Roland

GENERAL MIDI

JV-2080

64 VOICE SYNTHESIZER MODULE

3x EFX
8x EXPANSION

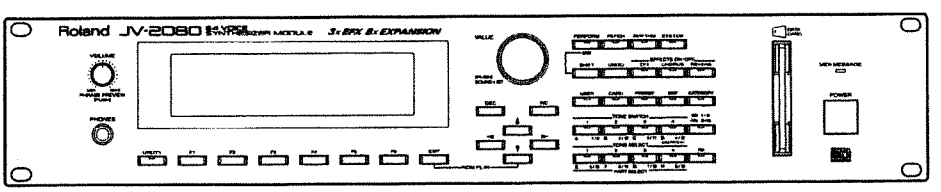
OWNER'S MANUAL

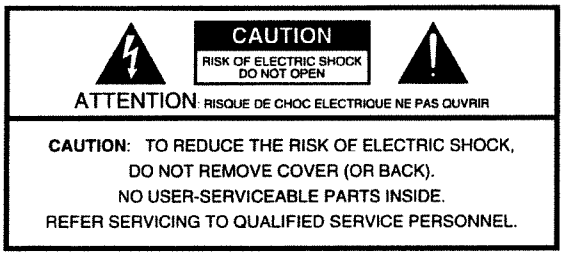
Before using this unit, carefully read the sections entitled: "IMPORTANT SAFETY INSTRUCTIONS" (p. 2), "USING THE UNIT SAFELY" (p. 3), and "IMPORTANT NOTES" (p. 6). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, this manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.

The documentation for the JV-2080 consists of two manuals: "Quick Start" and "Owner's Manual." "Quick Start" explains the basic functionality of the JV-2080 using actual examples. "Owner's Manual" explains functions grouped by topic. Use the table of contents, index, and list of functions by display to find the section for the information you need.

Conventions Used in This Manual

- Words enclosed in square brackets [ ] indicate panel buttons.
  Example: [PERFORM] indicates the PERFORM button.
- The order in which buttons are to be pressed will often be indicated by words enclosed in square brackets [ ], together with + and →.
  Example: [SHIFT] + [PERFORM] → [F4] (Part)
  means that you are to hold down the SHIFT button and press the PERFORM button, and then press the F4 (Part) button.
- (→ p. 00) indicates a reference page.





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 all the instructions before using the product.
2. Do not use this product near water — for example, near a bathtub, washbowl, kitchen sink, in a wet basement, or near a swimming pool, or the like.
3. This product should be used only with a cart or stand that is recommended by the manufacturer.
4. This product, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
5. The product should be located so that its location or position does not interfere with its proper ventilation.
6. The product should be located away from heat sources such as radiators, heat registers, or other products that produce heat.
7. The product should be connected to a power supply only of the type described in the operating instructions or as marked on the product.
8. The power-supply cord of the product should be unplugged from the outlet when left unused for a long period of time.
9. Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
10. The product should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled onto the product; or
    C. The product has been exposed to rain; or
    D. The product does not appear to operate normally or exhibits a marked change in performance; or
    E. The product has been dropped, or the enclosure damaged.
11. Do not attempt to service the product beyond that described in the user-maintenance instructions. All other servicing should be referred to qualified service personnel.

For the USA

GROUNDING INSTRUCTIONS

This product must be grounded. If it should malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock.

This product is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER: Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded.
Do not modify the plug provided with the product — if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

For the U.K.

WARNING: THIS APPARATUS MUST BE EARTHED
IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.
GREEN-AND-YELLOW: EARTH, BLUE: NEUTRAL, BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured GREEN-AND-YELLOW must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured GREEN or GREEN-AND-YELLOW.

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

The product which is equipped with a THREE WIRE GROUNDING TYPE LINE PLUG must be grounded.

USING THE UNIT SAFELY

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

About ⚠WARNING and ⚠CAUTION Notices

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

About the Symbols

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

ALWAYS OBSERVE THE FOLLOWING

⚠WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual.
- Do not open or perform any internal modifications on the unit. (The only exception would be where this manual provides specific instructions which should be followed in order to put in place user-installable options; see p. 9.)
- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces.
- Avoid damaging the power cord. Do not bend it excessively, step on it, place heavy objects on it, etc. A damaged cord can easily become a shock or fire hazard. Never use a power cord after it has been damaged.
- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.
- Protect the unit from strong impact. (Do not drop it!)
- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.
- Before using the unit in a foreign country, consult with your dealer, or qualified Roland service personnel.
- Always turn the unit off and unplug the power cord before attempting installation of the circuit board (SR-JV80 series; p. 9).

⚠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 boards (SR-JV80 series). Remove only the specified screws (p. 9).

Contents

IMPORTANT NOTES

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

Power Supply

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

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.

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 benzene, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Repairs and Data

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

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 dealer, or qualified Roland service personnel.

"Battery Low"

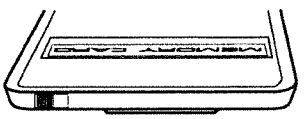
Additional Precautions

- 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 loosing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit's memory on a DATA card, in another MIDI device (e.g., a sequencer).
- Unfortunately, it may be impossible to restore the contents of data that was stored on a DATA card, in another MIDI device (e.g., a sequencer), in the unit's memory once it has been lost. Roland Corporation assumes no liability concerning such loss of data.
- Use a reasonable amount of care when using the unit's buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.
- 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.

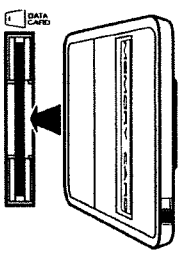
Before Using Cards

Using DATA Cards

- New Memory cards do not yet have their battery installed. Before a Memory card can be used, you first need to incert the battery (refer to the instructions supplied with the Memory card).
- M-512E/M-256E Memory cards are equipped with a PROTECT switch, which when turned on protects your data from accidental erasure. It is recommended thet the switch be kept at the ON position, and switched to OFF only at the times you wish to write new data onto the card.



- When the battery in a DATA card is nearly worn out, the message **"Data Card Battery Low."** will be shown in the display. Refer to the instructions supplied with the DATA card and promptly replace the battery to avoid the loss of the data on it.
- 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.
- DATA cards in the PN-JV80 series are designed to be read-only. You cannot write any new data onto these cards.

Chapter 1.

Starting Out

Main Features of the JV-2080

As successor to the JV-1080, this synthesizer sound module offers even greater performance and higher-quality sounds.

- Maximum polyphony is 64 notes, and up to 16 parts can be handled simultaneously.
- A total of 768 Patches (sounds) are built-in, including Patches for General MIDI.
- Supports the General MIDI system.

Powerful effects

- Three different effects systems are provided: "Multi-effect (EFX)," which offers a total of 40 effect types (such as equalizer, rotary, and distortion); and "Reverb" and "Chorus." In a Performance (which allows up to 16 Parts to be used simultaneously), three different EFX plus chorus and reverb can be used simultaneously, for a total of 5 effect units, allowing highly-sophisticated musical expression.

User-friendly display and button operations, and convenient functions

- The big screen can show a large amount of information at once, and can also display information graphically so that settings can be made visually.
- The [F1]—[F6] buttons located below the screen change their function in accord with the current display page. This allows intuitive operation with a less-cluttered operating panel.
- A "Patch Search function" is provided to help you navigate through the vast number of Patches to find the desired one.
- A "Patch Preview function" lets you use a phrase to audition a Patch without requiring any other equipment.

Expandable to meet any musical need

- Up to eight wave expansion boards (SR-JV80 series: optionally available) can be installed to add a maximum of approximately 2,000 Patches.

Compatible with the JV-1080 and XP-50/80

- Patches are compatible not only with the JV-1080, but also with the XP-50/80.
- The JV-2080 can correctly play back musical data that was created using the JV-1080 or XP-50/80.

General MIDI system

The General MIDI system 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 data that meets the General MIDI standard bears the General MIDI logo ( ). Music data bearing the General MIDI logo can be played back using any General MIDI sound generating unit to produce essentially the same musical performance.

Cautions When Installing the Wave Expansion Board

Up to eight optional wave expansion boards (SR-JV80 series) can be installed into the JV-2080 to increase the number of sounds.
Wave expansion boards contain wave (waveform) data, Patches, and Rhythm Sets.

In order to install a wave expansion board, the top cover of the JV-2080 must be removed. Refer to the owner's manual for your wave expansion board.
Here we will explain some cautionary points that should be observed when installing a board into the JV-2080.

There are eight locations into which a board can be installed: EXP A slot through the EXP H slot. These correspond to the groups (XP-A—XP-H) which can be selected when using expansion board Waves/Patches/Rhythm Sets.

⚠WARNING

- Always turn the unit off and unplug the power cord before attempting installation of the circuit board (SR-JV80 series).

⚠CAUTION

- Install only the specified circuit boards (SR-JV80 series). Remove only the specified screws.
- To avoid the risk of damage to internal components that can be caused by static electricity, please carefully observe the following whenever you handle the board.
  1. Before you touch the board, always first grasp a metal object (such as a water pipe), so you are sure that any static electricity you might have been carrying has been discharged.
  2. When handling the board, grasp it only by its edges. Avoid touching any of the electronic components or connectors.
- Do not touch any of the printed circuit pathways or connection terminals.
- Never use excessive force when installing a circuit board. If it doesn't fit properly on the first attempt, remove the board and try again.
- When circuit board installation is complete, double-check your work.

Using Data Cards

The JV-2080 can use optional DATA cards. The following two types of DATA card are available.

MEMORY CARDS: M-512E, M-256E

These are read/write cards which can be used to store the JV-2080's Performance, Patch, and Rhythm Set data. Use these cards when you wish to save data for which there is no more space in the internal USER group, or so that the data you created can be used on another JV-2080.

Memory cards must be formatted before they can be used.

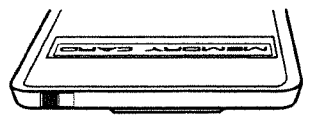
SOUND LIBRARY CARDS: PN-JV80 series

These are read-only cards which contain preset Performance, Patch and Rhythm Set data.

