001	REV MplTom2	1051	REV RkRCym2p
1002	REV MplTom4	1052	REV RkRCym2f
1003	REV 808Tom	1053	REV JzRCym p
1004	REV VerbTomH	1054	REV JzRCymmf
1005	REV VerbTomL	1055	REV JzRCym f
1006	REV DryTom H	1056	REV Ride 1
1007	REV DryTom M	1057	REV Ride 2
1008	REV RkCIH1 p	1058	REV RideBell
1009	REV RkCIH1mf	1059	REV RkCCym1p
1010	REV RkCIH1 f	1060	REV RkCCym1f
1011	REV RkCIH2 p	1061	REV RkCCym2p
1012	REV RkCIH2mf	1062	REV RkCCym2f
1013	REV RkCIH2 f	1063	REV RkSplash
1014	REV JzCIH1 p	1064	REV JzCCym p
1015	REV JzCIH1mf	1065	REV JzCCym f
1016	REV JzCIH1 f	1066	REV CrashCym
1017	REV JzCIH2 p	1067	REV Crash 1
1018	REV JzCIH2mf	1068	REV RkChina
1019	REV JzCIH2 f	1069	REV China
1020	REV CI HH 1	1070	REV Cowbell
1021	REV CI HH 2	1071	REV WoodBlck
1022	REV CI HH 3	1072	REV Claves
1023	REV CI HH 4	1073	REV Conga
1024	REV CI HH 5	1074	REV Timbale
1025	REV RkOpHH p	1075	REV Maracas
1026	REV RkOpHH f	1076	REV Guiro
1027	REV JzOpHH p	1077	REV Tamb 1
1028	REV JzOpHHmf	1078	REV Tamb 2
1029	REV JzOpHH f	1079	REV Cuica
1030	REV Op HiHat	1080	REV Timpani
1031	REV OpHiHat2	1081	REV Timp3 pp
1032	REV RkPdHH p	1082	REV Timp3 mp
1033	REV RkPdHH f	1083	REV Metro
1034	REV JzPdHH p		
1035	REV JzPdHH f		
1036	REV PedalHH		
1037	REV PedalHH2		
1038	REV Dance HH		
1039	REV 70s CIHH		
1040	REV 70s OpHH		
1041	REV 606 CIHH		
1042	REV 606 OpHH		
1043	REV 909 NZHH		
1044	REV 909 OpHH		
1045	REV HClapsEQ		
1046	REV TghtClps		
1047	REV FingSnap		
1048	REV RealCLP		
1049	REV RkRCym1p		
1050	REV RkRCym1f		

MIDI Implementation

Model :XV-3080
Date :Dec. 18, 1999
Version :1.0

1. Receive data

■ Channel Voice Messages

* Not received in Performance mode when the Receive Switch parameter (PERFORM/PART) 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/TONE and RHYTHM/TONE) 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 Polyphonic 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 COMMON), the corresponding effect will occur.
- * If a Controller number that corresponds to the System Control Source 1, 2, 3 or 4 parameter (SYSTEM/Common) is selected, the specified effect will apply if Patch Control Source 1, 2, 3 or 4 parameter (PATCH/Common) is set to SYS-CTRL1, CTRL-2, CTRL-3 or CTRL-4.

○ 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, Rhythms, and Patches 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		
000		001 - 128	GM Patch	
:				
032		001 - 128	GM Patch	
085	000	001 - 064	User Performance	001 - 064
	032	001 - 064	Card Performance A	001 - 064
	033	001 - 064	Card Performance B	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
	032	001 - 004	Card Rhythm A	001 - 004
	033	001 - 004	Card Rhythm B	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
	032	001 - 128	Card Patch A	001 - 128
	033	001 - 128	Card Patch B	001 - 128
	:			
	064	001 - 128	Preset Patch A	001 - 128
	065	001 - 128	Preset Patch B	001 - 128
	:			
088	000 - 001	001 - 128	SR-JV80-01 Rhythm	001 - 256
	002 - 003	001 - 128	SR-JV80-02 Rhythm	001 - 256
	:			
089	000 - 001	001 - 128	SR-JV80-01 Patch	001 - 256
	002 - 003	001 - 128	SR-JV80-02 Patch	001 - 256
	:			
092	000 -	001 -	SRX Rhythm	001 -
	:			
093	000 -	001 -	SRX Patch	001 -
	:			
120		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 (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.

MIDI Implementation

○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/TONE or RHYTHM/TONE) 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/TONE or RHYTHM/TONE) 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 - 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 - 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 - 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 - 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 - 7FH (-64 - 0 - +63)

* The decay time will change in GM mode.

○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 - 7FH (-64 - 0 - +63)

* The vibrato rate will change in GM mode.

○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 - 7FH (-64 - 0 - +63)

* The vibrato depth will change in GM mode.

○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 - 7FH (-64 - 0 - +63)

* The vibrato delay will change in GM mode.

○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/TONE) 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/TONE) of Tone 2 will change.

○General Purpose Controller 7 (Controller number 82)

Status	<u>2nd byte</u>	<u>3rd byte</u>
BnH	52H	vvH
n = MIDI channel number:	0H - FH (Ch.1 - 16)	
vv = Control value:	00H - 7FH (0 - 127)	

* The Tone Level parameter (PATCH/TONE) of Tone 3 will change.

○General Purpose Controller 8 (Controller number 83)

Status	<u>2nd byte</u>	<u>3rd byte</u>
BnH	53H	vvH
n = MIDI channel number:	0H - FH (Ch.1 - 16)	
vv = Control value:	00H - 7FH (0 - 127)	

* The Tone Level parameter (PATCH/TONE) of Tone 4 will change.

○Portamento control (Controller number 84)

Status	<u>2nd byte</u>	<u>3rd byte</u>
BnH	54H	kkH
n = MIDI channel number:	0H - 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	<u>2nd byte</u>	<u>3rd byte</u>
BnH	5BH	vvH
n = MIDI channel number:	0H - FH (Ch.1 - 16)	
vv = Reverb Send Level:	00H - 7FH (0 - 127)	

* In Performance mode the Part Part Reverb Send Level parameter (PERFORM/PART) will change.

○Effect 3 (Chorus Send Level) (Controller number 93)

Status	<u>2nd byte</u>	<u>3rd byte</u>
BnH	5DH	vvH
n = MIDI channel number:	0H - FH (Ch.1 - 16)	
vv = Chorus Send Level:	00H - 7FH (0 - 127)	

* In Performance mode the Part Part Chorus Send Level parameter (PERFORM/PART) will change.

○RPN MSB/LSB (Controller number 100, 101)

Status	<u>2nd byte</u>	<u>3rd byte</u>
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		

<<< RPN >>>

Control Changes include RPN (Registered Parameter Numbers), which are extended When using RPNs, first the RPN (Controller numbers 100 and 101; they can be sent in any

This device receives the following RPNs.

RPN	Data entry	Notes
<u>MSB_LSB</u>	<u>MSB_LSB</u>	
00H, 00H	mmH, llH	Pitch Bend Sensitivity mm: 00H - 18H (0 - 24 semitones) ll: ignored (processed as 00H) Up to 2 octave can be specified in semitone steps. * In Performance mode, the Part Pitch Bend Range parameter (PERFORM/PART) will change.

00H, 01H	mmH, llH	Master Fine Tuning mm, ll: 20 00H - 40 00H - 60 00H (-8192 x 50 / 8192 - 0 - +8192 x 50 / 8192 cent) * In Performance mode, the Part Fine Tune parameter (PERFORM/PART) will change.
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00H, 02H	mmH, llH	Master Coarse Tuning mm: 10H - 40H - 70H (-48 - 0 - +48 semitones) ll: ignored (processed as 00H) * In Performance mode, the Part Coarse Tune parameter (PERFORM/PART) will change.
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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
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●Program Change

Status	<u>2nd byte</u>
CnH	ppH
n = MIDI channel number:	0H - FH (Ch.1 - 16)
pp = Program number:	00H - 7FH (prog.1 - prog.128)

* Not received in Performance mode when the Receive Program parameter (PERFORM/MIDI) is OFF.

●Channel Pressure

Status	<u>2nd byte</u>
DnH	vvH
n = MIDI channel number:	0H - 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	<u>2nd byte</u>	<u>3rd byte</u>
EnH	llH	mmH
n = MIDI channel number:	0H - 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/TONE) is OFF.
- * Not received in Performance mode when the Receive Bender 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	<u>2nd byte</u>	<u>3rd byte</u>
BnH	78H	00H
n = MIDI channel number:	0H - 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	<u>2nd byte</u>	<u>3rd byte</u>
BnH	79H	00H
n = MIDI channel number:	0H - FH (Ch.1 - 16)	

* When this message is received, the following controllers will be set to their reset values.

MIDI Implementation

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)
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: 0H - 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

● Timing Clock

Status
F8H

- * This message will be received if the Clock Source parameter (SYSTEM/COMMON) is MIDI.

● 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: an ID number (manufacturer ID) to indicate the manufacturer whose Exclusive message this is. 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: 00H - 1FH (1 - 32), the initial value is 10H (17).)
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.SSS) 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 GM1 mode.
- * Not received when the Receive GM1 System On parameter (SYSTEM/COMMON) 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 GM2 mode.
- * Not received when the Receive GM2 System On parameter (SYSTEM/COMMON) 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, 11H, mmH	F7H

Byte	Explanation
F0H	Exclusive status
7FH	ID number (universal realtime message)
7FH	Device ID (Broadcast)
04H	Sub ID#1 (Device Control messages)
01H	Sub ID#2 (Master Volume)
11H	Master Volume lower byte
mmH	Master Volume upper byte
F7H	EOX (End Of Exclusive)

* The lower byte (11H) of Master Volume will be handled as 00H.
* The Master Level parameter (SYSTEM/COMMON) will change.

○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/COMMON) 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/COMMON) will change.

●Global Parameter Control

* Not received in Performance mode and Patch mode.

○Reverb Parameters

Status	Data byte	Status
F0H	7FH, 7FH, 04H, 05H, 01H, 01H, 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, 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 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%	

MIDI Implementation

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	FH,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...	F7H

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 byte1
 bits 0 to 1 = channel 15 to 16
 bit 2 to 6 = Undefined
 ggH Channel byte2
 bits 0 to 6 = channel 8 to 14
 hhH Channel byte3
 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 - 0F)
 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)

F7H 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.

he 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 Explanation

F0H Exclusive status
 41H ID number (Roland)
 dev devdevice ID (dev: 10H - 1FH, 7FH)
 00H model ID #1 (XV-3080)
 10H model ID #2 (XV-3080)
 11H commandID (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.SSS)".

* For the checksum, refer to (p.SSS).

* Not received when the Receive Exclusive parameter (SYSTEM/COMMON) 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, Initial value is 10H)
 00H Model ID #1 (XV-3080)
 10H Model ID #2 (XV-3080)
 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 Section 3, "Parameter address map."
- * 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.
- * Not received when the Receive Exclusive parameter (SYSTEM/COMMON) is OFF.

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)
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 Section 3, "Parameter address map."
- * 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.555)
- * Not received when the Receive Exclusive parameter (SYSTEM/COMMON) is OFF.

2. Data transmission (sound source section)

■Channel Voice Messages

When execute the GM Data Transfer, the following Program Change and Control 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),
Initial value = 40H (Center)

○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 - 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 - 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 - 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 - 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 - 7FH (-64 - 0 - +63)

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○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 - 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 - 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 - 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

<<< RPN >>>

Control Changes include RPN (Registered Parameter Numbers), which are extended When using RPNs, first the RPN (Controller numbers 100 and 101; they can be sent in any

This device receives the following RPNs.

RPN	Data entry	Notes
MSB, LSB 00H, 00H	MSB, LSB mmH, llH	Pitch Bend Sensitivity mm: 00H - 18H (0 - 24 semitones) ll: ignored (processed as 00H) Up to 2 octave can be specified in semitone steps. * In Performance mode, the Part Pitch Bend Range parameter (PERFORM/PART) will change.
00H, 01H	mmH, llH	Master Fine Tuning mm, ll: 20 00H - 40 00H - 60 00H (-8192 x 50 / 8192 - 0 - +8192 x50 / 8192 cent) * In Performance mode, the Part Fine Tune parameter (PERFORM/PART) will change.
00H, 02H	mmH, llH	Master Coarse Tuning mm: 10H - 40H - 70H (-48 - 0 - +48 semitones) ll: ignored (processed as 00H) * In Performance mode, the Part Coarse Tune parameter (PERFORM/PART) will change.
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: 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-3080.

●Universal Non-realtime System Exclusive Message

○Identity Reply Message

Receiving Identity Request Message, the XV-3080 send this message.

Status Data byte Status
 F0H 7EH, dev, 06H, 02H, 41H, 10H, 01H, 00H, 00H, 00H, 00H, 00H
 F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (Universal Non-realtime Message)
dev	Device ID (use the same as the device ID of Roland)
06H	Sub ID#1 (General Information)
02H	Sub ID#2 (Identity Reply)
41H	ID number (Roland)
10H 01H	Device family code
00H 00H	Device family number code
00H 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, Initial value is 10H)
00H	Model ID #1 (XV-3080)
10H	Model ID #2 (XV-3080)
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 Section 3, "Parameter address map."
- * 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.

3. Parameter address map

* Transmission of “#” marked address is devided to some packets. For example, ABH in hexadecimal notation will be devided to 0AH and 0BH, and is sent/received in this order.

1. XV-3080 (Model ID=00H 10H)

* “<>” marked address, valid on the XV-5080, are ignored when the XV-3080 receive them.