Before Using DATA Cards

**New Memory cards do not yet have their battery installed. Before a Memory card can be used, you first need to incert the battery (refer to the instructions supplied with the Memory card).*

**M-512E/M-256E Memory cards are equipped with a PROTECT switch, which when turned on protects your data from accidental erasure. It is recommended thet the switch be kept at the ON position, and switched to OFF only at the times you wish to write new data onto the card.*



On ← → Off

**When the battery in a DATA card is nearly worn out, the message "Data Card Battery Low." will be shown in the display. Refer to the instructions supplied with the DATA card and promptly replace the battery to avoid the loss of the data on it.*

**Since it is possible for the data to be lost when the card battery is replaced, you should first save the data in the USER group of the JV-2080 (→p. 56) or on an external MIDI sequencer (→p. 58), or replace the battery while the card is inserted into a JV-2080 whose power is turned on.*

**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.*

**PN-JV80 series DATA cards can only be read. Data cannot be written onto these cards.*

**Some sound library cards contain Patches which use waves that are found on optional wave expansion boards. If you are using such a sound library card together with multiple types of wave expansion board, be sure that the appropriate board is installed in the EXP A slot. (→p. 9)*

**The JV-2080 can read Performance, Patch and Rhythm Set data from DATA cards created for the JV-1080.*

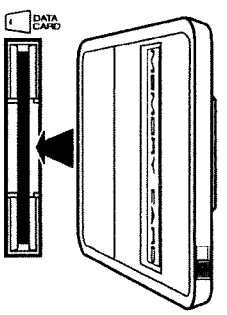
**The JV-2080 can read Patch and Rhythm Set data from DATA cards for the JV-1000/JV-90/JV-80/JV-880. However, since some of the setting items have a different structure, such data must be compensated for as it is read from the DATA card. This means that the data may sound differently on the JV-2080 than it does on the JV-1000/JV-90/JV-80/JV-880. Please be aware of this situation.*

Formatting a Memory Card

After turning off the Protect switch, use the following procedure to format the card.

1. Insert the memory card into the card slot.

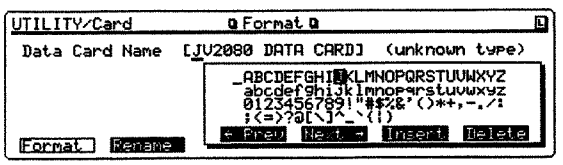
Be sure you insert the card into the DATA Card slot with the label side facing left.



2. Press [UTILITY] to make the indicator light.
3. Press [F6] (Menu) to select Menu 2.
4. Press [F1] (Card).
5. Press [F1] (Format). The Format page will appear.

6. Assign a name to the memory card. Press [F1] (Format) once again.

   A list of the characters which can be input will appear.

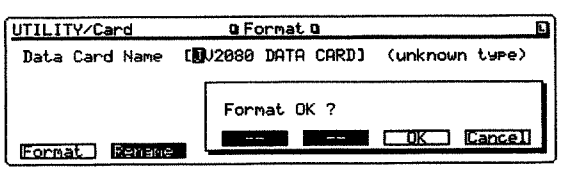


7. Press the VALUE dial or [F3] (← Prev) [F4] (Next→) to move the cursor to the location where you wish to input a character.
8. By either rotating the VALUE dial, using [INC][DEC], or using [▲][▼][◄][►], select the character you wish to input.

   To insert a space at the cursor location, press [F5] (Insert).

   To delete the character at the cursor location, press [F6] (Delete).
9. Repeat steps 7 and 8 to complete the name.
10. Press either [F1] (Format) or [EXIT] to return to the normal Format page.
11. Press [F6] (Execute).

    A message will ask you to confirm whether you really want to format.



12. Press [F5] (OK) to execute formatting.

    The PR-A Performance, Patch and Rhythm Set will be written automatically.

** Even without displaying the list of characters, you can use [◄][►] following step 5 to move the cursor to the location at which you wish to input a character, and then either rotate the VALUE or use [INC][DEC] to assign a name. The following characters can be used.*

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

** When one of the following DATA cards is inserted, the parentheses ( ) will indicate the type of the DATA card.*

- *A DATA card which has not been formatted*
  →(unknown type)
- *A DATA card which was formatted by the JV-1080*
  →(JV2080 type)
- *A DATA card which was formatted by another JV series instrument*
  →(JV80 type)
- *A sound library card*
  →(JV80 type)

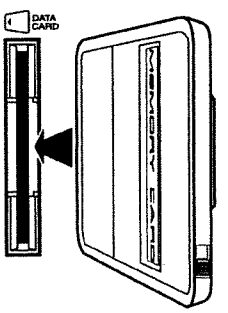
■ Modifying the Name of a Memory Card

1. Insert the memory card into the card slot.
2. Press [UTILITY] to make the indicator light.
3. Press [F6] (Menu) to select Menu 2.
4. Press [F1] (Card).
5. Press [F2] (Rename). The Rename page will appear.
6. Press [F2] (Rename) once again.

   A list of the characters which can be input will appear.
7. As when assigning a name during the formatting process, input the desired name.
8. Press either [F2] or [EXIT] to return to the normal Rename page.
9. Press [F6] (Execute) to execute the rename operation.

Using a DATA Card

1. Insert the DATA card into the card slot.



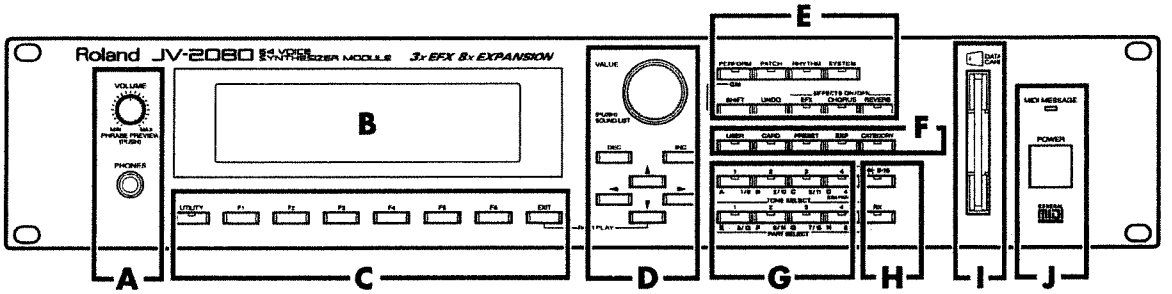
Be sure you insert the card into the DATA Card slot with the label side facing left.

For details on selecting sounds, refer to p. 17.

For details on saving sounds, refer to p. 58.

Panel Descriptions

Front Panel



A

○ VOLUME knob (PHRASE PREVIEW)

This adjusts the volume of the MIX OUTPUT jack and PHONES jack.

It does not affect the volume of the DIRECT 1 and 2 OUTPUT jacks. (→Q.Start p. 5)

You can press the VOLUME knob to sound the JV-2080 without using any external devices. (→p. 23)

○ PHONES jack

Headphones can be connected here.
(→Q.Start p. 3)

If you use your own headphones, make sure that they have an impedance of 8—15 ohms.

B

○ Display

A variety of information is displayed here.

C

○ [UTILITY]

This button allows you to perform operations such as saving, copying, initializing, and transferring data, operations related to a DATA card, and factory preset operations.

○ [F1]—[F6]

The functions of these button will depend on the page. The function name is shown in the display.

○ [EXIT]

Use this button to return to the basic display screen, or to cancel a list that is shown in the display.

By holding [EXIT] and pressing [▼], you can hear the demo songs. (→Q.Start p. 6)

D

○ VALUE dial (SOUND LIST)

Use this to modify the values of a setting.
If you press the dial as you rotate it, the value will change more rapidly.

In some cases, you can press the dial to view various lists in the display.

○ [INC][DEC]

Use these buttons to modify the value of a setting.
To rapidly increase the value, hold down [INC] and press [DEC].

To rapidly decrease the value, hold down [DEC] and press [INC].

○ [▲][▼][◄][►]

Use these buttons to move the cursor.

E

○ [PERFORM]

Select a Performance. (→p. 17)
If you hold down [SHIFT] and press [PERFORM], GM System will be selected. (→p. 124)

○ [PATCH]

Select a Patch. (→p. 17)

○ **[RHYTHM]**
Select a Rhythm Set. (→p. 17)

○ **[SYSTEM]**
Make settings for functions which affect the entire JV-2080.

○ **[SHIFT]**
Holding down this button will change the functions of other buttons.

This button is used by holding it down and then pressing another button.

○ **[UNDO]**
This restores a value to the unmodified setting. The value that was in effect when the cursor was moved to the item will be restored.

● **EFFECTS ON/OFF**

○ **[EFX]**
Turn EFX on/off. (→p. 25, 125)

○ **[CHORUS]**
Turn chorus on/off. (→p. 25, 125)

○ **[REVERB]**
Turn reverb on/off. (→p. 25, 125)

F

○ **[USER]**
Select a sound from the user group. (→p. 17)

○ **[CARD]**
Select a sound from a DATA card (optional). (→p. 17)

○ **[PRESET]**
Select a sound from the preset group. (→p. 17)

○ **[EXP]**
Select a sound from a wave expansion board (optional). (→p. 17)

○ **[CATEGORY]**
Use the Patch Search function to select a Patch. (→p. 19)

G

Since the function of these eight buttons will depend on the screen display, multiple button names are printed on the panel.

○ **TONE SWITCH [1]—[4]**
Switch each Tone on/off. (→p. 71, 80)

○ **TONE SELECT [1]—[4]**
Select the Tone for which you wish to make settings. (→p. 77)

○ **PART SELECT [1/9]—[8/16]**
Select the Part for which you wish to make settings. (→p. 64, 125)
Switch each Part on/off. (→p. 64, 125)
Specify the MIDI receive channel for Patch mode. (→p. 16)

○ **[A]—[H]**
Select sound groups. (→p. 17)

H

○ **[1-8/9-16]**
Specify whether the PART SELECT [1/9]—[8/16] buttons will select Parts 1—8 or Parts 9—16. (→p. 64, 125)

When the indicator of this button is lit, Parts 9—16 can be selected.

○ **[RX]**
Switch each Part on/off. (→p. 64, 125)

Specify the MIDI transmit channel for Patch mode. (→p. 16)

I

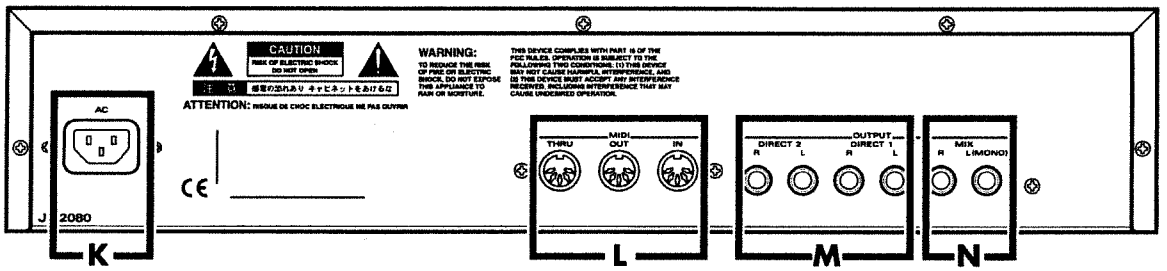
○ **DATA CARD**
An optional DATA card can be inserted here. (→p. 11)

J

○ **MIDI MESSAGE**
This will light when a MIDI message is received.

○ **POWER**
This turns the power on/off. (→Q.Start p. 5)

Rear Panel



K

○ AC inlet

Connect the included power cable here. (→Q.Start p. 3)

L

○ MIDI connectors (IN/OUT/THRU)

Use these connectors to connect the JV-2080 to external devices so that MIDI messages can be received and transmitted.

Use a MIDI cable to make connections (→Q.Start p. 3, 34)

IN : This connector receives MIDI messages from an external device

OUT : This connector transmits MIDI messages to an external device

THRU : MIDI messages received at MIDI IN are re-transmitted without change from this connector.

M

○ DIRECT 1, 2 OUTPUT jacks

These jacks output the sound unprocessed by effects or the EFX sound alone. (→p. 26, 27, 30—32)

N

○ MIX OUTPUT jacks

These jacks output audio signals in stereo (L/R) to an amp or mixer. For monaural output, make connections to the L jack. (→Q.Start p. 3, 34)

Chapter 2.

Topical Guide to Basic Operation

Setting the Receive Channel

The JV-2080 produces sound in response to MIDI messages it receives from other devices. When doing so, the MIDI channels of the transmitting device (MIDI keyboard etc.) and of the JV-2080 must match.

** For details on setting the MIDI transmit channels of the transmitting device, refer to the owner's manual for the transmitting device.*

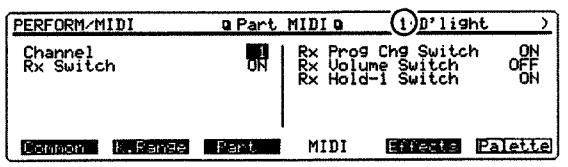
■ Parts of a Performance

In order to play a Performance, you will need to set the MIDI channel of each Part.
In order to play a Rhythm Set, set the MIDI channel of Performance part 10. (Column **Internal organization** →p. 18)

1. Select the Performance you wish to use. The PERFORM Play page will appear. (→p. 17)
2. Press [F4] (MIDI). The Part MIDI page will appear.
3. Use PART SELECT [1/9]—[8/16] to select the Part.

   To select Parts 9—16, make the [1-8/9-16] indicator light, and press PART SELECT [1/9]—[8/16].

   The indicator will blink, and the Part number will appear in the upper right of the display.



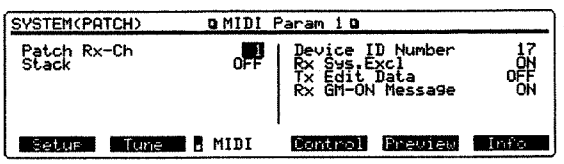
4. Use [▲][▼][◄][►] to move the cursor to the "Channel" setting.
5. Either by rotating the VALUE dial or by using [INC][DEC], set the MIDI receive channel.
6. Press [EXIT] to return to the PERFORM Play page.

■ Patch Mode

In order to play Patches, set the MIDI channel as follows.

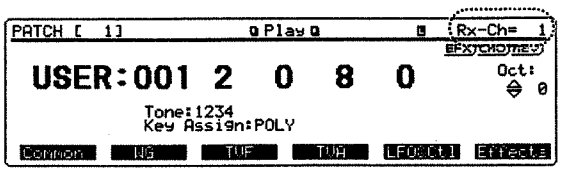
1. Press [PATCH] to make the indicator light.
2. Press [SYSTEM] to make the indicator light.
3. Press [F3] (MIDI). The MIDI Param 1 page will appear.

   If the MIDI Param 2 page appeared, press [F3] (MIDI) once again.



4. Use [▲][▼][◄][►] to move the cursor to the "Patch Rx-Ch" setting.
5. Either by rotating the VALUE dial or by pressing [INC][DEC], set the MIDI receive channel.
6. Press [EXIT] to return to the PATCH Play page.

   The MIDI receive channel will be shown in the upper right of the display.



Directly modifying the MIDI channel in the PATCH Play page

1. Press [RX] to make the indicator light.
2. Use PART SELECT [1/9]—[8/16] to select the MIDI channel.

   To select 9—16, make the [1-8/9-16] indicator light, and press PART SELECT [1/9]—[8/16].

   The MIDI receive channel in the upper right of the display will change.

   The MIDI Param 1 page Patch Rx-Ch setting will change in tandem with this.
3. Press [RX] to make the indicator go dark.

Selecting Performances, Patches, and Rhythm Sets

Performances, Patches and Rhythm Sets are organized into the following groups.

	PATCH	RHYTHM	PERFORM
USER	1—128	1, 2	1—32
PR-A	1—128	1, 2	1—32
PR-B	1—128	1, 2	1—32
PR-C	1—128	1, 2	—
PR-D (GM (General MIDI))	1—128	1, 2	—
PR-E	1—128	1, 2	—
XP-A	*	*	—
:	:	:	:
XP-H	*	*	—
CARD	*	*	*

—: None *: Differs by type

USER

This is the sound group inside the JV-2080 which can be rewritten. Sounds you yourself create can be stored in this group. The 128 Patch sounds are the PR-E Patches with modified octave settings.

PR-A—C, E (Preset A—C, E)

These are sound groups inside the JV-2080 which cannot be rewritten. Performances are found only in PR-A and B.

PR-D (GM (General MIDI))

This group contains sounds which are compatible with the GM system — a set of MIDI specifications which can be uniformly implemented to bridge differences of model or manufacturer. It contains no Performances.

XP-A—H (Expansion A—H)

These groups use sounds from the wave expansion boards (SR-JV80 series: optional) installed in slots EXP-A—H. The number of the Patches and Rhythm Sets will depend on the wave expansion board. These groups contain no Performances. (Cautions When Installing the Wave Expansion Board →p. 9)

CARD

This group uses sounds from a DATA card (optional) inserted into the card slot. You can use MEMORY CARDS (M-512E, M-256E) or SOUND LIBRARY CARDS (PN-JV80 series). (Using a DATA Card →p. 11)

1. To select a Performance press [PERFORM], to select a Patch press [PATCH] or to select a Rhythm Set press [RHYTHM] to make the respective indicator light.
2. Select the group.
   - USER : Press [USER] to make the indicator light.
   - PR-A—C, E : Press [PRESET], and then press [A]—[C][E] to make the indicator light.
   - PR-D (GM (General MIDI)): Press [PRESET], and then press [D] to make the indicator light.
   - XP-A—H : Press [EXP], and then press [A]—[H] to make the indicator light.
   - CARD : Press [CARD] to make the indicator light.
3. Select the number. Select by either rotating the VALUE dial or by pressing [INC][DEC].

**XP-A—H sounds can be selected only if the corresponding wave expansion board is installed. (→p. 9)*

**CARD sounds can be selected only if a DATA card is inserted into the CARD slot. (→p. 11)*

**When playing Patches or Rhythm Sets which use wave data from a wave expansion board, the sound will not be correct unless a wave expansion board containing the specified wave data has been installed in the JV-2080.*

To change a value in large steps

On the JV-2080, data values can be modified using either the VALUE dial or [INC][DEC]. When using these methods, the data values will change more quickly if the following procedures are used.

VALUE dial

Rotate the VALUE dial while pressing it. Alternatively, rotate the VALUE dial while pressing [SHIFT].

[INC] [DEC]

To increase a value quickly

Hold down [INC] and press [DEC]. Alternatively, hold down [SHIFT] and press [INC].

To decrease a value quickly

Hold down [DEC] and press [INC]. Alternatively, hold down [SHIFT] and press [DEC].

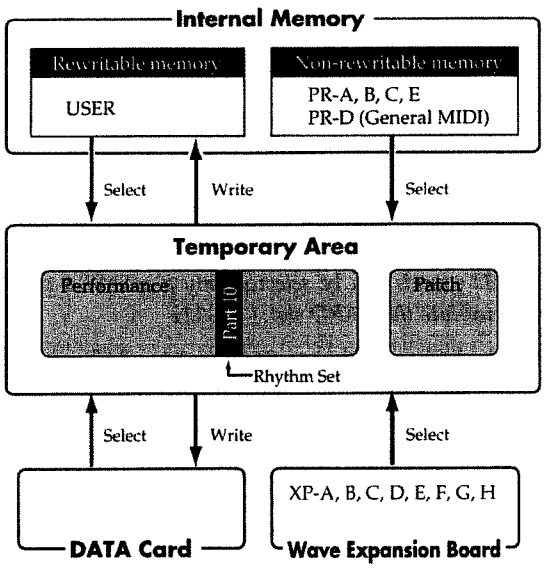
Internal organization

When you select a sound, the sound data is loaded into a temporary part of memory known as the Temporary Area. The JV-2080 will produce sound according to the data in this temporary area.

The data in the temporary area will

- change whenever you select a different sound.
- be lost when the power is turned off.

The Rhythm Set that is selected by pressing [RHYTHM] is also loaded into Performance Part 10 of the temporary area.



- To play a Rhythm Set, set the MIDI channel of Performance Part 10.
- When you select a different Performance, the Rhythm Set will also change.
- When you select a different Rhythm Set, the Performance settings will be modified, meaning that an "*" will appear in the PERFORM Play page.

When you edit a Performance, Patch or Rhythm Set, your modifications affect only the data that was loaded into the temporary area. Since the data in the temporary area is temporary, you will need to use the Write operation if you wish to keep the modified data. (→p. 56)

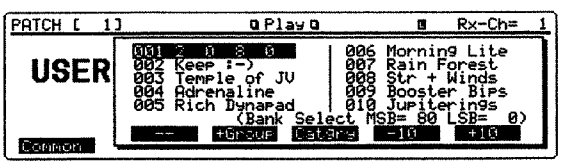
■ Selecting From the Sound List

Performances, Patches and Rhythm Sets can be selected from a list.
By displaying a list, you can find the desired sound more rapidly.

1. To select a Performance, press [PERFORM]
   to select a Patch, press [PATCH]
   to select a Rhythm Set, press [RHYTHM]
   to make the respective indicator light.
2. Press the VALUE dial (SOUND LIST) to display the list.

   Pages in which a list can be viewed will show an "L" symbol in the top line to indicate this. Including the currently selected number, items will be displayed in numerical order in sets of 10.

* Each group contains two internal Rhythm Sets.



3. To switch groups, press [F2] (-Group) or [F3] (+Group).

   To move through the display in steps of 10, press [F5] (-10) or [F6] (+10).