Start Address	Description	
00 00 00 00	System	*1-1
10 00 00 00	Temporary Performance	*1-2
11 00 00 00	Temporary Patch/Rhythm (Performance Mode Part 1)	*1-3
11 20 00 00	Temporary Patch/Rhythm (Performance Mode Part 2)	
:		
14 60 00 00	Temporary Patch/Rhythm (Performance Mode Part 16)	
1F 00 00 00	Temporary Patch/Rhythm (Patch Mode)	
20 00 00 00	User Performance (01)	*1-2
20 01 00 00	User Performance (02)	
:		
20 3F 00 00	User Performance (64)	
30 00 00 00	User Patch (001)	*1-3-1
30 01 00 00	User Patch (002)	
:		
30 7F 00 00	User Patch (128)	
40 00 00 00	User Rhythm (001)	*1-3-2
40 10 00 00	User Rhythm (002)	
40 20 00 00	User Rhythm (003)	
40 30 00 00	User Rhythm (004)	

*1-1 System

Offset Address	Description	
00 00 00	System Common	*1-1-1
00 10 00	System Part (Part 1)	*1-1-2
00 11 00	System Part (Part 2)	
:		
00 1F 00	System Part (Part 16)	
00 20 00	System Part (Part 17) <XV-5080>	
00 21 00	System Part (Part 18) <XV-5080>	
:		
00 2F 00	System Part (Part 32) <XV-5080>	

*1-3 Temporary Patch/Rhythm

Offset Address	Description	
00 00 00	Temporary Patch	*1-3-1
10 00 00	Temporary Rhythm	*1-3-2

*1-2 Performance

Offset Address	Description	
00 00 00	Performance Common	*1-2-1
00 02 00	Performance Common MFx	*1-2-2
00 04 00	Performance Common Chorus	*1-2-3
00 06 00	Performance Common Reverb	*1-2-4
00 10 00	Performance MIDI (Channel 1)	*1-2-5
00 11 00	Performance MIDI (Channel 2)	
:		
00 1F 00	Performance MIDI (Channel 16)	
00 20 00	Performance Part (Part 1)	*1-2-6
00 21 00	Performance Part (Part 2)	
:		
00 2F 00	Performance Part (Part 16)	
00 30 00	Performance Part (Part 17) <XV-5080>	
00 31 00	Performance Part (Part 18) <XV-5080>	
:		
00 3F 00	Performance Part (Part 32) <XV-5080>	

*1-3-1 Patch

Offset Address	Description	
00 00 00	Patch Common	*1-3-1-1
00 02 00	Patch Common MFx	*1-3-1-2
00 04 00	Patch Common Chorus	*1-3-1-3
00 06 00	Patch Common Reverb	*1-3-1-4
00 10 00	Patch TMF (Tone Mix Table)	*1-3-1-5
00 20 00	Patch Tone (Tone 1)	*1-3-1-6
00 22 00	Patch Tone (Tone 2)	
00 24 00	Patch Tone (Tone 3)	
00 26 00	Patch Tone (Tone 4)	

*1-3-2 Rhythm

Offset Address	Description	
00 00 00	Rhythm Common	*1-3-2-1
00 02 00	Rhythm Common MFx	*1-3-2-2
00 04 00	Rhythm Common Chorus	*1-3-2-3
00 06 00	Rhythm Common Reverb	*1-3-2-4
00 10 00	Rhythm Tone (Key # 21)	*1-3-2-5
00 12 00	Rhythm Tone (Key # 22)	
:		
01 3E 00	Rhythm Tone (Key # 108)	

*1-1-1 System Common

Offset Address	Description	
00 00	0000 0aaa Sound Mode	(0 - 4)
# 00 01	0000 0aaa 0000 0bbb	PERFORM, PATCH, GM1, GM2, GS

	0000 cccc 0000 dddd	Master Tune	(24 - 2024)
00 05	00aa 0aaa	Master Key Shift	-100.0 - 100.0 [cent] (40 - 88)
00 06	0aaa 0aaa	Master Level	-24 - +24 (0 - 127)
00 07	0000 000a	Scale Tune Switch	(0 - 1) OFF, ON
00 08	0000 000a	Patch Remain	(0 - 1) OFF, ON
00 09	0000 000a	Mix/Parallel	(0 - 1) MIX, PARALLEL
00 0A	0000 000a	MFx Switch	(0 - 1) BYPASS, ON
00 0B	0000 000a	Chorus Switch	(0 - 1) OFF, ON
00 0C	0000 000a	Reverb Switch	(0 - 1) OFF, ON
00 0D	000a 0aaa	Performance Control Channel	(0 - 16) 1 - 16, OFF
00 0E	0aaa 0aaa	Performance Bank Select MSB (CC# 0)	(0 - 127)
00 0F	0aaa 0aaa	Performance Bank Select LSB (CC# 32)	(0 - 127)
00 10	0aaa 0aaa	Performance Program Number (PC)	(0 - 127)
00 11	0000 0aaa	Patch Receive Channel	(0 - 15) 1 - 16
00 12	0aaa 0aaa	Patch Bank Select MSB (CC# 0)	(0 - 127)
00 13	0aaa 0aaa	Patch Bank Select LSB (CC# 32)	(0 - 127)
00 14	0aaa 0aaa	Patch Program Number (PC)	(0 - 127)
00 15	0000 000a	System Clock Source	(0 - 1) INT, MIDI
# 00 16	0000 0aaa 0000 0bbb	System Tempo	(20 - 250)
00 18	0aaa 0aaa	System Control 1 Source	(0 - 97) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT
00 19	0aaa 0aaa	System Control 2 Source	(0 - 97) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT
00 1A	0aaa 0aaa	System Control 3 Source	(0 - 97) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT
00 1B	0aaa 0aaa	System Control 4 Source	(0 - 97) OFF, CC01 - CC31, CC33 - CC95, BEND, AFT
00 1C	0000 000a	Receive Program Change	(0 - 1) OFF, ON
00 1D	0000 000a	Receive Bank Select	(0 - 1) OFF, ON
00 00 00 1E		Total Size	

*1-1-2 System Part

Offset Address	Description		
00 00	0aaa 0aaa	Scale Tune for C	(0 - 127) -64 - +63
00 01	0aaa 0aaa	Scale Tune for C#	(0 - 127) -64 - +63
00 02	0aaa 0aaa	Scale Tune for D	(0 - 127) -64 - +63
00 03	0aaa 0aaa	Scale Tune for D#	(0 - 127) -64 - +63
00 04	0aaa 0aaa	Scale Tune for E	(0 - 127) -64 - +63
00 05	0aaa 0aaa	Scale Tune for F	(0 - 127) -64 - +63
00 06	0aaa 0aaa	Scale Tune for F#	(0 - 127) -64 - +63
00 07	0aaa 0aaa	Scale Tune for G	(0 - 127) -64 - +63
00 08	0aaa 0aaa	Scale Tune for G#	(0 - 127) -64 - +63
00 09	0aaa 0aaa	Scale Tune for A	(0 - 127) -64 - +63
00 0A	0aaa 0aaa	Scale Tune for A#	(0 - 127) -64 - +63
00 0B	0aaa 0aaa	Scale Tune for B	(0 - 127) -64 - +63
00 00 00 0C		Total Size	

*1-2-1 Performance Common

Offset Address	Description		
00 00	0aaa 0aaa	Performance Name 1	(32 - 127) 32 - 127 [ASCII]
00 01	0aaa 0aaa	Performance Name 2	(32 - 127) 32 - 127 [ASCII]
00 02	0aaa 0aaa	Performance Name 3	(32 - 127) 32 - 127 [ASCII]
00 03	0aaa 0aaa	Performance Name 4	(32 - 127) 32 - 127 [ASCII]
00 04	0aaa 0aaa	Performance Name 5	(32 - 127) 32 - 127 [ASCII]
00 05	0aaa 0aaa	Performance Name 6	(32 - 127) 32 - 127 [ASCII]
00 06	0aaa 0aaa	Performance Name 7	(32 - 127) 32 - 127 [ASCII]
00 07	0aaa 0aaa	Performance Name 8	(32 - 127) 32 - 127 [ASCII]
00 08	0aaa 0aaa	Performance Name 9	(32 - 127) 32 - 127 [ASCII]
00 09	0aaa 0aaa	Performance Name 10	(32 - 127) 32 - 127 [ASCII]
00 0A	0aaa 0aaa	Performance Name 11	(32 - 127) 32 - 127 [ASCII]
00 0B	0aaa 0aaa	Performance Name 12	(32 - 127) 32 - 127 [ASCII]
00 0C	00aa 0aaa	Solo Part Select	(0 - 32) OFF, 1 - 16, 17 - 32<XV-5080>
00 0D	000a 0aaa	MFx Control Channel	(0 - 16) 1 - 16, OFF
00 0E	0000 000a	MFx Control MIDI1 <XV-5080>	(0 - 1) OFF, ON
00 0F	0000 000a	MFx Control MIDI2 <XV-5080>	(0 - 1) OFF, ON
00 10	0aaa 0aaa	Voice Reserve 1	(0 - 64) 0 - 63, FULL-VOICE
00 11	0aaa 0aaa	Voice Reserve 2	(0 - 64) 0 - 63, FULL-VOICE
00 12	0aaa 0aaa	Voice Reserve 3	(0 - 64) 0 - 63, FULL-VOICE
00 13	0aaa 0aaa	Voice Reserve 4	(0 - 64) 0 - 63, FULL-VOICE
00 14	0aaa 0aaa	Voice Reserve 5	(0 - 64) 0 - 63, FULL-VOICE

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00 15	0aaa aaaa	Voice Reserve 6	(0 - 64)
00 16	0aaa aaaa	Voice Reserve 7	(0 - 64)
00 17	0aaa aaaa	Voice Reserve 8	(0 - 64)
00 18	0aaa aaaa	Voice Reserve 9	(0 - 64)
00 19	0aaa aaaa	Voice Reserve 10	(0 - 64)
00 1A	0aaa aaaa	Voice Reserve 11	(0 - 64)
00 1B	0aaa aaaa	Voice Reserve 12	(0 - 64)
00 1C	0aaa aaaa	Voice Reserve 13	(0 - 64)
00 1D	0aaa aaaa	Voice Reserve 14	(0 - 64)
00 1E	0aaa aaaa	Voice Reserve 15	(0 - 64)
00 1F	0aaa aaaa	Voice Reserve 16	(0 - 64)
00 20	0aaa aaaa	Voice Reserve 17 <XV-5080>	(0 - 64)
00 21	0aaa aaaa	Voice Reserve 18 <XV-5080>	(0 - 64)
00 22	0aaa aaaa	Voice Reserve 19 <XV-5080>	(0 - 64)
00 23	0aaa aaaa	Voice Reserve 20 <XV-5080>	(0 - 64)
00 24	0aaa aaaa	Voice Reserve 21 <XV-5080>	(0 - 64)
00 25	0aaa aaaa	Voice Reserve 22 <XV-5080>	(0 - 64)
00 26	0aaa aaaa	Voice Reserve 23 <XV-5080>	(0 - 64)
00 27	0aaa aaaa	Voice Reserve 24 <XV-5080>	(0 - 64)
00 28	0aaa aaaa	Voice Reserve 25 <XV-5080>	(0 - 64)
00 29	0aaa aaaa	Voice Reserve 26 <XV-5080>	(0 - 64)
00 2A	0aaa aaaa	Voice Reserve 27 <XV-5080>	(0 - 64)
00 2B	0aaa aaaa	Voice Reserve 28 <XV-5080>	(0 - 64)
00 2C	0aaa aaaa	Voice Reserve 29 <XV-5080>	(0 - 64)
00 2D	0aaa aaaa	Voice Reserve 30 <XV-5080>	(0 - 64)
00 2E	0aaa aaaa	Voice Reserve 31 <XV-5080>	(0 - 64)
00 2F	0aaa aaaa	Voice Reserve 32 <XV-5080>	(0 - 64)
00 30	00aa aaaa	MFX(1) Source	(0 - 32)
00 31	00aa aaaa	MFX2 Source <XV-5080>	PERFORM, 1 - 16, 17 - 32<XV-5080>
00 32	00aa aaaa	MFX3 Source <XV-5080>	PERFORM, 1 - 16, 17 - 32<XV-5080>
00 33	00aa aaaa	Chorus Source	(0 - 32)
00 34	00aa aaaa	Reverb Source	PERFORM, 1 - 16, 17 - 32<XV-5080>
00 00 00 35	Total Size		

*1-2-2 Performance Common MFX

Offset 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) A, B, C, D<XV-5080>
00 05	0aaa aaaa	MFX Control 1 Source (0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4
00 06	0aaa aaaa	MFX Control 1 Sens (1 - 127) -63 - +63
00 07	0aaa aaaa	MFX Control 2 Source (0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4
00 08	0aaa aaaa	MFX Control 2 Sens (1 - 127) -63 - +63
00 09	0aaa aaaa	MFX Control 3 Source (0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4
00 0A	0aaa aaaa	MFX Control 3 Sens (1 - 127) -63 - +63
00 0B	0aaa aaaa	MFX Control 4 Source (0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4
00 0C	0aaa aaaa	MFX Control 4 Sens (1 - 127) -63 - +63
00 0D	000a aaaa	MFX Control Assign 1 (0 - 16) OFF, 1 - 16
00 0E	000a aaaa	MFX Control Assign 2 (0 - 16) OFF, 1 - 16
00 0F	000a aaaa	MFX Control Assign 3 (0 - 16) OFF, 1 - 16
00 10	000a aaaa	MFX Control Assign 4 (0 - 16) OFF, 1 - 16
# 00 11	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 1 (12768 - 52768) -20000 - +20000
# 00 15	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 2 (12768 - 52768) -20000 - +20000
# 00 19	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 3 (12768 - 52768) -20000 - +20000
# 00 1D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 4 (12768 - 52768) -20000 - +20000
# 00 21	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 5 (12768 - 52768) -20000 - +20000
# 00 25	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 6 (12768 - 52768) -20000 - +20000
# 00 29	0000 aaaa	