   You can also switch groups by pressing [USER][CARD][PRESET][EXP][A]—[H].
4. Either by rotating the VALUE dial, by using [INC][DEC] or by using [▲][▼][◄][►], move the cursor to select the desired item.
5. Press the VALUE dial (SOUND LIST) or [EXIT] to return to the normal display.

** For a Patch or Rhythm Set, press [F4](Catgry) to switch the number display to the category display. The number will be displayed in the upper left. Press [F4](Catgry) once again, and the previous display will reappear. By pressing [CATEGORY] from the category display, you can jump to the Patch Search function display for the category of the selected Patch. Press [CATEGORY] once again to return to the previous display. (Patch Search function →Following item)*

■ Selecting Patches by Category

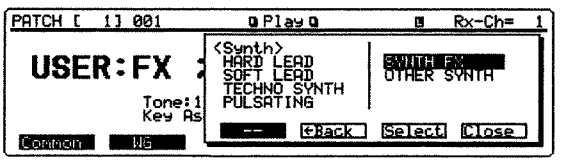
The JV-2080 provides a "Patch Search function" which allows you to specify a type (category) of Patch so that you can quickly find the desired Patch. There are a total of 38 categories.

1. Press [PATCH] to make the indicator light.
2. Press [CATEGORY] to make the indicator light.

   The category select page will appear. The 38 categories are classified into 10 groups.
3. By rotating the VALUE dial, move the cursor to the desired selection.

4. Press the VALUE dial.

   The categories will be displayed.
5. Select the desired category. By rotating the VALUE dial, move the cursor to the desired selection.



6. Press the VALUE dial.

   The Patches of the selected category will be displayed in sets of 10.

** There are no internal Patches belonging to the categories DRUMS or BEAT&GROOVE.*

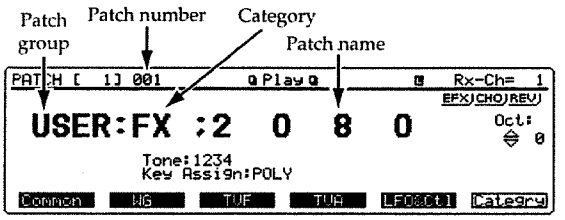
7. To switch Patch groups, press [F2] (-Group) or [F3] (+Group).

   To switch the displayed Patches in sets of 10, press [F5] (-10) or [F6] (+10).

** You can also switch Patch groups by pressing [USER][CARD][PRESET][EXP][A]—[H]. However, if that group contains no Patches that belong to the selected category, the Patch group will not change.*

8. By rotating the VALUE dial, move the cursor to select the desired Patch.
9. Press the VALUE dial (SOUND LIST) or [EXIT] to return to the PATCH Play page.

   The group, category, and name will be shown in order, and the number will appear in the upper left.



   If you decide to select Patches from a different category, press [F5] (Category) and re-select the category.
10. Press [CATEGORY] to make the indicator go dark.

    The normal PATCH Play page will reappear.

** When the [CATEGORY] indicator is lit, [F6] will be the Categry button, and only while [SHIFT] is being pressed will [F6] function as the usual Effects button.*

** By pressing [F4](← Back) you can return to the previous display page.*

** To cancel the selection process and return to the PATCH Play page, press [F6] (Close).*

** When a Performance is selected, the Patch Search function can be used only when the Play page for a Patch assigned to a Part or Part Param page is displayed. (Creating Patches for Each Part While still in Performance Mode →p.69)*

** While GM System is selected, the Patch Search function cannot be used.*

** In step 4 and 6 you may also press [F4](Select).*

** In step 3, 5 and 8 you may press either [INC][DEC] or [▲][▼][◄][►].*

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

** Sound Library Card (PN-JV80 series) Patches are all classified as "NO ASSIGN."*

■ Selecting via MIDI Messages from an External MIDI Device

● Selecting Patches and Rhythm Sets

To select a Patch (including the individual Patches within a Performance or GM System), transmit Bank Select messages (controller numbers 0 and 32) and Program Change messages to the JV-2080.

1. Match the transmit channel of the external device with the MIDI receive channel of the JV-2080. (→p. 16)

** The GM System fixes the receive channels as follows: Part 1 = Ch.1, Part 2 = Ch.2, Part 3 = Ch.3 ... Part 16 = Ch.16.*

** In a Performance or GM System, turn on the Part whose Patch you wish to switch.*

2. Transmit a Bank Select MSB message (controller number 0) to the JV-2080.
3. Transmit a Bank Select LSB message (controller number 32) to the JV-2080.

** Since the GM System assigns only GM Patches, it is not necessary to transmit Bank Select messages (controller numbers 0 and 32).*

4. Transmit a Program Change to the JV-2080.

** When the JV-2080 receives only a Program Change message without receiving Bank Select messages, Patches or Rhythm Sets within the same group will be selected. This means that even if you are using an external device which is unable to transmit Bank Select messages, you can place the Patches that you wish to use in the USER bank (Saving to Internal Memory →p. 56, Transmitting to Internal Memory →p. 131), and then first select a USER Patch. Then you can use Program Change messages alone to select the Patches that you wish to use.*

** If the MIDI channel of a Part within a Performance has the same setting as the Performance Ctrl-Ch parameter (MIDI Param 1 page [PERFORM]→[SYSTEM]→[F3] (MIDI)), the Performance Ctrl-Ch setting will take priority, meaning that the Performance will change when a Program Change is received. (→p. 21)*

** In order for Bank Select messages (controller numbers 0 and 32) to be received, both Rx Bank Select and Rx Program Change (MIDI Param 2 page [SYSTEM]→[F3] (MIDI)) must be turned ON. With the factory settings, these are both ON. (→p. 137)*

** In order for Program Change messages to be received, Rx Program Change (MIDI Param 2 page [SYSTEM]→[F3] (MIDI)) must be ON. With the factory settings, this is ON. (→p. 137)*

**If a program change is received when [CATEGORY] is on, [CATEGORY] will turn off.*

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

Patches

Patch group	Patch number	Bank Select number MSB	LSB	Program number
USER	001—128	80	00	001—128
PR-A	001—128	81	00	001—128
PR-B	001—128	81	01	001—128
PR-C	001—128	81	02	001—128
GM	001—128	81	03	001—128
PR-E	001—128	81	04	001—128
CARD	001—128	82	00	001—128
XP-A	001—128	84	00	001—128
XP-A	129—255	84	01	001—127
XP-B	001—128	84	02	001—128
XP-B	129—255	84	03	001—127
XP-C	001—128	84	04	001—128
XP-C	129—255	84	05	001—127
XP-D	001—128	84	06	001—128
XP-D	129—255	84	07	001—127
XP-E	001—128	84	08	001—128
XP-E	129—255	84	09	001—127
XP-F	001—128	84	10	001—128
XP-F	129—255	84	11	001—127
XP-G	001—128	84	12	001—128
XP-G	129—255	84	13	001—127
XP-H	001—128	84	14	001—128
XP-H	129—255	84	15	001—127

Rhythm Sets

Rhythm Set group	Rhythm Set number	Bank Select number MSB	LSB	Program number
USER	001, 002	80	00	001, 002
PR-A	001, 002	81	00	001, 002
PR-B	001, 002	81	01	001, 002
PR-C	001, 002	81	02	001, 002
GM	001, 002	81	03	001, 002
PR-E	001, 002	81	04	001, 002
CARD	001, 002	82	00	001, 002
XP-A	001—128	84	00	001—128
XP-A	129—255	84	01	001—127
XP-B	001—128	84	02	001—128
XP-B	129—255	84	03	001—127
XP-C	001—128	84	04	001—128
XP-C	129—255	84	05	001—127
XP-D	001—128	84	06	001—128
XP-D	129—255	84	07	001—127
XP-E	001—128	84	08	001—128
XP-E	129—255	84	09	001—127
XP-F	001—128	84	10	001—128
XP-F	129—255	84	11	001—127
XP-G	001—128	84	12	001—128
XP-G	129—255	84	13	001—127
XP-H	001—128	84	14	001—128
XP-H	129—255	84	15	001—127

● Selecting a Performance

To select a Performance, match the transmit channel of the external device with the Performance Control channel (Performance Ctrl-Ch) of the JV-2080, and transmit Bank Select messages (controller numbers 0 and 32) and Program Change messages to the JV-2080.

1. Select Performance mode. (→p. 17)
2. Set the Performance Control channel (Performance Ctrl-Ch).

   With the factory settings, this is set to ch.16.

   This setting can be changed in the MIDI Param 1 page ([SYSTEM]→[F3] (MIDI)). (→p. 136)
3. Set the transmit channel of the external device to match the Performance Ctrl-Ch.

**For the procedure, refer to the owner's manual for your external device.*

4. Transmit a Bank Select MSB message (controller number 0) to the JV-2080.
5. Transmit a Bank Select LSB message (controller number 32) to the JV-2080.
6. Transmit a Program Change message to the JV-2080.

**As with Patches or Rhythm Sets, when the JV-2080 receives only a Program Change message without receiving Bank Select messages, Performances within the same group will be selected. This means that even if you are using an external device which is unable to transmit Bank Select messages, you can place the Performances that you wish to use in the USER bank (Saving to Internal Memory →p. 56, Transmitting to Internal Memory →p. 131), and then first select a USER Performance. Then you can use Program Change messages alone to select the Performances that you wish to use.*

**In order for Bank Select messages (controller numbers 0 and 32) to be received, both Rx Bank Select and Rx Program Change (MIDI Param 2 page [SYSTEM]→[F3] (MIDI)) must be ON. With the factory settings, these are both ON. (→p. 137)*

**In order for Program Change messages to be received, Rx Program Change (MIDI Param 2 page [SYSTEM]→[F3] (MIDI)) must be ON. With the factory settings, this is ON. (→p. 137)*

The Performances in each group correspond to the following Bank Select numbers and Program numbers.

Performances

Performance group	Performance number	Bank Select number MSB	Bank Select number LSB	Program number
USER	1—32	80	00	1—32
PR-A	1—32	81	00	1—32
PR-B	1—32	81	01	1—32
CARD	1—32	82	00	1—32

● Switching between Performance, Patch and GM System modes

You can switch between Performance, Patch, and GM System modes by transmitting the following system exclusive message to the JV-2080. (Hexadecimal notation)

To switch to Performance

F0 41 10 6A 12 00 00 00 00 00 00 F7

To switch to Patch

F0 41 10 6A 12 00 00 00 00 01 7F F7

To switch to GM System

F0 41 10 6A 12 00 00 00 00 02 7E 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 JV-2080. The transmitted messages will use a value of one less than this (16).) If you have modified the device ID number (→p. 136), modify the third byte to the appropriate value when transmitting the above exclusive message.*

** It is not possible to use MIDI messages to switch from Performance, Patch or GM System modes to Rhythm mode.*

** In order for system exclusive messages to be received, Rx Sys.Excl (MIDI Param 2 page [SYSTEM]→[F3] (MIDI)) must be ON. With the factory settings this is turned ON. (→p. 136)*

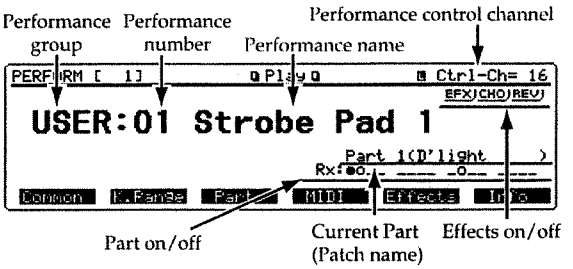
■ About the Main Displays (PERFORM Play, PATCH Play, RHYTHM Play)

A variety of information is shown in the display. Of these different types of display, the main display pages which appear when you select Performance, Patch or Rhythm Set are as follows.

The name of each display page is shown in the top line.

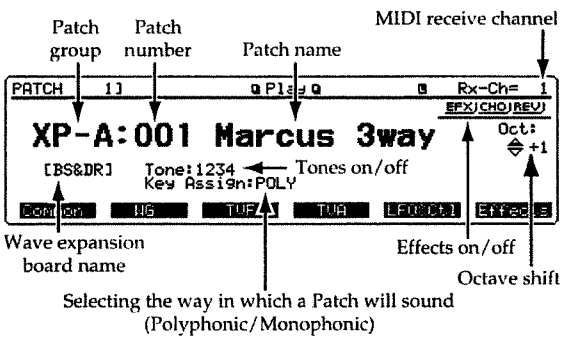
● PERFORM Play page

This will appear when you press [PERFORM].



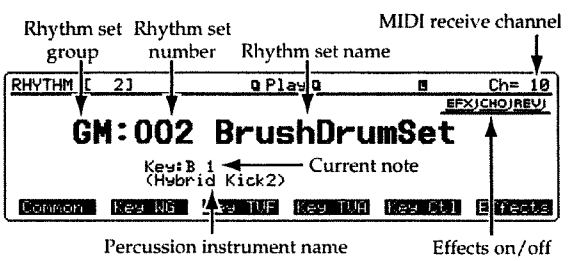
● PATCH Play page

This will appear when you press [PATCH].



● RHYTHM Play page

This will appear when you press [RHYTHM].



Auditioning Sounds with the JV-2080 Alone (PHRASE PREVIEW)

Even when a MIDI keyboard or sequencer is not connected to the JV-2080, you can audition Patches using a phrase appropriate for the type (category) of the selected Patch.

1. Select a Patch. (→p. 17)
2. Press and hold the volume knob (PHRASE PREVIEW).

   A phrase will play according to the Category settings (Common General page [PATCH]→[F1] (Common)→[F1] (General)).

** When a Performance is selected, the Patch of the Part for which settings are being made (indicated in the lower right of the PERFORM Play page) will sound. When a Rhythm Set is selected, a drum phrase will sound.*

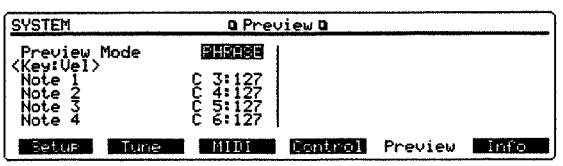
** Patches of the USER group or from an optional wave expansion board (SR-JV80 series) may not sound at the appropriate pitch range. In this case, use [▲] or [▼] (the Octave Shift function) to set an appropriate pitch range.*

** If the range of the phrase is wider than the range of the Tones within the Patch (→p. 76), or wider than the range of the Parts within the Performance (→p. 66), the portion of the phrase that exceeds the range will not sound.*

■ Selecting the Preview Method (Phrase / Chord / Single Notes)

You can select one of three ways in which the preview will sound: "play a phrase," "play a chord," or "play a single note."

1. Press [SYSTEM] to make the indicator light.
2. Press [F5] (Preview). The Preview page will appear.



3. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
4. Either by rotating the VALUE dial or by pressing [INC][DEC], set the value.
5. Press [EXIT] several times to return to the applicable Play page.

Preview Mode (Preview Sound Mode)

PHRASE : The phrase prepared for the Patch type (category) will sound.
CHORD : The notes specified by Note 1—4 will sound simultaneously.
SINGLE : The notes specified by Note 1—4 will sound successively one by one.

<Key:Vel>

Note 1—4 (Preview <Key:Velocity> Set 1—4)

Specify the four notes (C-1—G9) and volume (0—127) which will sound when SINGLE or CHORD is selected for Preview Mode.

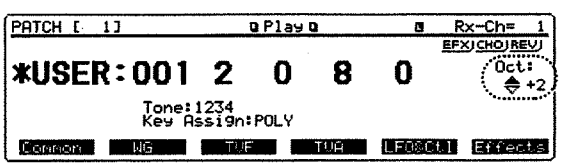
If PHRASE is selected for Preview Mode, these settings will have no effect.

Sounding the Patch an Octave Higher (Lower) ([▲] [▼])

The overall pitch of the Patch can be easily modified.

1. Select the Patch you wish to use. The PATCH Play page will appear. (→p. 17)
2. Each time you press [▲] the pitch will rise one octave, and each time you press [▼] the pitch will fall one octave.

   An adjustment of up to +/-3 octaves can be made.



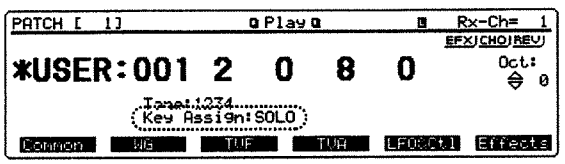
** This setting is in common with the Octave Shift setting (Common General page [PATCH]→[F1] (Common)→[F1] (General)). (→p. 72)*

Selecting the way in which a Patch will sound (Polyphonic/Monophonic)

You can select whether a Patch will be able to play multiple notes simultaneously (Polyphonic), or whether only the last-played note will sound (Monophonic).

1. Select the Patch you wish to use. The PATCH Play page will appear. (→p. 17)
2. Hold down [SHIFT] and press [RX].

   Each time you press, the Key Assign: display will alternate between POLY (polyphonic) and SOLO (monophonic).



**This setting is linked with the Key Assign setting (Common Control page [PATCH]→[F1] (Common) →[F2] (Control)). (→p. 73)*

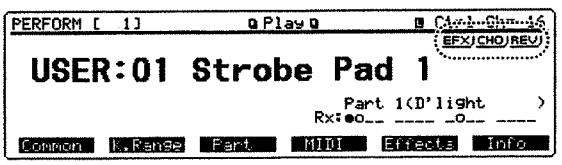
Turning Effects On/Off ([EFX], [CHORUS], [REVERB])

The built-in effect units (EFX, chorus, reverb) can be turned on/off for the entire JV-2080.

1. Press [EFX][CHORUS][REVERB] to turn the effect unit on (indicator light) or off (indicator dark).

   When each of these are on, "EFX," "CHO" and "REV" will respectively be displayed in the upper right of the various Play pages.

   When off, they will be displayed as a gray letter.



   Turn these settings off when you wish to listen to the unprocessed sound as you create a sound, or when you wish to use external effect devices instead of the built-in effects.

Specifying the Effect Structure

The result of the effects will vary greatly depending on how the sound from the effect is output, and on the level at which it is output.

The following pages explain the setting procedure for the various selections.

Patch (→p. 25)
Performance (→p. 28)
Rhythm Set (→p. 32)
GM System (→p. 32)

■ Patch

Patches consist of 1—4 Tones.
(For details refer to →p. 70)

A Patch can use one EFX.

The most important element which determines the effect unit structure is the "Output Assign" setting. Make the "Output Assign" setting first.

Select the Output Assign setting that is appropriate for your needs, as follows.

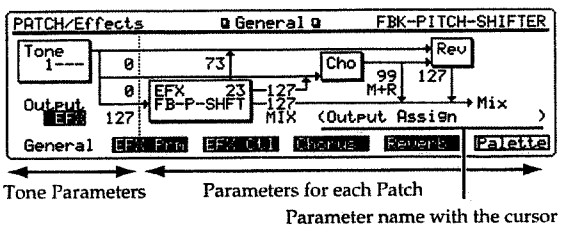
EFX : Select this setting when you wish to use reverb, chorus, and EFX.
MIX : Select this setting when you wish to use reverb and chorus, but not EFX.
DIR1, 2 : Select this setting when you wish to use an external effects device, and not the JV-2080 internal effects units.

Explanations of the setting items are provided for each Output Assign. ("EFX" →p.26, "MIX"→p.27, "DIR1, 2"→p.27)
There are effect setting items which can be made for each Tone, and those which can be made for the entire Patch.

** If the Structure Type 1&2 and 3&4 settings (Structure page [PATCH]→[F1] (Common)→[F3] (Struct)) are set to a value of Type 2—10, the output of Tones 1 and 2 will be combined into Tone 2, and the output of Tones 3 and 4 will be combined into Tone 4. This means that the setting of Tone 1 will follow the setting of Tone 2, and the setting of Tone 3 will follow the setting of Tone 4. (→p. 74)*

1. Select the Patch you wish to use, and access the PATCH Play page. (→p. 17)
2. Press [EFX][CHORUS][REVERB] to make the indicators light.
3. Press [F6] (Effects).
4. Press [F1] (General). The General page will appear.
5. Use TONE SELECT [1]—[4] to select the Tone for which you wish to make settings.

   The indicator will blink, and the Tone number will appear in the upper left of the display.



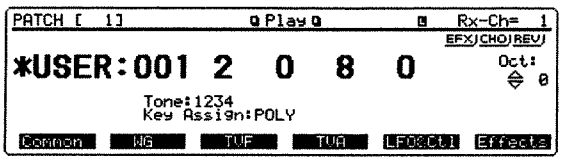
* This procedure is not necessary when you are setting items which apply to the entire Patch.

6. Use [▲][▼][◄][►] to move the cursor to the item which you wish to set.
7. Either by rotating the VALUE dial or by pressing [INC][DEC], set the value.

If you make a mistake in your settings and press [UNDO], the value will return to the setting that was in effect when the cursor was moved to that item.