# 00 2D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 7 (12768 - 52768) -20000 - +20000
# 00 31	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 8 (12768 - 52768) -20000 - +20000
# 00 35	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 9 (12768 - 52768) -20000 - +20000
# 00 39	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 10 (12768 - 52768) -20000 - +20000
# 00 3D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 11 (12768 - 52768) -20000 - +20000
# 00 41	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 12 (12768 - 52768) -20000 - +20000
# 00 45	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 13 (12768 - 52768) -20000 - +20000
# 00 49	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 14 (12768 - 52768) -20000 - +20000
# 00 4D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 15 (12768 - 52768) -20000 - +20000
# 00 51	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 16 (12768 - 52768) -20000 - +20000
# 00 55	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 17 (12768 - 52768) -20000 - +20000
# 00 59	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 18 (12768 - 52768) -20000 - +20000
# 00 5D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 19 (12768 - 52768) -20000 - +20000
# 00 61	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 20 (12768 - 52768) -20000 - +20000
# 00 65	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 21 (12768 - 52768) -20000 - +20000
# 00 69	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 22 (12768 - 52768) -20000 - +20000
# 00 6D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 23 (12768 - 52768) -20000 - +20000
# 00 71	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 24 (12768 - 52768) -20000 - +20000
# 00 75	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 25 (12768 - 52768) -20000 - +20000
# 00 79	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 26 (12768 - 52768) -20000 - +20000
# 00 7D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 27 (12768 - 52768) -20000 - +20000
# 01 01	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 28 (12768 - 52768) -20000 - +20000
# 01 05	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 29 (12768 - 52768) -20000 - +20000
# 01 09	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 30 (12768 - 52768) -20000 - +20000
# 01 0D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 31 (12768 - 52768) -20000 - +20000
# 01 11	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 32 (12768 - 52768) -20000 - +20000
00 00 01 11	Total Size	

*1-2-3 Performance Common Chorus

Offset Address	Description	
00 00	0000 aaaa	Chorus Type (0 - 2)
00 01	0aaa aaaa	Chorus Level (0 - 127)
00 02	0000 00aa	Chorus Output Assign (0 - 3)

00 03	0000 00aa	Chorus Output Select	A, B, C, D<XV-5080> (0 - 2) MAIN, REV, MAIN+REV
# 00 04	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 1	(12768 - 52768) -20000 - +20000
# 00 08	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 2	(12768 - 52768) -20000 - +20000
# 00 0C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 3	(12768 - 52768) -20000 - +20000
# 00 10	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 4	(12768 - 52768) -20000 - +20000
# 00 14	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 5	(12768 - 52768) -20000 - +20000
# 00 18	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 6	(12768 - 52768) -20000 - +20000
# 00 1C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 7	(12768 - 52768) -20000 - +20000
# 00 20	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 8	(12768 - 52768) -20000 - +20000
# 00 24	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 9	(12768 - 52768) -20000 - +20000
# 00 28	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 10	(12768 - 52768) -20000 - +20000
# 00 2C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 11	(12768 - 52768) -20000 - +20000
# 00 30	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 12	(12768 - 52768) -20000 - +20000
00 00 00 34	Total Size		

*1-2-4 Performance Common Reverb

Offset Address	Description	
00 00	0000 aaaa	Reverb Type (0 - 4)
00 01	0aaa aaaa	Reverb Level (0 - 127)
00 02	0000 00aa	Reverb Output Assign (0 - 3) A, B, C, D<XV-5080>
# 00 03	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 1 (12768 - 52768) -20000 - +20000
# 00 07	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 2 (12768 - 52768) -20000 - +20000
# 00 0B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 3 (12768 - 52768) -20000 - +20000
# 00 0F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 4 (12768 - 52768) -20000 - +20000
# 00 13	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 5 (12768 - 52768) -20000 - +20000
# 00 17	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 6 (12768 - 52768) -20000 - +20000
# 00 1B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 7 (12768 - 52768) -20000 - +20000
# 00 1F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 8 (12768 - 52768) -20000 - +20000
# 00 23	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 9 (12768 - 52768) -20000 - +20000
# 00 27	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 10 (12768 - 52768) -20000 - +20000
# 00 2B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 11 (12768 - 52768) -20000 - +20000
# 00 2F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 12 (12768 - 52768) -20000 - +20000
# 00 33	0000 aaaa 0000 bbbb 0000 cccc	

# 00 37	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 13	(12768 - 52768) -20000 - +20000
# 00 3B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 14	(12768 - 52768) -20000 - +20000
# 00 3F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 15	(12768 - 52768) -20000 - +20000
# 00 43	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 16	(12768 - 52768) -20000 - +20000
# 00 47	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 17	(12768 - 52768) -20000 - +20000
# 00 4B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 18	(12768 - 52768) -20000 - +20000
# 00 4F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 19	(12768 - 52768) -20000 - +20000
# 00 53	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 20	(12768 - 52768) -20000 - +20000
00 00 00 53	Total Size		

*1-2-5 Performance MIDI

Offset Address	Description	
00 00	0000 000a	Receive Program Change (0 - 1) OFF, ON
00 01	0000 000a	Receive Bank Select (0 - 1) OFF, ON
00 02	0000 000a	Receive Bender (0 - 1) OFF, ON
00 03	0000 000a	Receive Polyphonic Key Pressure (0 - 1) OFF, ON
00 04	0000 000a	Receive Channel Pressure (0 - 1) OFF, ON
00 05	0000 000a	Receive Modulation (0 - 1) OFF, ON
00 06	0000 000a	Receive Volume (0 - 1) OFF, ON
00 07	0000 000a	Receive Pan (0 - 1) OFF, ON
00 08	0000 000a	Receive Expression (0 - 1) OFF, ON
00 09	0000 000a	Receive Hold-1 (0 - 1) OFF, ON
00 0A	0000 000a	Phase Lock (0 - 1) OFF, ON
00 0B	0000 0aaa	Velocity Curve Type (0 - 4) OFF, 1 - 4
00 00 00 0C	Total Size	

*1-2-6 Performance Part

Offset Address	Description	
00 00	0000 aaaa	Receive Channel (0 - 15) 1 - 16
00 01	0000 000a	Receive Switch (0 - 1) OFF, ON
00 02	0000 000a	Receive MIDI1 <XV-5080> (0 - 1) OFF, ON
00 03	0000 000a	Receive MIDI2 <XV-5080> (0 - 1) 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)
00 09	0aaa aaaa	Part Coarse Tune (RPN# 2) L64 - 63R (16 - 112) -48 - +48
00 0A	0aaa aaaa	Part Fine Tune (RPN# 1) (14 - 114) -50 - +50
00 0B	0000 00aa	Part Mono/Poly (MONO ON/POLY ON) (0 - 2) MONO, POLY, PATCH
00 0C	0000 00aa	Part Legato Switch (CC# 68) (0 - 2) OFF, ON, PATCH
00 0D	000a aaaa	Part Pitch Bend Range (RPN# 0) (0 - 25) 0 - 24, PATCH
00 0E	0000 00aa	Part Portamento Switch (CC# 65) (0 - 2) OFF, ON, PATCH
# 00 0F	0000 aaaa 0000 bbbb	Part Portamento Time (CC# 5) (0 - 128) 0 - 127, PATCH
00 11	0aaa aaaa	Part Cutoff Offset (CC# 74) (0 - 127) -64 - +63
00 12	0aaa aaaa	Part Resonance Offset (CC# 71) (0 - 127) -64 - +63
00 13	0aaa aaaa	Part Attack Time Offset (CC# 73) (0 - 127) -64 - +63
00 14	0aaa aaaa	Part Release Time Offset (CC# 72) (0 - 127) -64 - +63
00 15	0000 0aaa	Part Octave Shift (61 - 67) -3 - +3
00 16	0aaa aaaa	Part Velocity Sens Offset (1 - 127) -63 - +63
00 17	0aaa aaaa	Keyboard Range Lower (0 - 127) C-1 - UPPER
00 18	0aaa aaaa	Keyboard Range Upper (0 - 127) 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) 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) MPX, A, B, C, D<XV-5080>, 1, 2, 3, 4, 5, 6, 7<XV-5080>, 8<XV-5080>, PATCH

MIDI Implementation

00 20	0000 00aa	Part Output MFX Select <XV-5080>	(0 - 2) MFX1, MFX2, MFX3
00 00 00 21	Total Size		

*1-3-1-1 Patch Common

Offset Address	Description	
00 00	0aaa aaaa	Patch Name 1 (32 - 127) [ASCII]
00 01	0aaa aaaa	Patch Name 2 (32 - 127) [ASCII]
00 02	0aaa aaaa	Patch Name 3 (32 - 127) [ASCII]
00 03	0aaa aaaa	Patch Name 4 (32 - 127) [ASCII]
00 04	0aaa aaaa	Patch Name 5 (32 - 127) [ASCII]
00 05	0aaa aaaa	Patch Name 6 (32 - 127) [ASCII]
00 06	0aaa aaaa	Patch Name 7 (32 - 127) [ASCII]
00 07	0aaa aaaa	Patch Name 8 (32 - 127) [ASCII]
00 08	0aaa aaaa	Patch Name 9 (32 - 127) [ASCII]
00 09	0aaa aaaa	Patch Name 10 (32 - 127) [ASCII]
00 0A	0aaa aaaa	Patch Name 11 (32 - 127) [ASCII]
00 0B	0aaa aaaa	Patch Name 12 (32 - 127) [ASCII]
00 0C	0aaa aaaa	Patch Category (0 - 127)
00 0D	0000 000a	Tone Type <XV-5080> (0 - 1) 4TONES, MULTI-PARTIAL
00 0E	0aaa aaaa	Patch Level (0 - 127)
00 0F	0aaa aaaa	Patch Pan (0 - 127)
00 10	0000 000a	Patch Priority (0 - 1) LAST, LOUDEST
00 11	0aaa aaaa	Patch Coarse Tune (16 - 112) -48 +48
00 12	0aaa aaaa	Patch Fine Tune (14 - 114) -50 +50
00 13	0000 0aaa	Octave Shift (61 - 67) -3 +3
00 14	0000 00aa	Stretch Tune Depth (0 - 3) OFF, 1 - 3
00 15	0aaa aaaa	Analog Feel (0 - 127)
00 16	0000 000a	Mono/Poly (0 - 1) MONO, POLY
00 17	0000 000a	Legato Switch (0 - 1) OFF, ON
00 18	0000 000a	Legato Retrigger (0 - 1) OFF, ON
00 19	0000 000a	Portamento Switch (0 - 1) OFF, ON
00 1A	0000 000a	Portamento Mode (0 - 1) NORMAL, LEGATO
00 1B	0000 000a	Portamento Type (0 - 1) RATE, TIME
00 1C	0000 000a	Portamento Start (0 - 1) PITCH, NOTE
00 1D	0aaa aaaa	Portamento Time (0 - 127)
00 1E	0000 000a	Patch Clock Source (0 - 1) PATCH, SYSTEM
# 00 1F	0000 aaaa	Patch Tempo (20 - 250)
00 20	0000 bbbb	One Shot Mode <XV-5080> (0 - 1) OFF, ON
00 21	0000 000a	
00 22	0aaa aaaa	Cutoff Offset (1 - 127) -63 +63
00 23	0aaa aaaa	Resonance Offset (1 - 127) -63 +63
00 24	0aaa aaaa	Attack Time Offset (1 - 127) -63 +63
00 25	0aaa aaaa	Release Time Offset (1 - 127) -63 +63
00 26	0aaa aaaa	Velocity Sens Offset (1 - 127) -63 +63
00 27	0000 aaaa	Patch Output Assign (0 - 13) MPX, A, B, C, D<XV-5080> 1, 2, 3, 4, 5, 6, 7<XV-5080>, 8<XV-5080>, TONE
00 28	0000 000a	TMT Control Switch (0 - 1) 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) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4, VELOCITY, KEYFOLLOW, TEMPO, LF01, LFO2, PIT-ENV, TVF-ENV, TVA-ENV
00 2C	00aa aaaa	Matrix Control 1 Destination 1 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4
00 2D	0aaa aaaa	Matrix Control 1 Sens 1 (1 - 127) -63 +63
00 2E	00aa aaaa	Matrix Control 1 Destination 2 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4
00 2F	0aaa aaaa	Matrix Control 1 Sens 2 (1 - 127) -63 +63
00 30	00aa aaaa	Matrix Control 1 Destination 3 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4
00 31	0aaa aaaa	Matrix Control 1 Sens 3 (1 - 127) -63 +63
00 32	00aa aaaa	Matrix Control 1 Destination 4 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4

			PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4
00 33	0aaa aaaa	Matrix Control 1 Sens 4 (1 - 127) -63 +63	
00 34	0aaa aaaa	Matrix Control 2 Source (0 - 109) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4, VELOCITY, KEYFOLLOW, TEMPO, LF01, LFO2, PIT-ENV, TVF-ENV, TVA-ENV	
00 35	00aa aaaa	Matrix Control 2 Destination 1 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4	
00 36	0aaa aaaa	Matrix Control 2 Sens 1 (1 - 127) -63 +63	
00 37	00aa aaaa	Matrix Control 2 Destination 2 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4	
00 38	0aaa aaaa	Matrix Control 2 Sens 2 (1 - 127) -63 +63	
00 39	00aa aaaa	Matrix Control 2 Destination 3 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4	
00 3A	0aaa aaaa	Matrix Control 2 Sens 3 (1 - 127) -63 +63	
00 3B	00aa aaaa	Matrix Control 2 Destination 4 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4	
00 3C	0aaa aaaa	Matrix Control 2 Sens 4 (1 - 127) -63 +63	
00 3D	0aaa aaaa	Matrix Control 3 Source (0 - 109) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4, VELOCITY, KEYFOLLOW, TEMPO, LF01, LFO2, PIT-ENV, TVF-ENV, TVA-ENV	
00 3E	00aa aaaa	Matrix Control 3 Destination 1 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4	
00 3F	0aaa aaaa	Matrix Control 3 Sens 1 (1 - 127) -63 +63	
00 40	00aa aaaa	Matrix Control 3 Destination 2 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4	
00 41	0aaa aaaa	Matrix Control 3 Sens 2 (1 - 127) -63 +63	
00 42	00aa aaaa	Matrix Control 3 Destination 3 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4	
00 43	0aaa aaaa	Matrix Control 3 Sens 3 (1 - 127) -63 +63	
00 44	00aa aaaa	Matrix Control 3 Destination 4 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4	
00 45	0aaa aaaa	Matrix Control 3 Sens 4 (1 - 127) -63 +63	
00 46	0aaa aaaa	Matrix Control 4 Source (0 - 109) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4, VELOCITY, KEYFOLLOW, TEMPO, LF01, LFO2, PIT-ENV, TVF-ENV, TVA-ENV	
00 47	00aa aaaa	Matrix Control 4 Destination 1 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4	
00 48	0aaa aaaa	Matrix Control 4 Sens 1 (1 - 127) -63 +63	
00 49	00aa aaaa	Matrix Control 4 Destination 2 (0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LF01, PIT-LFO2, TVF-LFO1, TVF-LFO2, TVA-LF01, TVA-LFO2, PAN-LF01, PAN-LFO2, LF01-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4	

			PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4 (1 - 127)
00 4A	0aaa aaaa	Matrix Control 4 Sens 2	-63 - +63
00 4B	00aa aaaa	Matrix Control 4 Destination 3	(0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LFOL, PIT-LFO2, TVF-LFOL, TVF-LFO2, TVA-LFOL, TVA-LFO2, PAN-LFOL, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4 (1 - 127)
00 4C	0aaa aaaa	Matrix Control 4 Sens 3	-63 - +63
00 4D	00aa aaaa	Matrix Control 4 Destination 4	(0 - 33) OFF, PCH, CUT, RES, LEV, PAN, DRY, CHO, REV, PIT-LFOL, PIT-LFO2, TVF-LFOL, TVF-LFO2, TVA-LFOL, TVA-LFO2, PAN-LFOL, PAN-LFO2, LFO1-RATE, LFO2-RATE, PIT-ATK, PIT-DCY, PIT-REL, TVF-ATK, TVF-DCY, TVF-REL, TVA-ATK, TVA-DCY, TVA-REL, TMT, FXM, MFX1, MFX2, MFX3, MFX4 (1 - 127)
00 4E	0aaa aaaa	Matrix Control 4 Sens 4	-63 - +63
00 00 00 4F	Total Size		

*1-3-1-2 Patch Common MFX

Offset	Address	Description	
00 00	0aaa aaaa	MFX Type	(0 - 127)
00 01	0aaa aaaa	MFX Dry Send Level	(0 - 72)
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) A, B, C, D<XV-5080>
00 05	0aaa aaaa	MFX Control 1 Source	(0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4
00 06	0aaa aaaa	MFX Control 1 Sens	(1 - 127) -63 - +63
00 07	0aaa aaaa	MFX Control 2 Source	(0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4
00 08	0aaa aaaa	MFX Control 2 Sens	(1 - 127) -63 - +63
00 09	0aaa aaaa	MFX Control 3 Source	(0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4
00 0A	0aaa aaaa	MFX Control 3 Sens	(1 - 127) -63 - +63
00 0B	0aaa aaaa	MFX Control 4 Source	(0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4
00 0C	0aaa aaaa	MFX Control 4 Sens	(1 - 127) -63 - +63
00 0D	000a aaaa	MFX Control Assign 1	(0 - 16) OFF, 1 - 16
00 0E	000a aaaa	MFX Control Assign 2	(0 - 16) OFF, 1 - 16
00 0F	000a aaaa	MFX Control Assign 3	(0 - 16) OFF, 1 - 16
00 10	000a aaaa	MFX Control Assign 4	(0 - 16) OFF, 1 - 16
# 00 11	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 1	(12768 - 52768) -20000 - +20000
# 00 15	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 2	(12768 - 52768) -20000 - +20000
# 00 19	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 3	(12768 - 52768) -20000 - +20000
# 00 1D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 4	(12768 - 52768) -20000 - +20000
# 00 21	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 5	(12768 - 52768) -20000 - +20000
# 00 25	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 6	(12768 - 52768) -20000 - +20000
# 00 29	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 7	(12768 - 52768) -20000 - +20000
# 00 2D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 8	(12768 - 52768) -20000 - +20000
# 00 31	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 9	(12768 - 52768) -20000 - +20000
# 00 35	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 10	(12768 - 52768) -20000 - +20000
# 00 39	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 11	(12768 - 52768) -20000 - +20000
# 00 3D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 12	(12768 - 52768) -20000 - +20000
# 00 41	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 13	(12768 - 52768) -20000 - +20000

# 00 45	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 14	(12768 - 52768) -20000 - +20000
# 00 49	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 15	(12768 - 52768) -20000 - +20000
# 00 4D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 16	(12768 - 52768) -20000 - +20000
# 00 51	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 17	(12768 - 52768) -20000 - +20000
# 00 55	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 18	(12768 - 52768) -20000 - +20000
# 00 59	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 19	(12768 - 52768) -20000 - +20000
# 00 5D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 20	(12768 - 52768) -20000 - +20000
# 00 61	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 21	(12768 - 52768) -20000 - +20000
# 00 65	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 22	(12768 - 52768) -20000 - +20000
# 00 69	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 23	(12768 - 52768) -20000 - +20000
# 00 6D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 24	(12768 - 52768) -20000 - +20000
# 00 71	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 25	(12768 - 52768) -20000 - +20000
# 00 75	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 26	(12768 - 52768) -20000 - +20000
# 00 79	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 27	(12768 - 52768) -20000 - +20000
# 00 7D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 28	(12768 - 52768) -20000 - +20000
# 01 01	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 29	(12768 - 52768) -20000 - +20000
# 01 05	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 30	(12768 - 52768) -20000 - +20000
# 01 09	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 31	(12768 - 52768) -20000 - +20000
# 01 0D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	MFX Parameter 32	(12768 - 52768) -20000 - +20000
00 00 01 11	Total Size		

*1-3-1-3 Patch Common Chorus

Offset	Address	Description	
00 00	0000 aaaa	Chorus Type	(0 - 2)
00 01	0aaa aaaa	Chorus Level	(0 - 127)
00 02	0000 00aa	Chorus Output Assign	(0 - 3) A, B, C, D<XV-5080>
00 03	0000 00aa	Chorus Output Select	(0 - 2) MAIN, REV, MAIN+REV
# 00 04	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 1	(12768 - 52768) -20000 - +20000
# 00 08	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 2	(12768 - 52768) -20000 - +20000
# 00 0C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 3	(12768 - 52768) -20000 - +20000
# 00 10	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 4	(12768 - 52768) -20000 - +20000
# 00 14	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 5	(12768 - 52768) -20000 - +20000
# 00 18	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 6	(12768 - 52768) -20000 - +20000

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#	00 1C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 7	(12768 - 52768) -20000 - +20000
#	00 20	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 8	(12768 - 52768) -20000 - +20000
#	00 24	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 9	(12768 - 52768) -20000 - +20000
#	00 28	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 10	(12768 - 52768) -20000 - +20000
#	00 2C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 11	(12768 - 52768) -20000 - +20000
#	00 30	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Chorus Parameter 12	(12768 - 52768) -20000 - +20000
	00 00 00 34	Total Size		

*1-3-1-4 Patch Common Reverb

Offset	Address	Description		
00 00	0000 aaaa	Reverb Type	(0 - 4)	
00 01	0aaa aaaa	Reverb Level	(0 - 127)	
00 02	0000 00aa	Reverb Output Assign	(0 - 3)	A, B, C, D<XV-5080>
#	00 03	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 1	(12768 - 52768) -20000 - +20000
#	00 07	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 2	(12768 - 52768) -20000 - +20000
#	00 0B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 3	(12768 - 52768) -20000 - +20000
#	00 0F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 4	(12768 - 52768) -20000 - +20000
#	00 13	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 5	(12768 - 52768) -20000 - +20000
#	00 17	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 6	(12768 - 52768) -20000 - +20000
#	00 1B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 7	(12768 - 52768) -20000 - +20000
#	00 1F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 8	(12768 - 52768) -20000 - +20000
#	00 23	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 9	(12768 - 52768) -20000 - +20000
#	00 27	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 10	(12768 - 52768) -20000 - +20000
#	00 2B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 11	(12768 - 52768) -20000 - +20000
#	00 2F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 12	(12768 - 52768) -20000 - +20000
#	00 33	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 13	(12768 - 52768) -20000 - +20000
#	00 37	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 14	(12768 - 52768) -20000 - +20000
#	00 3B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 15	(12768 - 52768) -20000 - +20000
#	00 3F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 16	(12768 - 52768) -20000 - +20000
#	00 43	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 17	(12768 - 52768) -20000 - +20000
#	00 47	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 18	(12768 - 52768) -20000 - +20000
#	00 4B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 19	(12768 - 52768) -20000 - +20000
#	00 4F	0000 aaaa 0000 bbbb		

	0000 cccc 0000 dddd	Reverb Parameter 20	(12768 - 52768) -20000 - +20000
00 00 00 53	Total Size		

*1-3-1-5 Patch TMT (Tone Mix Table)

Offset	Address	Description		
00 00	0000 aaaa	Structure Type 1 & 2	(0 - 9)	1 - 10
00 01	0000 00aa	Booster 1 & 2	(0 - 3)	0, +6, +12, +18 [dB]
00 02	0000 aaaa	Structure Type 3 & 4	(0 - 9)	1 - 10
00 03	0000 00aa	Booster 3 & 4	(0 - 3)	0, +6, +12, +18 [dB]
00 04	0000 00aa	TMT Velocity Control	(0 - 2)	OFF, ON, RANDOM
00 05	0000 000a	TMT1 Tone Switch	(0 - 1)	OFF, ON
00 06	0aaa aaaa	TMT1 Keyboard Range Lower	(0 - 127)	C-1 - UPPER
00 07	0aaa aaaa	TMT1 Keyboard Range Upper	(0 - 127)	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	(0 - 127)	1 - UPPER
00 0B	0aaa aaaa	TMT1 Velocity Range Upper	(0 - 127)	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)	OFF, ON
00 0F	0aaa aaaa	TMT2 Keyboard Range Lower	(0 - 127)	C-1 - UPPER
00 10	0aaa aaaa	TMT2 Keyboard Range Upper	(0 - 127)	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	(0 - 127)	1 - UPPER
00 14	0aaa aaaa	TMT2 Velocity Range Upper	(0 - 127)	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)	OFF, ON
00 18	0aaa aaaa	TMT3 Keyboard Range Lower	(0 - 127)	C-1 - UPPER
00 19	0aaa aaaa	TMT3 Keyboard Range Upper	(0 - 127)	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	(0 - 127)	1 - UPPER
00 1D	0aaa aaaa	TMT3 Velocity Range Upper	(0 - 127)	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)	OFF, ON
00 21	0aaa aaaa	TMT4 Keyboard Range Lower	(0 - 127)	C-1 - UPPER
00 22	0aaa aaaa	TMT4 Keyboard Range Upper	(0 - 127)	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	(0 - 127)	1 - UPPER
00 26	0aaa aaaa	TMT4 Velocity Range Upper	(0 - 127)	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			

*1-3-1-6 Patch Tone

Offset	Address	Description		
00 00	0aaa aaaa	Tone Level	(0 - 127)	
00 01	0aaa aaaa	Tone Coarse Tune	(16 - 112)	-48 - +48
00 02	0aaa aaaa	Tone Fine Tune	(14 - 114)	-50 - +50
00 03	000a aaaa	Tone Random Pitch Depth	(0 - 30)	0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200
00 04	0aaa aaaa	Tone Pan	(0 - 127)	L64 - 63R
00 05	000a aaaa	Tone Pan Keyfollow	(54 - 74)	-100 - +100
00 06	00aa aaaa	Tone Random Pan Depth	(0 - 63)	
00 07	0aaa aaaa	Tone Alternate Pan Depth	(1 - 127)	L63 - 63R
00 08	0000 000a	Tone Env Mode	(0 - 1)	NO-SUS, SUSTAIN
00 09	0000 00aa	Tone Delay Mode	(0 - 3)	NORMAL, HOLD, KEY-OFF-N, KEY-OFF-D
#	00 0A	0000 aaaa 0000 bbbb	Tone Delay Time	(0 - 149) 0 - 127, MUSICAL-NOTES
00 0C	0aaa aaaa	Tone Dry Send Level	(0 - 127)	
00 0D	0aaa aaaa	Tone Chorus Send Level (MFX)	(0 - 127)	
00 0E	0aaa aaaa	Tone Reverb Send Level (MFX)	(0 - 127)	
00 0F	0aaa aaaa	Tone Chorus Send Level (non MFX)	(0 - 127)	
00 10	0aaa aaaa	Tone Reverb Send Level (non MFX)	(0 - 127)	
00 11	0000 aaaa	Tone Output Assign	(0 - 12)	MPX, A, B, C, D<XV-5080>, 1, 2, 3, 4, 5, 6, 7<XV-5080>, 8<XV-5080>
00 12	0000 000a	Tone Receive Bender	(0 - 1)	OFF, ON
00 13	0000 000a	Tone Receive Expression	(0 - 1)	OFF, ON
00 14	0000 000a	Tone Receive Hold-1	(0 - 1)	OFF, ON
00 15	0000 000a	Tone Receive Pan Mode	(0 - 1)	CONTINUOUS, KEY-ON
00 16	0000 000a	Tone Redamper Switch	(0 - 1)	OFF, ON