8. Press [EXIT] to return to the PATCH Play page.

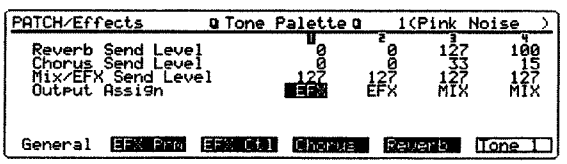
A "*" symbol will appear at the left of the patch group, indicating that the settings have been modified.



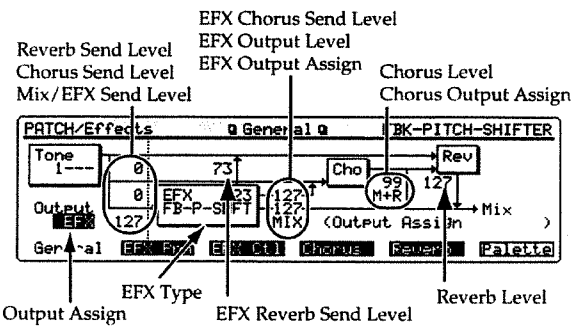
If you turn off the power or select another Patch while the "" symbol is displayed, the modified Patch settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

When [EFX], [CHORUS], and [REVERB] are respectively turned off, effect units which are turned off will be indicated by a dashed outline in the General display page.

After step 4, you can press [F6] (Palette) to view the settings for all four Tones together in a single display. This allows you to compare the settings of each Tone as you make settings. When you press [F6] once again, the General page will reappear. [F6] will indicate the Tone number to which you will return.



● When Output Assign is "EFX" (Patch)



◆ Setting items for each Tone

Output Assign

Specify the output destination of the original sound.

EFX : The sound will be output to reverb, chorus, and EFX. Select this setting when you wish to use reverb, chorus, and EFX.

Reverb Send Level

Specify the depth of reverb.

Chorus Send Level

Specify the depth of chorus.

Mix/EFX Send Level

Specify the depth and volume of EFX.

◆ Setting items for the entire Patch

EFX Type

Select one of the 40 types of EFX.

You can also press the VALUE dial (SOUND LIST) and choose from the EFX type list.

The parameter settings for each EFX are made in the EFX Param page ([PATCH]→[F6] (Effects)→[F2] (EFX Prm)). (→p. 33)

EFX Reverb Send Level

Specify the depth of reverb that is to be applied to the sound routed through EFX.

EFX Chorus Send Level

Specify the depth of chorus that is to be applied to the sound routed through EFX.

If EFX Output Assign is set either to "DIR1" or "DIR2," it will not be possible to set EFX Reverb Send Level or EFX Chorus Send Level.

EFX Output Level

Specify the volume of the sound routed through EFX.

EFX Output Assign

Specify how the sound routed through EFX will be output.

MIX : Output from the "MIX" OUTPUT jack.
DIR1 : Output from the "DIRECT 1" OUTPUT jack.
DIR2 : Output from the "DIRECT 2" OUTPUT jack.

Chorus Level

Specify the volume of the sound routed through chorus.

This setting is linked with the Level parameter (Chorus page [PATCH]→[F6] (Effects)→[F4] (Chorus)). (→p. 54)

Chorus Output Assign

Specify how the sound routed through chorus will be output.

MIX : Output from the "MIX" OUTPUT jacks.
REV : Output to the reverb.
M+R : Output from the "MIX" OUTPUT jacks and to reverb.

**This setting is linked with the Output parameter (Chorus page [PATCH]→[F6] (Effects)→[F4] (Chorus)). (→p. 54)*

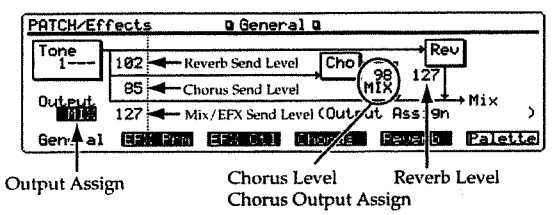
Reverb Level

Specify the volume of the sound routed through reverb.

**This setting is linked with the Level parameter (Reverb page [PATCH]→[F6] (Effects)→[F5] (Reverb)). (→p. 55)*

The output destination of the sound which has passed through reverb is fixed at the "MIX" OUTPUT jack.

● When Output Assign is "MIX" (Patch)



◆ Setting items for each Tone

Output Assign

Specify the output destination of the original sound.

MIX : The sound will be output to reverb, chorus, and the "MIX" OUTPUT jacks. Select this setting when you wish to use reverb and chorus, but not EFX.

Reverb Send Level

Adjust the depth of reverb.

Chorus Send Level

Adjust the depth of chorus.

Mix/EFX Send Level

Specify the volume.

◆ Setting items for the entire Patch

Chorus Level

Specify the volume of the sound routed through chorus.

**This setting is linked with the Level parameter (Chorus page [PATCH]→[F6] (Effects)→[F4] (Chorus)). (→p. 54)*

Chorus Output Assign

Specify the way in which the sound routed through chorus will be output.

MIX : Output from the "MIX" OUTPUT jacks.
REV : Output to reverb.
M+R : Output from the "MIX" OUTPUT jacks and to reverb.

**This setting is linked with the Output parameter (Chorus page [PATCH]→[F6] (Effects)→[F4] (Chorus)). (→p. 54)*

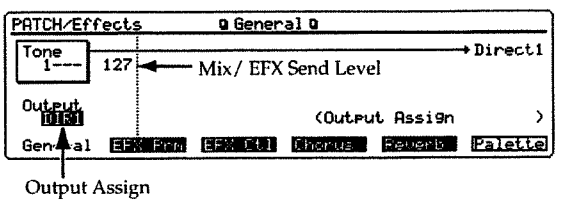
Reverb Level

Specify the volume of the sound routed through reverb.

**This setting is linked with the Level (Reverb page [PATCH]→[F6] (Effects)→[F5] (Reverb)). (→p. 55)*

The output destination of the sound which has passed through reverb is fixed at the "MIX" OUTPUT jack.

● When Output Assign is "DIR1, 2" (Patch)



◆ Setting items for each Tone

Output Assign

Specify the output destination of the original sound. Use DIR1, 2 when you wish to use external effect devices without using the internal effects of the JV-2080.

DIR1 : Output from the "DIRECT 1" OUTPUT jacks.
DIR2 : Output from the "DIRECT 2" OUTPUT jacks.

Mix/EFX Send Level

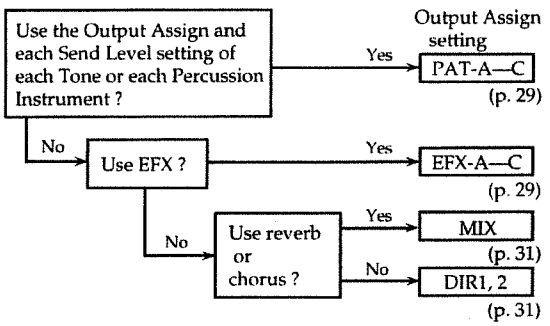
Specify the volume.

■ Performance

A Performance can use three different EFX.

The most important element which determines the effect unit structure is the "Output Assign" setting. Make the "Output Assign" setting first.

Select the Output Assign setting that is appropriate for your needs, as follows.



** If you are using EFX, first set "Output Assign" and then set "EFX-A—C Source."*

Explanations of the setting items are provided for each Output Assign.

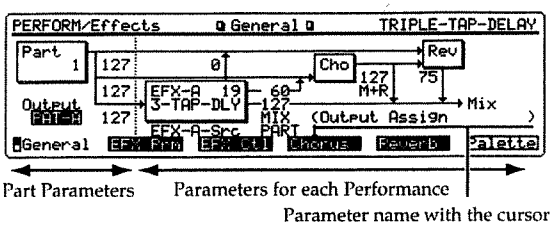
Effect settings consist of settings which are made for each Part, and setting which are made for the entire Performance.

1. Select the Performance you wish to use, and access the PERFORM Play page. (→p. 17)
2. Press [EFX][CHORUS][REVERB] to make the indicators light.
3. Press [F5] (Effects).
4. Press [F1] (General). The General page will appear.

   If the EFX Information page (Column **EFX Information page**→p. 30) appears, press [F1] (General) once again.
5. Press PART SELECT [1/9]—[8/16] to select the Part for which you wish to make settings.

   To select a Part 9—16, make the [1-8/9-16] indicator light, and press PART SELECT [1/9]—[8/16].

   The indicator will blink, and the Part number will appear in the upper left of the display.



** When setting an item which applies to the entire Performance, this step is not required.*

6. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
7. Either by rotating the VALUE dial or by pressing [INC][DEC], specify the value.

** If you make a mistake when specifying the value, pressing [UNDO] will return the parameter to the value it had when the cursor was moved to this item.*

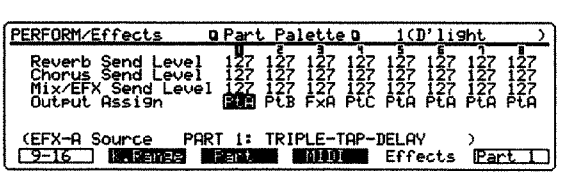
8. Press [EXIT] to return to the PERFORM Play page.

   An "*" symbol will appear at the left of the Performance group, indicating that the settings have been modified.

** If while the "*" symbol is displayed, you turn off the power or switch to another Performance, the modified Performance settings will be lost. If you wish to keep them, perform the Write operation. (→p. 56)*

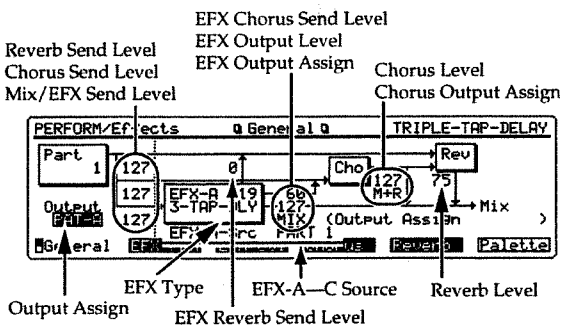
** When [EFX], [CHORUS], and [REVERB] are respectively turned off, effect units which are turned off will be indicated by a dashed outline in the General display page.*

** When the General page is accessed, you can press [F6] (Palette) to view the values for eight Parts (Parts 1—8 or Parts 9—16) in a single screen. Each time you press [F1], the Part Palette display will switch between Parts 1—8 and Parts 9—16. When you press [F6] once again, the General page will reappear. [F6] will indicate the Part number to which you will return.*



● When Output Assign is "EFX-A—C" or "PAT-A—C" (Performance)

When using EFX, first set "Output Assign" and then set "EFX-A—C Source."



◆ Setting items for each Part

Output Assign

Specify the output destination of the original sound.