00 17	0000 00aa	Tone Control 1 Switch 1	(0 - 2) OFF, ON, REVERSE
00 18	0000 00aa	Tone Control 1 Switch 2	(0 - 2) OFF, ON, REVERSE
00 19	0000 00aa	Tone Control 1 Switch 3	(0 - 2) OFF, ON, REVERSE
00 1A	0000 00aa	Tone Control 1 Switch 4	(0 - 2) OFF, ON, REVERSE
00 1B	0000 00aa	Tone Control 2 Switch 1	(0 - 2) OFF, ON, REVERSE
00 1C	0000 00aa	Tone Control 2 Switch 2	(0 - 2) OFF, ON, REVERSE
00 1D	0000 00aa	Tone Control 2 Switch 3	(0 - 2) OFF, ON, REVERSE
00 1E	0000 00aa	Tone Control 2 Switch 4	(0 - 2) OFF, ON, REVERSE
00 1F	0000 00aa	Tone Control 3 Switch 1	(0 - 2) OFF, ON, REVERSE
00 20	0000 00aa	Tone Control 3 Switch 2	(0 - 2) OFF, ON, REVERSE
00 21	0000 00aa	Tone Control 3 Switch 3	(0 - 2) OFF, ON, REVERSE
00 22	0000 00aa	Tone Control 3 Switch 4	(0 - 2) OFF, ON, REVERSE
00 23	0000 00aa	Tone Control 4 Switch 1	(0 - 2) OFF, ON, REVERSE
00 24	0000 00aa	Tone Control 4 Switch 2	(0 - 2) OFF, ON, REVERSE
00 25	0000 00aa	Tone Control 4 Switch 3	(0 - 2) OFF, ON, REVERSE
00 26	0000 00aa	Tone Control 4 Switch 4	(0 - 2) OFF, ON, REVERSE
# 00 27	0000 00aa	Wave Group Type	(0 - 3) INT-WAVE, SRJV80-EXP, SRX-EXP, SAMPLE<XV-5080>
# 00 28	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Wave Group ID	(0 - 16384) OFF, 1 - 16384
# 00 2C	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Wave Number L (Mono)	(0 - 16384) OFF, 1 - 16384
# 00 30	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Wave Number R	(0 - 16384) OFF, 1 - 16384
00 34	0000 00aa	Wave Gain	(0 - 3) -6, 0, +6, +12 [dB]
00 35	0000 000a	Wave FXM Switch	(0 - 1) OFF, ON
00 36	0000 00aa	Wave FXM Color	(0 - 3) 1 - 4
00 37	000a aaaa	Wave FXM Depth	(0 - 16)
00 38	0000 000a	Wave Tempo Sync	(0 - 1) OFF, ON
00 39	00aa aaaa	Wave Pitch Keyfollow	(44 - 84) -200 - +200
00 3A	000a aaaa	Pitch Env Depth	(52 - 76) -12 - +12
00 3B	0aaa aaaa	Pitch Env Velocity Sens	(1 - 127) -63 - +63
00 3C	0aaa aaaa	Pitch Env Time 1 Velocity Sens	(1 - 127) -63 - +63
00 3D	0aaa aaaa	Pitch Env Time 4 Velocity Sens	(1 - 127) -63 - +63
00 3E	000a aaaa	Pitch Env Time Keyfollow	(54 - 74) -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) -63 - +63
00 44	0aaa aaaa	Pitch Env Level 1	(1 - 127) -63 - +63
00 45	0aaa aaaa	Pitch Env Level 2	(1 - 127) -63 - +63
00 46	0aaa aaaa	Pitch Env Level 3	(1 - 127) -63 - +63
00 47	0aaa aaaa	Pitch Env Level 4	(1 - 127) -63 - +63
00 48	0000 0aaa	TVF Filter Type	(0 - 6) OFF, LPF, BPF, HPF, PKG, LPP2, LPP3
00 49	0aaa aaaa	TVF Cutoff Frequency	(0 - 127)
00 4A	00aa aaaa	TVF Cutoff Keyfollow	(44 - 84) -200 - +200
00 4B	0000 0aaa	TVF Cutoff Velocity Curve	(0 - 7) FIXED, 1 - 7
00 4C	0aaa aaaa	TVF Cutoff Velocity Sens	(1 - 127) -63 - +63
00 4D	0aaa aaaa	TVF Resonance	(0 - 127)
00 4E	0aaa aaaa	TVF Resonance Velocity Sens	(1 - 127) -63 - +63
00 4F	0aaa aaaa	TVF Env Depth	(1 - 127) -63 - +63
00 50	0000 0aaa	TVF Env Velocity Curve	(0 - 7) FIXED, 1 - 7
00 51	0aaa aaaa	TVF Env Velocity Sens	(1 - 127) -63 - +63
00 52	0aaa aaaa	TVF Env Time 1 Velocity Sens	(1 - 127) -63 - +63
00 53	0aaa aaaa	TVF Env Time 4 Velocity Sens	(1 - 127) -63 - +63
00 54	000a aaaa	TVF Env Time Keyfollow	(54 - 74) -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) -100 - +100
00 5F	0aaa aaaa	Bias Position	(0 - 127) C-1 - G9
00 60	0000 00aa	Bias Direction	(0 - 3) LOWER, UPPER, LOW&UP, ALL
00 61	0000 0aaa	TVA Level Velocity Curve	(0 - 7) FIXED, 1 - 7
00 62	0aaa aaaa	TVA Level Velocity Sens	(1 - 127) -63 - +63
00 63	0aaa aaaa	TVA Env Time 1 Velocity Sens	(1 - 127) -63 - +63
00 64	0aaa aaaa	TVA Env Time 4 Velocity Sens	(1 - 127) -63 - +63
00 65	000a aaaa	TVA Env Time Keyfollow	(54 - 74) -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)
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) SIN, TRI, SAW-UP, SAW-DW, SQR, RND, BEND-UP, BEND-DW, TRP, S&H CHS
# 00 6E	0000 aaaa 0000 bbbb	LFO1 Rate	(0 - 149) 0 - 127, MUSICAL-NOTES
00 70	0000 0aaa	LFO1 Offset	(0 - 4) -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) -100 - +100
00 74	0000 00aa	LFO1 Fade Mode	(0 - 3) KEY-ON-IN, KEY-ON-OUT, KEY-OFF-IN, KEY-OFF-OUT
00 75	0aaa aaaa	LFO1 Fade Time	(0 - 127)
00 76	0000 000a	LFO1 Key Trigger	(0 - 1) OFF, ON
00 77	0aaa aaaa	LFO1 Pitch Depth	(1 - 127) -63 - +63
00 78	0aaa aaaa	LFO1 TVF Depth	(1 - 127) -63 - +63
00 79	0aaa aaaa	LFO1 TVA Depth	(1 - 127) -63 - +63
00 7A	0aaa aaaa	LFO1 Pan Depth	(1 - 127) -63 - +63
# 00 7B	0000 aaaa	LFO2 Wave Form	(0 - 10) SIN, TRI, SAW-UP, SAW-DW, SQR, RND, BEND-UP, BEND-DW, TRP, S&H CHS
# 00 7C	0000 aaaa 0000 bbbb	LFO2 Rate	(0 - 149) 0 - 127, MUSICAL-NOTES
00 7E	0000 0aaa	LFO2 Offset	(0 - 4) -100, -50, 0, +50, +100
00 7F	0aaa aaaa	LFO2 Rate Detune	(0 - 127)
01 00	0aaa aaaa	LFO2 Delay Time	(0 - 127)
01 01	000a aaaa	LFO2 Delay Time Keyfollow	(54 - 74) -100 - +100
01 02	0000 00aa	LFO2 Fade Mode	(0 - 3) KEY-ON-IN, KEY-ON-OUT, KEY-OFF-IN, KEY-OFF-OUT
01 03	0aaa aaaa	LFO2 Fade Time	(0 - 127)
01 04	0000 000a	LFO2 Key Trigger	(0 - 1) OFF, ON
01 05	0aaa aaaa	LFO2 Pitch Depth	(1 - 127) -63 - +63
01 06	0aaa aaaa	LFO2 TVF Depth	(1 - 127) -63 - +63
01 07	0aaa aaaa	LFO2 TVA Depth	(1 - 127) -63 - +63
01 08	0aaa aaaa	LFO2 Pan Depth	(1 - 127) -63 - +63
00 00 01 09	Total Size		

*1-3-2-1 Rhythm Common

Offset	Address	Description	
00 00	0aaa aaaa	Rhythm Name 1 (32 - 127) [ASCII]	
00 01	0aaa aaaa	Rhythm Name 2 (32 - 127) [ASCII]	
00 02	0aaa aaaa	Rhythm Name 3 (32 - 127) [ASCII]	
00 03	0aaa aaaa	Rhythm Name 4 (32 - 127) [ASCII]	
00 04	0aaa aaaa	Rhythm Name 5 (32 - 127) [ASCII]	
00 05	0aaa aaaa	Rhythm Name 6 (32 - 127) [ASCII]	
00 06	0aaa aaaa	Rhythm Name 7 (32 - 127) [ASCII]	
00 07	0aaa aaaa	Rhythm Name 8 (32 - 127) [ASCII]	
00 08	0aaa aaaa	Rhythm Name 9 (32 - 127) [ASCII]	
00 09	0aaa aaaa	Rhythm Name 10 (32 - 127) [ASCII]	
00 0A	0aaa aaaa	Rhythm Name 11 (32 - 127) [ASCII]	
00 0B	0aaa aaaa	Rhythm Name 12 (32 - 127) [ASCII]	
00 0C	0aaa aaaa	Rhythm Level (0 - 127)	
00 0D	0000 000a	Rhythm Clock Source (0 - 1) RHYTHM, SYSTEM	
# 00 0E	0000 aaaa 0000 bbbb	Rhythm Tempo (20 - 250)	
00 10	0000 000a	One Shot Mode <XV-5080> (0 - 1) OFF, ON	
00 11	0000 aaaa	Rhythm Output Assign (0 - 13) MFX, A, B, C, D-<XV-5080>, 1, 2, 3, 4, 5, 6, 7-<XV-5080>, 8-<XV-5080>, TONE	
00 00 00 12	Total Size		

*1-3-2-2 Rhythm Common MFX

Offset	Address	Description
00 00	0aaa aaaa	MFX Type (0 - 127)
00 01	0aaa aaaa	MFX Dry Send Level (0 - 72)
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) A, B, C, D-<XV-5080>
00 05	0aaa aaaa	MFX Control 1 Source (0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4
00 06	0aaa aaaa	MFX Control 1 Sens (1 - 127) -63 - +63
00 07	0aaa aaaa	MFX Control 2 Source (0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4
00 08	0aaa aaaa	MFX Control 2 Sens (1 - 127) -63 - +63
00 09	0aaa aaaa	MFX Control 3 Source (0 - 101) OFF, CC01 - CC31, CC33 - CC95, BEND, APT, SYS1 - SYS4
00 0A	0aaa aaaa	MFX Control 3 Sens (1 - 127) -63 - +63
00 0B	0aaa aaaa	MFX Control 4 Source (0 - 101)

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Offset	Address	Description	Value
00 0C	0aaa 0aaa	MFX Control 4 Sens	OFF, CC01 - CC31, CC33 - CC95, BEND, AFT, SYS1 - SYS4 (1 - 127) -63 - +63
00 0D	000a 0aaa	MFX Control Assign 1	(0 - 16) OFF, 1 - 16
00 0E	000a 0aaa	MFX Control Assign 2	(0 - 16) OFF, 1 - 16
00 0F	000a 0aaa	MFX Control Assign 3	(0 - 16) OFF, 1 - 16
00 10	000a 0aaa	MFX Control Assign 4	(0 - 16) OFF, 1 - 16
# 00 11	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 1	(12768 - 52768) -20000 - +20000
# 00 15	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 2	(12768 - 52768) -20000 - +20000
# 00 19	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 3	(12768 - 52768) -20000 - +20000
# 00 1D	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 4	(12768 - 52768) -20000 - +20000
# 00 21	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 5	(12768 - 52768) -20000 - +20000
# 00 25	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 6	(12768 - 52768) -20000 - +20000
# 00 29	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 7	(12768 - 52768) -20000 - +20000
# 00 2D	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 8	(12768 - 52768) -20000 - +20000
# 00 31	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 9	(12768 - 52768) -20000 - +20000
# 00 35	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 10	(12768 - 52768) -20000 - +20000
# 00 39	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 11	(12768 - 52768) -20000 - +20000
# 00 3D	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 12	(12768 - 52768) -20000 - +20000
# 00 41	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 13	(12768 - 52768) -20000 - +20000
# 00 45	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 14	(12768 - 52768) -20000 - +20000
# 00 49	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 15	(12768 - 52768) -20000 - +20000
# 00 4D	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 16	(12768 - 52768) -20000 - +20000
# 00 51	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 17	(12768 - 52768) -20000 - +20000
# 00 55	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 18	(12768 - 52768) -20000 - +20000
# 00 59	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 19	(12768 - 52768) -20000 - +20000
# 00 5D	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 20	(12768 - 52768) -20000 - +20000
# 00 61	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 21	(12768 - 52768) -20000 - +20000
# 00 65	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 22	(12768 - 52768) -20000 - +20000
# 00 69	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 23	(12768 - 52768) -20000 - +20000
# 00 6D	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 24	(12768 - 52768) -20000 - +20000
# 00 71	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 25	(12768 - 52768) -20000 - +20000
# 00 75	0000 0aaa 0000 0bbb 0000 0ccc		

# 00 79	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 26	(12768 - 52768) -20000 - +20000
# 00 7D	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 27	(12768 - 52768) -20000 - +20000
# 01 01	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 28	(12768 - 52768) -20000 - +20000
# 01 05	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 29	(12768 - 52768) -20000 - +20000
# 01 09	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 30	(12768 - 52768) -20000 - +20000
# 01 0D	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 31	(12768 - 52768) -20000 - +20000
# 01 11	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	MFX Parameter 32	(12768 - 52768) -20000 - +20000
00 00 01 11	Total Size		

*1-3-2-3 Rhythm Common Chorus

Offset	Address	Description	Value
00 00	0000 0aaa	Chorus Type	(0 - 2)
00 01	0aaa 0aaa	Chorus Level	(0 - 127)
00 02	0000 00aa	Chorus Output Assign	(0 - 3)
00 03	0000 00aa	Chorus Output Select	A, B, C, D<XV-5080> (0 - 2) MAIN, REV, MAIN+REV
# 00 04	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Chorus Parameter 1	(12768 - 52768) -20000 - +20000
# 00 08	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Chorus Parameter 2	(12768 - 52768) -20000 - +20000
# 00 0C	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Chorus Parameter 3	(12768 - 52768) -20000 - +20000
# 00 10	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Chorus Parameter 4	(12768 - 52768) -20000 - +20000
# 00 14	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Chorus Parameter 5	(12768 - 52768) -20000 - +20000
# 00 18	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Chorus Parameter 6	(12768 - 52768) -20000 - +20000
# 00 1C	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Chorus Parameter 7	(12768 - 52768) -20000 - +20000
# 00 20	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Chorus Parameter 8	(12768 - 52768) -20000 - +20000
# 00 24	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Chorus Parameter 9	(12768 - 52768) -20000 - +20000
# 00 28	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Chorus Parameter 10	(12768 - 52768) -20000 - +20000
# 00 2C	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Chorus Parameter 11	(12768 - 52768) -20000 - +20000
# 00 30	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Chorus Parameter 12	(12768 - 52768) -20000 - +20000
00 00 00 34	Total Size		

*1-3-2-4 Rhythm Common Reverb

Offset	Address	Description	Value
00 00	0000 0aaa	Reverb Type	(0 - 4)
00 01	0aaa 0aaa	Reverb Level	(0 - 127)
00 02	0000 00aa	Reverb Output Assign	(0 - 3)
# 00 03	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Reverb Parameter 1	(12768 - 52768) -20000 - +20000
# 00 07	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Reverb Parameter 2	(12768 - 52768) -20000 - +20000
# 00 0B	0000 0aaa 0000 0bbb 0000 0ccc 0000 0ddd	Reverb Parameter 3	(12768 - 52768) -20000 - +20000
# 00 0F	0000 0aaa 0000 0bbb 0000 0ccc		

#	00 13	0000 dddd 0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 4 (12768 - 52768) -20000 - +20000
#	00 17	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 5 (12768 - 52768) -20000 - +20000
#	00 1B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 6 (12768 - 52768) -20000 - +20000
#	00 1F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 7 (12768 - 52768) -20000 - +20000
#	00 23	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 8 (12768 - 52768) -20000 - +20000
#	00 27	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 9 (12768 - 52768) -20000 - +20000
#	00 2B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 10 (12768 - 52768) -20000 - +20000
#	00 2F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 11 (12768 - 52768) -20000 - +20000
#	00 33	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 12 (12768 - 52768) -20000 - +20000
#	00 37	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 13 (12768 - 52768) -20000 - +20000
#	00 3B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 14 (12768 - 52768) -20000 - +20000
#	00 3F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 15 (12768 - 52768) -20000 - +20000
#	00 43	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 16 (12768 - 52768) -20000 - +20000
#	00 47	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 17 (12768 - 52768) -20000 - +20000
#	00 4B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 18 (12768 - 52768) -20000 - +20000
#	00 4F	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Reverb Parameter 19 (12768 - 52768) -20000 - +20000
	00 00 00 53	Total Size	

	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 MFX)	(0 - 127)
	00 1A	0aaa aaaa	Tone Reverb Send Level (non MFX)	(0 - 127)
	00 1B	0000 aaaa	Tone Output Assign	(0 - 12) MFX, A, B, C, D<XV-5080>, 1, 2, 3, 4, 5, 6, 7<XV-5080>, 8<XV-5080>
	00 1C	00aa aaaa	Tone Pitch Bend Range	(0 - 48)
	00 1D	0000 000a	Tone Receive Expression	(0 - 1) OFF, ON
	00 1E	0000 000a	Tone Receive Hold-1	(0 - 1) OFF, ON
	00 1F	0000 000a	Tone Receive Pan Mode	(0 - 1) CONTINUOUS, KEY-ON
	00 20	0000 00aa	WMT Velocity Control	(0 - 2) OFF, ON, RANDOM
	00 21	0000 000a	WMT1 Wave Switch	(0 - 1) OFF, ON
	00 22	0000 00aa	WMT1 Wave Group Type	(0 - 3) INT-WAVE, SRJV80-EXP, SRX-EXP, SAMPLE<XV-5080>
#	00 23	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT1 Wave Group ID	(0 - 16384) OFF, 1 - 16384
#	00 27	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT1 Wave Number L (Mono)	(0 - 16384) OFF, 1 - 16384
#	00 2B	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT1 Wave Number R	(0 - 16384) OFF, 1 - 16384
	00 2F	0000 00aa	WMT1 Wave Gain	(0 - 3) -6, 0, +6, +12 [dB]
	00 30	0000 000a	WMT1 Wave FXM Switch	(0 - 1) OFF, ON
	00 31	0000 00aa	WMT1 Wave FXM Color	(0 - 3) 1 - 4
	00 32	000a aaaa	WMT1 Wave FXM Depth	(0 - 16)
	00 33	0000 000a	WMT1 Wave Tempo Sync	(0 - 1) OFF, ON
	00 34	0aaa aaaa	WMT1 Wave Coarse Tune	(16 - 112) -48 - +48
	00 35	0aaa aaaa	WMT1 Wave Fine Tune	(14 - 114) -50 - +50
	00 36	0aaa aaaa	WMT1 Wave Pan	(0 - 127) L64 - 63R
	00 37	0000 000a	WMT1 Wave Random Pan Switch	(0 - 1) OFF, ON
	00 38	0000 00aa	WMT1 Wave Alternate Pan Switch	(0 - 2) OFF, ON, REVERSE
	00 39	0aaa aaaa	WMT1 Wave Level	(0 - 127)
	00 3A	0aaa aaaa	WMT1 Velocity Range Lower	(1 - 127) 1 - UPPER
	00 3B	0aaa aaaa	WMT1 Velocity Range Upper	(1 - 127) 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) OFF, ON
	00 3F	0000 00aa	WMT2 Wave Group Type	(0 - 3) INT-WAVE, SRJV80-EXP, SRX-EXP, SAMPLE<XV-5080>
#	00 40	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT2 Wave Group ID	(0 - 16384) OFF, 1 - 16384
#	00 44	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT2 Wave Number L (Mono)	(0 - 16384) OFF, 1 - 16384
#	00 48	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT2 Wave Number R	(0 - 16384) OFF, 1 - 16384
	00 4C	0000 00aa	WMT2 Wave Gain	(0 - 3) -6, 0, +6, +12 [dB]
	00 4D	0000 000a	WMT2 Wave FXM Switch	(0 - 1) OFF, ON
	00 4E	0000 00aa	WMT2 Wave FXM Color	(0 - 3) 1 - 4
	00 4F	000a aaaa	WMT2 Wave FXM Depth	(0 - 16)
	00 50	0000 000a	WMT2 Wave Tempo Sync	(0 - 1) OFF, ON
	00 51	0aaa aaaa	WMT2 Wave Coarse Tune	(16 - 112) -48 - +48
	00 52	0aaa aaaa	WMT2 Wave Fine Tune	(14 - 114) -50 - +50
	00 53	0aaa aaaa	WMT2 Wave Pan	(0 - 127) L64 - 63R
	00 54	0000 000a	WMT2 Wave Random Pan Switch	(0 - 1) OFF, ON
	00 55	0000 00aa	WMT2 Wave Alternate Pan Switch	(0 - 2) OFF, ON, REVERSE
	00 56	0aaa aaaa	WMT2 Wave Level	(0 - 127)
	00 57	0aaa aaaa	WMT2 Velocity Range Lower	(1 - 127) 1 - UPPER
	00 58	0aaa aaaa	WMT2 Velocity Range Upper	(1 - 127) 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) OFF, ON
	00 5C	0000 00aa	WMT3 Wave Group Type	(0 - 3) INT-WAVE, SRJV80-EXP, SRX-EXP, SAMPLE<XV-5080>
#	00 5D	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT3 Wave Group ID	(0 - 16384) OFF, 1 - 16384
#	00 61	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT3 Wave Number L (Mono)	(0 - 16384) OFF, 1 - 16384
#	00 65	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT3 Wave Number R	(0 - 16384) OFF, 1 - 16384
	00 69	0000 00aa	WMT3 Wave Gain	(0 - 3) -6, 0, +6, +12 [dB]
	00 6A	0000 000a	WMT3 Wave FXM Switch	(0 - 1) OFF, ON
	00 6B	0000 00aa	WMT3 Wave FXM Color	(0 - 3) 1 - 4
	00 6C	000a aaaa	WMT3 Wave FXM Depth	(0 - 16)

*1-3-2-5 Rhythm Tone

Offset Address	Description	
00 00	0aaa aaaa	Tone Name 1 (32 - 127) [ASCII]
00 01	0aaa aaaa	Tone Name 2 (32 - 127) [ASCII]
00 02	0aaa aaaa	Tone Name 3 (32 - 127) [ASCII]
00 03	0aaa aaaa	Tone Name 4 (32 - 127) [ASCII]
00 04	0aaa aaaa	Tone Name 5 (32 - 127) [ASCII]
00 05	0aaa aaaa	Tone Name 6 (32 - 127) [ASCII]
00 06	0aaa aaaa	Tone Name 7 (32 - 127) [ASCII]
00 07	0aaa aaaa	Tone Name 8 (32 - 127) [ASCII]
00 08	0aaa aaaa	Tone Name 9 (32 - 127) [ASCII]
00 09	0aaa aaaa	Tone Name 10 (32 - 127) [ASCII]
00 0A	0aaa aaaa	Tone Name 11 (32 - 127) [ASCII]
00 0B	0aaa aaaa	Tone Name 12 (32 - 127) [ASCII]
00 0C	0000 000a	Assign Type (0 - 1) MULTI, SINGLE
00 0D	000a aaaa	Mute Group (0 - 31) OFF, 1 - 31
00 0E	0aaa aaaa	Tone Level (0 - 127)
00 0F	0aaa aaaa	Tone Coarse Tune (0 - 127)
00 10	0aaa aaaa	Tone Fine Tune C-1 - 69 (14 - 114)
00 11	000a aaaa	Tone Random Pitch Depth (0 - 30) 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1100, 1200
00 12	0aaa aaaa	Tone Pan (0 - 127) L64 - 63R
00 13	00aa aaaa	Tone Random Pan Depth (0 - 63)
00 14	0aaa aaaa	Tone Alternate Pan Depth (1 - 127) L63 - 63R
00 15	0000 000a	Tone Env Mode (0 - 1) NO-SUS, SUSTAIN
00 16	0aaa aaaa	Tone Dry Send Level (0 - 127)

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00 6D	0000 000a	WMT3 Wave Tempo Sync	(0 - 1) OFF, ON
00 6E	0aaa aaaa	WMT3 Wave Coarse Tune	(16 - 112) -48 +48
00 6F	0aaa aaaa	WMT3 Wave Fine Tune	(14 - 114) -50 +50
00 70	0aaa aaaa	WMT3 Wave Pan	(0 - 127) L64 - 63R
00 71	0000 000a	WMT3 Wave Random Pan Switch	(0 - 1) OFF, ON
00 72	0000 00aa	WMT3 Wave Alternate Pan Switch	(0 - 2) OFF, ON, REVERSE
00 73	0aaa aaaa	WMT3 Wave Level	(0 - 127)
00 74	0aaa aaaa	WMT3 Velocity Range Lower	(1 - 127) 1 - UPPER
00 75	0aaa aaaa	WMT3 Velocity Range Upper	(1 - 127) 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) OFF, ON
00 79	0000 00aa	WMT4 Wave Group Type	(0 - 3) INT-WAVE, SRJV80-EXP, SRX-EXP, SAMPLE<XV-5080>
# 00 7A	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT4 Wave Group ID	(0 - 16384) OFF, 1 - 16384
# 00 7E	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT4 Wave Number L (Mono)	(0 - 16384) OFF, 1 - 16384
# 01 02	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	WMT4 Wave Number R	(0 - 16384) OFF, 1 - 16384
01 06	0000 00aa	WMT4 Wave Gain	(0 - 3) -6, 0, +6, +12 [dB]
01 07	0000 000a	WMT4 Wave FXM Switch	(0 - 1) OFF, ON
01 08	0000 00aa	WMT4 Wave FXM Color	(0 - 3) 1 - 4
01 09	000a aaaa	WMT4 Wave FXM Depth	(0 - 16)
01 0A	0000 000a	WMT4 Wave Tempo Sync	(0 - 1) OFF, ON
01 0B	0aaa aaaa	WMT4 Wave Coarse Tune	(16 - 112) -48 +48
01 0C	0aaa aaaa	WMT4 Wave Fine Tune	(14 - 114) -50 +50
01 0D	0aaa aaaa	WMT4 Wave Pan	(0 - 127) L64 - 63R
01 0E	0000 000a	WMT4 Wave Random Pan Switch	(0 - 1) OFF, ON
01 0F	0000 00aa	WMT4 Wave Alternate Pan Switch	(0 - 2) OFF, ON, REVERSE
01 10	0aaa aaaa	WMT4 Wave Level	(0 - 127)
01 11	0aaa aaaa	WMT4 Velocity Range Lower	(1 - 127) 1 - UPPER
01 12	0aaa aaaa	WMT4 Velocity Range Upper	(1 - 127) 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) -12 +12
01 16	0aaa aaaa	Pitch Env Velocity Sens	(1 - 127) -63 +63
01 17	0aaa aaaa	Pitch Env Time 1 Velocity Sens	(1 - 127) -63 +63
01 18	0aaa aaaa	Pitch Env Time 4 Velocity Sens	(1 - 127) -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) -63 +63
01 1E	0aaa aaaa	Pitch Env Level 1	(1 - 127) -63 +63
01 1F	0aaa aaaa	Pitch Env Level 2	(1 - 127) -63 +63
01 20	0aaa aaaa	Pitch Env Level 3	(1 - 127) -63 +63
01 21	0aaa aaaa	Pitch Env Level 4	(1 - 127) -63 +63
01 22	0000 0aaa	TVF Filter Type	(0 - 6) OFF, LPF, BPF, HPP, PKG, LPP2, LPP3
01 23	0aaa aaaa	TVF Cutoff Frequency	(0 - 127)
01 24	0000 0aaa	TVF Cutoff Velocity Curve	(0 - 7) FIXED, 1 - 7
01 25	0aaa aaaa	TVF Cutoff Velocity Sens	(1 - 127) -63 +63
01 26	0aaa aaaa	TVF Resonance	(0 - 127)
01 27	0aaa aaaa	TVF Resonance Velocity Sens	(1 - 127) -63 +63
01 28	0aaa aaaa	TVF Env Depth	(1 - 127) -63 +63
01 29	0000 0aaa	TVF Env Velocity Curve Type	(0 - 7) FIXED, 1 - 7
01 2A	0aaa aaaa	TVF Env Velocity Sens	(1 - 127) -63 +63
01 2B	0aaa aaaa	TVF Env Time 1 Velocity Sens	(1 - 127) -63 +63
01 2C	0aaa aaaa	TVF Env Time 4 Velocity Sens	(1 - 127) -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) FIXED, 1 - 7
01 37	0aaa aaaa	TVA Level Velocity Sens	(1 - 127) -63 +63
01 38	0aaa aaaa	TVA Env Time 1 Velocity Sens	(1 - 127) -63 +63
01 39	0aaa aaaa	TVA Env Time 4 Velocity Sens	(1 - 127) -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		