PAT-A—C : Output will be according to the Output Assign setting of the Patch (for each Tone) which is assigned to that Part. For example in the case of a Patch where Tone 1 is assigned to EFX and Tones 2—4 are assigned to MIX, EFX will be applied only to Tone 1, and will not be applied to Tones 2—4. This setting will be useful when a Patch which uses EFX is assigned.

EFX-A—C : The sound will be output to reverb, chorus, and EFX. The Output Assign settings of the Patch (for each Tone) will be ignored.

For "PAT-A" and "EFX-A" → EFX-A Source
For "PAT-B" and "EFX-B" → EFX-B Source
For "PAT-C" and "EFX-C" → EFX-C Source

will be automatically selected. By setting "EFX-A—C Source" each to a different setting, you will be able to use 3 types of EFX. Of course, the Patches which are assigned to the Parts selected by "EFX-A—C Source" must each use different EFX selections.

Reverb Send Level

Specify the depth of reverb.

Chorus Send Level

Specify the depth of chorus.

Mix/EFX Send Level

Specify the depth and volume of EFX.

** When Output Assign is "PAT-A—C," the Reverb Send Level, Chorus Send Level, and Mix/EFX Send Level settings both of the Patch (for each Tone) and of the Part will be valid. If you want the various level settings of the Patch (of each Part) to be reflected as they are, set the various Part levels to 127. (→Q.Start p. 39) (Column* ***The General page for the Patches assigned to each Part*** *→P. 30) With a setting of "EFX-A—C," the various level settings of the Patch (for each Tone) will be ignored.*

◆ Setting items for the entire Performance

EFX-A—C Source

Select which EFX settings (EFX Type, EFX Reverb Send Level, EFX Chorus Send Level, EFX Output Level, and EFX Output Assign) will be used. This means that when the EFX-A—C Source setting is switched, the 5 EFX settings will change simultaneously.

Part 1—9, 11—16:

The EFX settings of the Patch assigned to each Part will be used.

PERFORM:

The EFX settings of the selected Performance will be used. Only one type of EFX settings can be specified for each Performance.

EFX Type

Select one of 40 types of EFX.

** You can also press the VALUE dial (SOUND LIST) and select from the EFX Type list.*

** Settings for each EFX are made in the EFX Param page ([PERFORM]→[F5] (Effects)→[F2] (EFX Prm)). (→p. 33)*

EFX Reverb Send Level

Specify the depth of the reverb that is to be applied to the sound routed through EFX.

EFX Chorus Send Level

Specify the depth of the chorus that is to be applied to the sound routed through EFX.

**If EFX Output Assign is set to "DIR1" or "DIR2," it will not be possible to set EFX Reverb Send Level and EFX Chorus Send Level.*

EFX Output Level

Specify the volume of the sound routed through EFX.

EFX Output Assign

Specify how the sound routed through EFX will be output.

MIX : Output from the "MIX" OUTPUT jacks.
DIR1 : Output from the "DIRECT 1" OUTPUT jacks.
DIR2 : Output from the "DIRECT 2" OUTPUT jacks.

If you modify the EFX settings (EFX Type, EFX Reverb Send Level, EFX Chorus Send Level, EFX Output Level, EFX Output Assign) and save, please refer to the column* ***Note when modifying EFX settings and saving* *(→p. 31).*

**When the Performance EFX-A—C Source is set to a value of Part 1—9 or 11—16, a * symbol will appear when the cursor is placed at an EFX setting. This indicates that this is a Patch setting item.*

Chorus Level

Specify the volume of the sound routed through chorus.

**This setting is linked with the Level setting (Chorus page [PERFORM]→[F5] (Effects)→[F4] (Chorus)). (→p. 54)*

Chorus Output Assign

Specify how the sound routed through chorus will be output.

MIX : Output from the "MIX" OUTPUT jacks.
REV : Output to the reverb.
M+R : Output from the "MIX" OUTPUT jacks and to reverb.

**This setting is linked with the Output setting (Chorus page [PERFORM]→[F5] (Effects)→[F4] (Chorus)). (→p. 54)*

Reverb Level

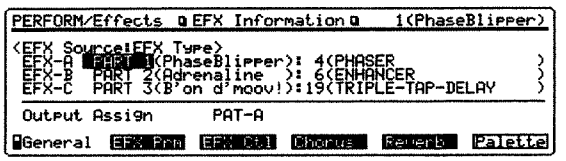
Specify the volume of the sound routed through reverb.

**This setting is linked with the Level setting (Reverb page [PERFORM]→[F5] (Effects)→[F5] (Reverb)). (→p. 55)*

The output destination of the sound which has passed through reverb is fixed at the "MIX" OUTPUT jack.

EFX Information page

The EFX Information page ([PERFORM]→[F5] (Effects)→[F1] (General)) simultaneously displays the settings of the three EFX (EFX-A—C Source and EFX Type) and Output Assign (current part), and also allows you to modify the settings. These settings are linked with the settings of the General page.



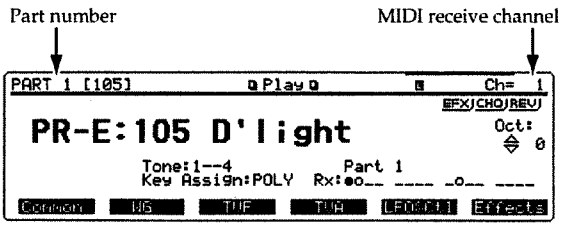
Note when setting Output Assign to "PAT-A—C"

When Output Assign is "PAT-A—C," the display will always indicate the EFX Type. However if the Patch (for each Tone) which is assigned to that Part does not use EFX (i.e., if Output Assign has a setting other than EFX), be aware that EFX will not apply.
We suggest that you use "PAT-A—C" when a Patch which uses EFX is assigned. (→p. 29)

The General page for the Patches assigned to each Part

1. Hold down [PERFORM] and press [PATCH].

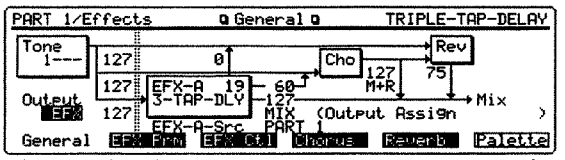
The Play page will appear for the Patch which is assigned to the Part.



2. Use [◄][►] to select a Part, and then press [F6] (Effects)→[F1] (General).

The General page for the Patch assigned to the selected Part will appear.

The Output Assign, Reverb Send Level, Chorus Send Level and Mix/EFX Send Level settings for each Tone will be displayed, and the other items indicate the Performance settings.



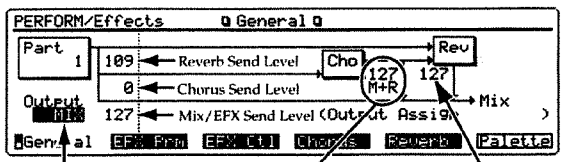
Tone parameters Parameters for each Performance

If you wish to modify the settings for each Tone and keep the changes, you will need to save the Patch which is assigned to that Part and then save the Performance. (→p. 57)

Note when modifying EFX settings and saving

When EFX-A—C Source has a setting in the range of Part 1—9 or 11—16, modifying the EFX setting will have the result of modifying the settings of the Patch which is assigned to the Part specified by EFX-A—C Source. This means that you will need to save the Performance after saving the Patch. (Column **When you have modified the settings of the Patch assigned to a Part of the Performance** →p. 57)

● When Output Assign is set to "MIX" (Performance)



◆ Setting items for each Part

Output Assign

Specify the output destination of the original sound.

MIX : The sound will be output to reverb, chorus, and the "MIX" OUTPUT jacks. Use this setting when you wish to use reverb and chorus, but not EFX.

Reverb Send Level

Specify the depth of reverb.

Chorus Send Level

Specify the depth of chorus.

Mix/EFX Send Level

Specify the volume.

◆ Setting items for the entire Performance

Chorus Level

Specify the volume of the sound routed through chorus.

**This setting is linked with the Level setting (Chorus page [PERFORM]→[F5] (Effects)→[F4] (Chorus)). (→p. 54)*

Chorus Output Assign

Specify how the sound routed through chorus will be output.

MIX : Output from the "MIX" OUTPUT jacks.
REV : Output to reverb.
M+R : Output from the "MIX" OUTPUT jacks and to reverb.

**This setting is linked with the Output setting (Chorus page [PERFORM]→[F5] (Effects)→[F4] (Chorus)). (→p. 54)*

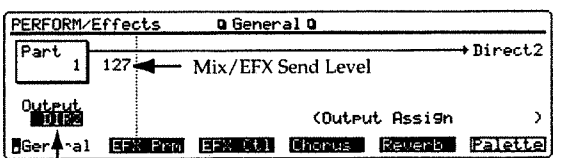
Reverb Level

Specify the volume of the sound routed through reverb.

**This setting is linked with the Level setting (Reverb page [PERFORM]→[F6] (Effects)→[F5] (Reverb)). (→p. 55)*

The output destination of the sound which has passed through reverb is fixed at the "MIX" OUTPUT jack.

● When Output Assign is set to "DIR1, 2" (Performance)



◆ Setting items for each Part

Output Assign

Specify the output destination of the original sound. DIR1 and 2 can be selected when you wish to use external effect device without using the internal effects of the JV-2080.

DIR1 : Output from the "DIRECT 1" OUTPUT jacks.
DIR2 : Output from the "DIRECT 2" OUTPUT jacks.

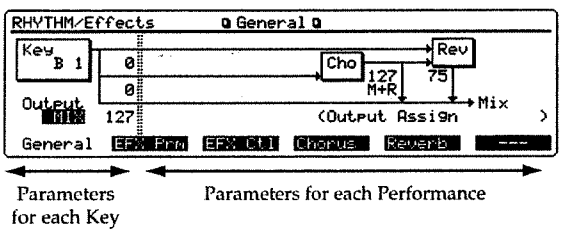
Mix/EFX Send Level

Specify the volume.

■ Rhythm Set

The Rhythm Set selected by pressing [RHYTHM] is assigned to Part 10 of the Performance that is loaded into the temporary area. (Column **Internal organization**→p. 18) This means that the effect processing structure of the Rhythm Set will refer to the Performance settings within the temporary area.

However, the following items can be set for each key (percussion instrument).



Output Assign

Specify the output destination of the original sound.

EFX : Output to reverb, chorus, and EFX.
MIX : Output to reverb, chorus, and the "MIX" OUTPUT jacks.
DIR1 : Output from the "DIRECT 1" OUTPUT jacks.
DIR2 : Output from the "DIRECT 2" OUTPUT jacks.

Reverb Send Level

Specify the depth of reverb.

Chorus Send Level

Specify the depth of chorus.