2. GS (Model ID=42H)

* System Parameter

Start	Address	Description	
#	40 00 00	0000 aaaa 0000 bbbb 0000 cccc 0000 dddd	Master Tune (24 - 2024) -100.0 - 100.0 [cent]
	40 00 04	0aaa aaaa	Master Volume (0 - 127)
	40 00 05	0aaa aaaa	Master Key Shift (40 - 88)
	40 00 06	0aaa aaaa	Master Pan (1 - 127) L63 - 63R
	40 00 7F	0aaa aaaa	Mode Set (0, 127) 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 0aaa aaaa	Tone Number CC#00 Value (0 - 127) Tone Number PC Value (0 - 127)
	40 1x 02	0aaa aaaa	Rx. Channel (0 - 16) 1 - 16, OFF
	40 1x 03	0000 000a	Rx. Pitch Bend (0 - 1)
	40 1x 04	0000 000a	Rx. Channel Pressure OFF, ON
	40 1x 05	0000 000a	Rx. Program Change OFF, ON
	40 1x 06	0000 000a	Rx. Control Change OFF, ON
	40 1x 07	0000 000a	Rx. Poly Pressure OFF, ON
	40 1x 08	0000 000a	Rx. Note Message OFF, ON
	40 1x 09	0000 000a	Rx. RPN OFF, ON
	40 1x 0A	0000 000a	Rx. NRPN OFF, ON
	40 1x 0B	0000 000a	Rx. Modulation OFF, ON
	40 1x 0C	0000 000a	Rx. Volume OFF, ON
	40 1x 0D	0000 000a	Rx. Panpot OFF, ON
	40 1x 0E	0000 000a	Rx. Expression OFF, ON
	40 1x 0F	0000 000a	Rx. Hold-1 OFF, ON
	40 1x 10	0000 000a	Rx. Portamento OFF, ON
	40 1x 11	0000 000a	Rx. Sostenuato OFF, ON
	40 1x 12	0000 000a	Rx. Soft OFF, ON
	40 1x 13	0aaa aaaa	Mono / Poly Mode (0 - 1) MODE, POLY
	40 1x 14	0aaa aaaa	Assign Mode (0 - 2) SINGLE, LIMITED-MULTI, FULL-MULTI
	40 1x 15	0aaa aaaa	Use for Rhythm Part (0 - 2) OFF, MAP1, MAP2
	40 1x 16	0aaa aaaa	Pitch Key Shift (40 - 88) -24 - +24 [semitone]
#	40 1x 17	0000 aaaa 0000 bbbb	Pitch Offset Fine (8 - 248)
	40 1x 19	0aaa aaaa	Part Level (CC# 7) (0 - 127)
	40 1x 1A	0aaa aaaa	Velocity Sens Depth (0 - 127) -64 +63
	40 1x 1B	0aaa aaaa	Velocity Sens Offset (0 - 127) -64 +63
	40 1x 1C	0aaa aaaa	Part Panpot (CC# 10) (0 - 127) 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) OFF, ON

40 1x 24	0000 000a	Rx. Bank Select LSB (0 - 1) OFF, ON
40 1x 30	0aaa aaaa	Tone Modify 1 (Vibrato Rate) (0 - 127) -64 - +63
40 1x 31	0aaa aaaa	Tone Modify 2 (Vibrato Depth) (0 - 127) -64 - +63
40 1x 32	0aaa aaaa	Tone Modify 3 (TVF Cutoff Freq.) (0 - 127) -64 - +63
40 1x 33	0aaa aaaa	Tone Modify 4 (TVF Resonance) (0 - 127) -64 - +63
40 1x 34	0aaa aaaa	Tone Modify 5 (TVF&TVA Env. Attack) (0 - 127) -64 - +63
40 1x 35	0aaa aaaa	Tone Modify 6 (TVF&TVA Env. Decay) (0 - 127) -64 - +63
40 1x 36	0aaa aaaa	Tone Modify 7 (TVF&TVA Env. Release) (0 - 127) -64 - +63
40 1x 37	0aaa aaaa	Tone Modify 8 (Vibrato Delay) (0 - 127) -64 - +63
40 1x 40	0aaa aaaa	Scale Tuning C (0 - 127) -64 - +63 [cent]
40 1x 41	0aaa aaaa	Scale Tuning C# (0 - 127) -64 - +63 [cent]
40 1x 42	0aaa aaaa	Scale Tuning D (0 - 127) -64 - +63 [cent]
40 1x 43	0aaa aaaa	Scale Tuning D# (0 - 127) -64 - +63 [cent]
40 1x 44	0aaa aaaa	Scale Tuning E (0 - 127) -64 - +63 [cent]
40 1x 45	0aaa aaaa	Scale Tuning F (0 - 127) -64 - +63 [cent]
40 1x 46	0aaa aaaa	Scale Tuning F# (0 - 127) -64 - +63 [cent]
40 1x 47	0aaa aaaa	Scale Tuning G (0 - 127) -64 - +63 [cent]
40 1x 48	0aaa aaaa	Scale Tuning G# (0 - 127) -64 - +63 [cent]
40 1x 49	0aaa aaaa	Scale Tuning A (0 - 127) -64 - +63 [cent]
40 1x 4A	0aaa aaaa	Scale Tuning A# (0 - 127) -64 - +63 [cent]
40 1x 4B	0aaa aaaa	Scale Tuning B (0 - 127) -64 - +63 [cent]
40 2x 00	0aaa aaaa	Mod Pitch Control (40 - 88) -24 - +24 [semitone]
40 2x 01	0aaa aaaa	Mod TVF Cutoff Control (0 - 127) -9600 - +9600 [cent]
40 2x 02	0aaa aaaa	Mod Amplitude Control (0 - 127) -100.0 - +100.0 [%]
40 2x 03	0aaa aaaa	Mod LFO1 Rate Control (0 - 127) -10.0 - +10.0 [Hz]
40 2x 04	0aaa aaaa	Mod LFO1 Pitch Control (0 - 127) 0 - 600 [cent]
40 2x 05	0aaa aaaa	Mod LFO1 TVF Depth (0 - 127) 0 - 2400 [cent]
40 2x 06	0aaa aaaa	Mod LFO1 TVA Depth (0 - 127) 0 - 100.0 [%]
40 2x 07	0aaa aaaa	Mod LFO2 Rate Control (0 - 127) -10.0 - +10.0 [Hz]
40 2x 08	0aaa aaaa	Mod LFO2 Pitch Control (0 - 127) 0 - 600 [cent]
40 2x 09	0aaa aaaa	Mod LFO2 TVF Depth (0 - 127) 0 - 2400 [cent]
40 2x 0A	0aaa aaaa	Mod LFO2 TVA Depth (0 - 127) 0 - 100.0 [%]
40 2x 10	0aaa aaaa	Bend Pitch Control (64 - 88) 0 - 24 [semitone]
40 2x 11	0aaa aaaa	Bend TVF Cutoff Control (0 - 127) -9600 - +9600 [cent]
40 2x 12	0aaa aaaa	Bend Amplitude Control (0 - 127) -100.0 - +100.0 [%]
40 2x 13	0aaa aaaa	Bend LFO1 Rate Control (0 - 127) -10.0 - +10.0 [Hz]
40 2x 14	0aaa aaaa	Bend LFO1 Pitch Control (0 - 127) 0 - 600 [cent]
40 2x 15	0aaa aaaa	Bend LFO1 TVF Depth (0 - 127) 0 - 2400 [cent]
40 2x 16	0aaa aaaa	Bend LFO1 TVA Depth (0 - 127) 0 - 100.0 [%]
40 2x 17	0aaa aaaa	Bend LFO2 Rate Control (0 - 127) -10.0 - +10.0 [Hz]
40 2x 18	0aaa aaaa	Bend LFO2 Pitch Control (0 - 127) 0 - 600 [cent]
40 2x 19	0aaa aaaa	Bend LFO2 TVF Depth (0 - 127) 0 - 2400 [cent]
40 2x 1A	0aaa aaaa	Bend LFO2 TVA Depth (0 - 127) 0 - 100.0 [%]
40 2x 20	0aaa aaaa	CAF Pitch Control (40 - 88) -24 - +24 [semitone]
40 2x 21	0aaa aaaa	CAF TVF Cutoff Control (0 - 127) -9600 - +9600 [cent]
40 2x 22	0aaa aaaa	CAF Amplitude Control (0 - 127) -100.0 - +100.0 [%]
40 2x 23	0aaa aaaa	CAF LFO1 Rate Control (0 - 127) -10.0 - +10.0 [Hz]
40 2x 24	0aaa aaaa	CAF LFO1 Pitch Control (0 - 127) 0 - 600 [cent]
40 2x 25	0aaa aaaa	CAF LFO1 TVF Depth (0 - 127) 0 - 2400 [cent]
40 2x 26	0aaa aaaa	CAF LFO1 TVA Depth (0 - 127) 0 - 100.0 [%]
40 2x 27	0aaa aaaa	CAF LFO2 Rate Control (0 - 127) -10.0 - +10.0 [Hz]
40 2x 28	0aaa aaaa	CAF LFO2 Pitch Control (0 - 127) 0 - 600 [cent]
40 2x 29	0aaa aaaa	CAF LFO2 TVF Depth (0 - 127) 0 - 2400 [cent]
40 2x 2A	0aaa aaaa	CAF LFO2 TVA Depth (0 - 127) 0 - 100.0 [%]
40 2x 30	0aaa aaaa	PAF Pitch Control (40 - 88) -24 - +24 [semitone]
40 2x 31	0aaa aaaa	PAF TVF Cutoff Control (0 - 127) -9600 - +9600 [cent]
40 2x 32	0aaa aaaa	PAF Amplitude Control (0 - 127) -100.0 - +100.0 [%]
40 2x 33	0aaa aaaa	PAF LFO1 Rate Control (0 - 127) -10.0 - +10.0 [Hz]
40 2x 34	0aaa aaaa	PAF LFO1 Pitch Control (0 - 127) 0 - 600 [cent]
40 2x 35	0aaa aaaa	PAF LFO1 TVF Depth (0 - 127) 0 - 2400 [cent]
40 2x 36	0aaa aaaa	PAF LFO1 TVA Depth (0 - 127) 0 - 100.0 [%]
40 2x 37	0aaa aaaa	PAF LFO2 Rate Control (0 - 127) -10.0 - +10.0 [Hz]
40 2x 38	0aaa aaaa	PAF LFO2 Pitch Control (0 - 127) 0 - 600 [cent]
40 2x 39	0aaa aaaa	PAF LFO2 TVF Depth (0 - 127) 0 - 2400 [cent]
40 2x 3A	0aaa aaaa	PAF LFO2 TVA Depth (0 - 127) 0 - 100.0 [%]
40 2x 40	0aaa aaaa	CC1 Pitch Control (40 - 88) -24 - +24 [semitone]
40 2x 41	0aaa aaaa	CC1 TVF Cutoff Control (0 - 127) -9600 - +9600 [cent]

40 2x 42	0aaa aaaa	CC1 Amplitude Control (0 - 127) -100.0 - +100.0 [%]
40 2x 43	0aaa aaaa	CC1 LFO1 Rate Control (0 - 127) -10.0 - +10.0 [Hz]
40 2x 44	0aaa aaaa	CC1 LFO1 Pitch Control (0 - 127) 0 - 600 [cent]
40 2x 45	0aaa aaaa	CC1 LFO1 TVF Depth (0 - 127) 0 - 2400 [cent]
40 2x 46	0aaa aaaa	CC1 LFO1 TVA Depth (0 - 127) 0 - 100.0 [%]
40 2x 47	0aaa aaaa	CC1 LFO2 Rate Control (0 - 127) -10.0 - +10.0 [Hz]
40 2x 48	0aaa aaaa	CC1 LFO2 Pitch Control (0 - 127) 0 - 600 [cent]
40 2x 49	0aaa aaaa	CC1 LFO2 TVF Depth (0 - 127) 0 - 2400 [cent]
40 2x 4A	0aaa aaaa	CC1 LFO2 TVA Depth (0 - 127) 0 - 100.0 [%]
40 2x 50	0aaa aaaa	CC2 Pitch Control (40 - 88) -24 - +24 [semitone]
40 2x 51	0aaa aaaa	CC2 TVF Cutoff Control (0 - 127) -9600 - +9600 [cent]
40 2x 52	0aaa aaaa	CC2 Amplitude Control (0 - 127) -100.0 - +100.0 [%]
40 2x 53	0aaa aaaa	CC2 LFO1 Rate Control (0 - 127) -10.0 - +10.0 [Hz]
40 2x 54	0aaa aaaa	CC2 LFO1 Pitch Control (0 - 127) 0 - 600 [cent]
40 2x 55	0aaa aaaa	CC2 LFO1 TVF Depth (0 - 127) 0 - 2400 [cent]
40 2x 56	0aaa aaaa	CC2 LFO1 TVA Depth (0 - 127) 0 - 100.0 [%]
40 2x 57	0aaa aaaa	CC2 LFO2 Rate Control (0 - 127) -10.0 - +10.0 [Hz]
40 2x 58	0aaa aaaa	CC2 LFO2 Pitch Control (0 - 127) 0 - 600 [cent]
40 2x 59	0aaa aaaa	CC2 LFO2 TVF Depth (0 - 127) 0 - 2400 [cent]
40 2x 5A	0aaa aaaa	CC2 LFO2 TVA Depth (0 - 127) 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
- Part 10 (MIDI ch = 10) x = 0
- Part 11 (MIDI ch = 11) x = A
- Part 12 (MIDI ch = 12) x = B
- ...
- Part 16 (MIDI ch = 16) x = F

* Drum Setup Parameter

Start	Address	Description	
41 m0 00	0aaa aaaa	Drum Map Name 1	(32 - 127)
41 m0 01	0aaa aaaa	Drum Map Name 2	(32 - 127) [ASCII]
41 m0 02	0aaa aaaa	Drum Map Name 3	(32 - 127) [ASCII]
41 m0 03	0aaa aaaa	Drum Map Name 4	(32 - 127) [ASCII]
41 m0 04	0aaa aaaa	Drum Map Name 5	(32 - 127) [ASCII]
41 m0 05	0aaa aaaa	Drum Map Name 6	(32 - 127) [ASCII]
41 m0 06	0aaa aaaa	Drum Map Name 7	(32 - 127) [ASCII]
41 m0 07	0aaa aaaa	Drum Map Name 8	(32 - 127) [ASCII]
41 m0 08	0aaa aaaa	Drum Map Name 9	(32 - 127) [ASCII]
41 m0 09	0aaa aaaa	Drum Map Name 10	(32 - 127) [ASCII]
41 m0 0A	0aaa aaaa	Drum Map Name 11	(32 - 127) [ASCII]
41 m0 0B	0aaa aaaa	Drum Map Name 12	(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
41 m5 rr	0aaa aaaa	Reverb Send Level	(0 - 127)
41 m6 rr	0aaa aaaa	Chorus Send Level	0.0 - 1.0
41 m7 rr	0000 000a	Rx. Note Off	(0 - 127)
41 m8 rr	0000 000a	Rx. Note On	OFF, ON
			(0 - 1)
			OFF, ON

m: Map number (0 = MAP1, 1 = MAP2)

rr: drum part note number (00H-7FH)

MIDI Implementation

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 $aa \times 128 + bb$.
- * 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 $aa \text{ bbH} - 40 \text{ 00H} = aa \times 128 + bb - 64 \times 128$.
- * 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 $a \times 16 + b$.

<Example 1> What is the decimal expression of 5AH?

From the preceding table, 5AH = 90

<Example 2> 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

$$18 \times 128 + 52 = 2356$$

<Example 3> 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

$$((10 \times 16 + 3) \times 16 + 9) \times 16 + 13 = 41885$$

<Example 4> What is the nibbled expression of the decimal value 1258?

$$\begin{array}{r} 16) \underline{1258} \\ \underline{78} \quad 10 \\ 16) \underline{4} \quad 14 \\ 0 \quad \dots \quad 4 \end{array}$$

Since from the preceding table, 0 = 00H, 4 = 04H, 14 = 0EH, 10 = 0AH, the result is: 00 04 0E 0AH.

Examples of actual MIDI messages

<Example 1> 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.

<Example 2> 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 (Flute in GS).

<Example 3> 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 (= $64 \times 12 + 80 = 8192$) is 0, so this Pitch Bend Value is $28 \text{ 00H} - 40 \text{ 00H} = 40 \times 12 + 80 - (64 \times 12 + 80) = 5120 - 8192 = -3072$

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 $-200 \times (-3072) \div (-8192) = -75$ cents of Pitch Bend is being applied to MIDI channel 11.

<Example 4> 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's an example of how the checksum is calculated. We will assume that in the Exclusive message we are transmitting, the address is aa bb cc ddH and the data or size is ee ffH.

$$aa + bb + cc + dd + ee + ff = \text{sum}$$

$$\text{sum} \div 128 = \text{quotient} \dots \text{remainder}$$

$$128 - \text{remainder} = \text{checksum}$$

<Example 1> Setting CHORUS TYPE of PERFORMANCE COMMON to DELAY (DT1). According to the "Parameter Address Map (p. 181)," 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;

$$\begin{array}{r} 10\ 00\ 00\ 00\text{H} \\ \quad \quad 04\ 00\text{H} \\ +) \quad \quad \quad 00\ 00\text{H} \\ \hline 10\ 00\ 04\ 00\text{H} \end{array}$$

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-3080), (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.

<Example 2> Getting the data (RQ1) of Performance Part 3 in USER:03. According to the "Parameter Address Map (p. 181)," 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;

$$\begin{array}{r} 20\ 02\ 00\ 00\text{H} \\ +) \quad \quad \quad 00\ 22\ 00\text{H} \\ \hline 20\ 02\ 22\ 00\text{H} \end{array}$$

As the size of Performance Part is 00 00 00 21H, the system exclusive message should be sent is;

F0	41	10	00 10	11	20 02 22 00	00 00 00 21	??	F7
(1)	(2)	(3)	(4)	(5)	address	data	checksum	(6)

(1) Exclusive Status, (2) ID (Roland), (3) Device ID (17),
 (4) Model ID (XV-3080), (5) Command ID (RQ1), (6) End of Exclusive

Then calculate the checksum.
 20H + 02H + 22H + 00H + 00H + 00H + 00H + 21H = 32 + 2 + 34 + 0 + 0 + 0 + 0 + 33 = 101 (sum)
 101 (sum) ÷ 128 = 0 (quotient) ... 101 (remainder)
 checksum = 128 - 101 (remainder) = 27 = 1BH
 This means that F0 41 10 00 10 11 20 02 22 00 00 00 00 21 1B F7 is the message should be sent.

<Example 3> 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. 181)," 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 Part is 00 00 00 21H, summation of the size and the start address of Part 16 at Temporary Performance will be;

$$\begin{array}{r} 10\ 00\ 2F\ 00\text{H} \\ +) \quad \quad \quad 00\ 00\ 00\ 21\text{H} \\ \hline 10\ 00\ 2F\ 21\text{H} \end{array}$$

And the size that have to be got should be;

$$\begin{array}{r} 10\ 00\ 2F\ 21\text{H} \\ -) \quad \quad \quad 10\ 00\ 00\ 00\text{H} \\ \hline 00\ 00\ 2F\ 21\text{H} \end{array}$$

Therefore the system exclusive message should be sent is;

F0	41	10	00 10	11	10 00 00 00	00 00 2F 21	??	F7
(1)	(2)	(3)	(4)	(5)	address	data	checksum	(6)

(1) Exclusive Status, (2) ID (Roland), (3) Device ID (17),
 (4) Model ID (XV-3080), (5) Command ID (RQ1), (6) End of Exclusive

Calculating the checksum as shown in <Example 2>, we get a message of F0 41 10 01 10 11 10 00 00 00 00 2F 21 20 F7 to be transmitted.

<Example 4> 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. 181)," the start address of the above all parameters is assigned as following:

10 00 00 00H	Temporary Performance
11 20 00 00H	Temporary Patch (Performance Mode Part 1)
11 30 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 1
:	
01 3E 00H	Rhythm Tone 4

As the data size of Rhythm Tone is 00 00 01 41H, summation of the size and the start address of Tone 4 of Part 16 at Temporary Patch in Performance mode will be;

$$\begin{array}{r} 14\ 70\ 00\ 00\text{H} \\ \quad \quad 01\ 3E\ 00\text{H} \\ +) \quad \quad \quad 00\ 00\ 01\ 41\text{H} \\ \hline 14\ 71\ 3F\ 41\text{H} \end{array}$$

And the size that have to be got should be;

$$\begin{array}{r} 14\ 71\ 3F\ 41\text{H} \\ -) \quad \quad \quad 10\ 00\ 00\ 00\text{H} \\ \hline 04\ 71\ 3F\ 41\text{H} \end{array}$$

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-3080), (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.

MIDI Implementation

●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-3080, 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 (Keytone C)	Arabian Scale
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
D#	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
A#	0	+14	-10
B	0	-12	-49

The values in the table are given in cents. Refer to the explanation of Scale Tuning on page 130 to convert these values to hexadecimal, and transmit them as Exclusive data.

For example, to set the tune (C-B) of the Part1 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.

(HEX) = hexadecimal

(DEC) = decimal

Character	(HEX)	(DEC)	Character	(HEX)	(DEC)	Character	(HEX)	(DEC)
SP	20H	32	@	40H	64	`	20H	96
!	21H	33	A	41H	65	a	61H	97
"	22H	34	B	42H	66	b	62H	98
#	23H	35	C	43H	67	c	63H	99
\$	24H	36	D	44H	68	d	64H	100
%	25H	37	E	45H	69	e	65H	101
&	26H	38	F	46H	70	f	66H	102
'	27H	39	G	47H	71	g	67H	103
(	28H	40	H	48H	72	h	68H	104
)	29H	41	I	49H	73	i	69H	105
*	2AH	42	J	4AH	74	j	6AH	106
+	2BH	43	K	4BH	75	k	6BH	107
,	2CH	44	L	4CH	76	l	6CH	108
-	2DH	45	M	4DH	77	m	6DH	109
.	2EH	46	N	4EH	78	n	6EH	110
/	2FH	47	O	4FH	79	o	6FH	111
0	30H	48	P	50H	80	p	70H	112
1	31H	49	Q	51H	81	q	71H	113
2	32H	50	R	52H	82	r	72H	114
3	33H	51	S	53H	83	s	73H	115
4	34H	52	T	54H	84	t	74H	116
5	35H	53	U	55H	85	u	75H	117
6	36H	54	V	56H	86	v	76H	118
7	37H	55	W	57H	87	w	77H	119
8	38H	56	X	58H	88	x	78H	120
9	39H	57	Y	59H	89	y	79H	121
:	3AH	58	Z	5AH	90	z	7AH	122
;	3BH	59	[	5BH	91	{	7BH	123
<	3CH	60	\	5CH	92	}	7CH	124
=	3DH	61	]	5DH	93	}	7CH	125
>	3EH	62	^	5EH	94			
?	3FH	63	_	5FH	95			

NOTE: "SP" is space.

Specifications

XV-3080 128 voice sound module

GM Level 2 system Compatible

● Parts

16

● Maximum Polyphony

128 voices

● Wave memory

64MB (16-bit linear format)

● Expansion slots

Wave Expansion Board SR-JV80 Series: 4slots

New Wave Expansion Board SRX Series: 2slots

● Preset memory

Patch: 768 (128 x 6 banks) + GM Level 2 Patch: 256

Performance: 64 (32 x 2 banks)

Rhythm Sets: 12 (2 x 6 banks) + GMLevel 2 Rhythm Set: 4

● User memory

Patch: 128

Performance: 64

Rhythm Set: 4

● External memory

SmartMedia card 1slot

(2 - 128 MB, 5 or 3.3 V)

● Effects

Multi Effects (MFX): 63 type

Reverb: 4 type

Chorus: 2 type

● Display

40 characters, 2 lines (Backlit LCD)

● Connectors

A (MIX) Output (L(MONO), R)

B Output (L, R)

C Output (L, R)

(Individual 1 - 6)

Phones Jack (Stereo)

MIDI connector (IN, OUT, THRU)

● Power supply

AC117, 230, 240 V

● Power Consumption

13 W

● Dimensions

482 (W) x 281 (D) x 88 (H) mm

19 (W) x 11-1/16 (D) x 3-1/2 (H) inches

(EIA-2U rack mount type)

● Weight

4.4 kg / 9lbs 12oz

● Accessories

Quickstart manual

Owner's manual

Q&A, Sound List

Power cord

● Options

Wave Expansion Board (SRX series, SR-JV80 series)

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

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MEMO



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
P.O. Box 2904,
El Horrieh Heliopolis, Cairo,
EGYPT
TEL: (02) 4185531

REUNION

Maison FO - YAM Marcel
25 Rue Jules Hermann,
Chaudron - BP79 97 491
Ste Clotilde Cedex,
REUNION ISLAND
TEL: 28 29 16

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TEL: (011) 403 4105

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17 Werdmuller Centre Claremont
7700
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M9W 6Y1 CANADA
TEL: (0416) 213 9707

U. S. A.

Roland Corporation U.S.
5100 S. Eastern Avenue
Los Angeles, CA 90040-2938,
U. S. A.
TEL: (323) 890 3700

As of May 15, 2001 (Roland)

Apparatus containing Lithium batteries

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

ADVARSEL

Ekspløsjonsfare ved feilaktig skifte av batteri.
Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten.
Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Discard used batteries according to the manufacturer's instructions.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.



This product complies with the requirements of European Directives EMC 89/336/EEC and LVD 73/23/EEC.

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.

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.

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.

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