** If Output Assign is set to "DIR1" or "DIR2," it will not be possible to set Reverb Send Level and Chorus Send Level.*

Mix/EFX Send Level

Set the volume.

The setting procedure is essentially the same as for a Patch. Refer to →p. 25.
However, be aware that the following points are different.

- In step 1, press [RHYTHM] to access the RHYTHM Play page.
- In step 5, use [E]—[H] to select the percussion instrument sound (key) for which you wish to make settings.

[E] : Select the key 1 octave below the currently selected key.
[F] : Select the key a semitone below the currently selected key.
[G] : Select the key a semitone above the currently selected key.
[H] : Select the key 1 octave above the currently selected key.

Alternatively, you can press a key on a connected MIDI keyboard to specify the percussion instrument sound (key). In this case, you will need to set the Rhythm Edit Key setting (Setup page [SYSTEM]→[F1] (Setup)) to PNL&MIDI. With the factory settings, this is set to PNL&MIDI. (→p. 90)

■ GM System

GM System mode can use one EFX.

Effect settings are divided into setting items for each Part, and items for the entire GM System.

The setting procedure is essentially the same as for a Performance. Refer to →p. 28.
However, be aware that the following points are different.

- In step 1, hold down [SHIFT] and press [PERFORM] to access the GM Play page.
- The selections for Output Assign are "EFX," "PAT," "MIX," "DIR1," and "DIR2."
- There is no EFX Information page.
- It is not possible to save GM System settings.

Modifying the 40 EFX Type Settings

There are 40 different EFX Types. You can change the settings for each EFX Type.

1. From the various Play pages, use the following procedures to access the EFX Param page.

For Performance or GM System

[F5] (Effects)→[F2] (EFX Prm)

For Patch or Rhythm Set

[F6] (Effects)→[F2] (EFX Prm)

In a Performance you can make settings for 3 EFX. Press [F2] (EFX Prm) several times to access the EFX-A Param page, EFX-B Param page, or EFX-C Param page.

** When the Performance EFX-A—C Source is set to a value of Part 1—9 or 11—16, a * symbol will appear in the upper right of the display when the cursor is placed at an EFX setting. This indicates that the EFX Type setting item is a Patch setting.*

2. Use [▲][▼][◄][►] to move the cursor to the item that you wish to set.

3. Either by rotating the VALUE dial or by pressing [INC][DEC], set the value.

** If you make the wrong setting by mistake, press [UNDO] to restore the value that was specified before the cursor was moved to the item.*

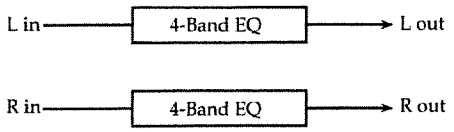
4. Press [EXIT] to return to the Play page.

** The EFX Type parameters marked by a "#" symbol can be modified in realtime using a MIDI controller. For details refer to →p.104.*

Explanations of the parameters for each EFX Type are given on the following pages.

1: STEREO-EQ (Stereo equalizer)

This is a stereo equalizer which allows you to adjust the tone quality using a low range, two mid-range, and a high range control.



Low Freq (Low frequency)
Select the frequency (200Hz/400Hz) at which the low frequency range will be adjusted.

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

P1 Freq (Peaking 1 frequency)
Specify the center frequency of the region in which the boost or cut will take place.

P1 Gain (Peaking 1 gain)
Specify the gain (amount of boost or cut) that will take place in the region specified by P1 Freq and P1 Q.
Positive (+) settings will emphasize (boost) the region specified by P1 Freq and P1Q.

P1 Q (Peaking 1 Q)
Specify the width of the region centered on the P1 Freq setting.
Higher settings will cause the region affected by P1 Gain to be narrower.

High Freq (High frequency)
Select the frequency (4000Hz/8000Hz) at which the high range will be adjusted.

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

P2 Freq (Peaking 2 frequency)
Specify the center frequency of the region in which the boost or cut will take place.

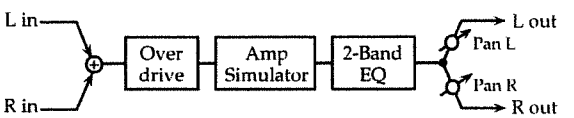
P2 Gain (Peaking 2 gain)
Specify the gain (amount of boost or cut) that will take place in the region specified by P2 Freq and P2 Q.
Positive (+) settings will emphasize (boost) the region specified by P2 Freq and P2Q.

P2 Q (Peaking 2 Q)
Specify the width of the region centered on the P2 Freq setting.
Higher settings will cause the region affected by P2 Gain to be narrower.

Level (Output level)#
Specify the output volume.

2: OVERDRIVE

Overdrive produces a natural-sounding distortion similar to that produced by a vacuum tube amplifier.



Drive #
Specify the depth of distortion. The volume will change together with the depth of distortion.

Amp Type (Amp simulator type)
Select the type of guitar amp.

SMALL : Small amp
BUILT-IN : Built-in type amp
2-STACK : Large two-level stack
3-STACK : Large three-level stack

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

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

Pan (Output pan) #

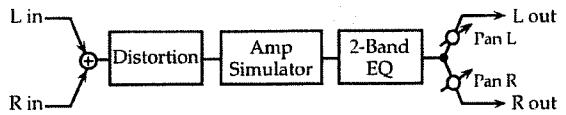
Specify the stereo location of the output sound.
A setting of L64 is far left, 0 is center, and 63R is far right.

Level (Output level)

Specify the output volume.
You can use the Output Level setting to even out the volume difference between the sound with and without Overdrive.

3: DISTORTION

Distortion produces a more intense distortion than the Overdrive effect.



Drive #

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

Amp Type (Amp simulator type)

Specify the type of guitar amp.

SMALL : Small amp
BUILT-IN : Built-in type amp
2-STACK : Large two-level stack
3-STACK : Large three-level stack

Low Gain

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

High Gain

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

Pan (Output pan) #

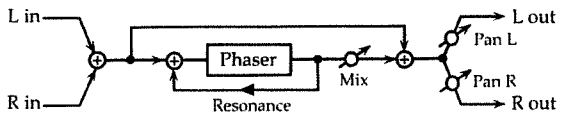
Specify the stereo location of the output sound.
A setting of L64 is far left, 0 is center, and 63R is far right.

Level (Output level)

Specify the output volume.
You can use the Output Level setting to even out the volume difference between the sound with and without Distortion.

4: PHASER

Phaser is an effect that adds a phase-shifted sound to the original sound to create time-varying change, modulating the sound.



Manual #

Specify the center frequency at which the sound is modulated.

Rate (Phaser rate) #

Specify the frequency of modulation.

Depth (Phaser depth)

Specify the depth of modulation.

Resonance

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

Mix (Mix level)

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

Pan (Output pan)

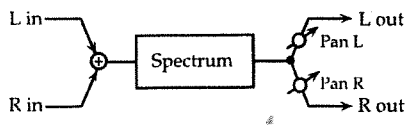
Specify the stereo location of the output sound.
A setting of L64 is far left, 0 is center, and 63R is far right.

Level (Output level)

Specify the output volume.

5: SPECTRUM

Spectrum is a type of filter which boosts or cuts the level at specific frequencies to modify the tone.
It functions similarly to the equalizer, but since the eight frequencies are fixed at positions ideal for giving the sound more character, more distinctive sounds can be created.



Band 1 (Band 1 gain)

Specify the gain (amount of boost or cut) at 250 Hz.

Band 2 (Band 2 gain)
Specify the gain (amount of boost or cut) at 500 Hz.

Band 3 (Band 3 gain)
Specify the gain (amount of boost or cut) at 1000 Hz.

Band 4 (Band 4 gain)
Specify the gain (amount of boost or cut) at 1250 Hz.

Band 5 (Band 5 gain)
Specify the gain (amount of boost or cut) at 2000 Hz.

Band 6 (Band 6 gain)
Specify the gain (amount of boost or cut) at 3150 Hz.

Band 7 (Band 7 gain)
Specify the gain (amount of boost or cut) at 4000 Hz.

Band 8 (Band 8 gain)
Specify the gain (amount of boost or cut) at 8000 Hz.

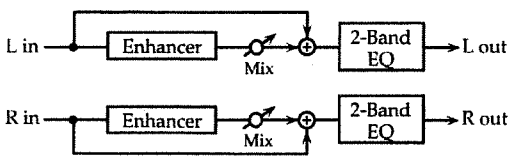
Q
Specify the range of all bands in which the level will be modified.

Pan (Output pan) #
Specify 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) #
Specify the output volume.

6: ENHANCER

Enhancer controls the overtone structure of the high frequency range, adding sparkle to the sound and improving the definition.



Sens (Sensitivity) #
Specify the depth of the Enhancer effect.

Mix (Mix level) #
Specify the proportion by which the overtones generated by the enhancer will be mixed with the original sound.

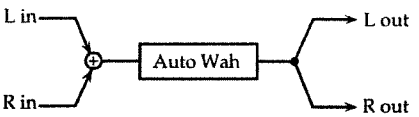
Low Gain
Specify the low frequency gain (amount of boost or cut).
Positive (+) settings will emphasize (boost) the low frequency range.

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

Level (Output level)
Specify the output volume.

7: AUTO-WAH

Auto Wah cyclically moves the frequency of a filter to produce a wah effect (cyclic modulation of the tone).



Filter Type
Specify the type of filter.
LPF : The wah effect will be produced over a wide frequency range.
BPF : The wah effect will be produced over a narrow frequency range.

Sens (Sensitivity)
Specify the sensitivity with which the filter will be affected.

Manual #
Specify the center frequency at which the wah effect will be produced.

Peak
Specify how the wah effect will affect the region around the center frequency.
Lower settings will produce a wah effect in a broad area around the center frequency. Higher settings will produce a wah effect in a narrow area around the center frequency.

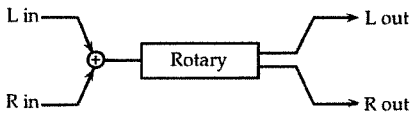
Rate (LFO rate) #
Specify the modulation frequency of the wah effect.

Depth (LFO depth)
Specify the modulation depth of the wah effect.

Level (Output level)
Specify the output volume.

8: ROTARY

Rotary is an effect which simulates the sound of the rotary speakers of the past. Since the movement of the high frequency and low frequency rotors can be specified separately, the unique modulation can be simulated realistically. This effect is most effective on organ-type Patches.



Low Slow Rate (Low frequency slow rate)
Specify the low-speed (SLOW) rotational speed of the low-range rotor.

Low Fast Rate (Low frequency fast rate)
Specify the high-speed (FAST) rotational speed of the low-range rotor.

Low Acceleration (Low frequency acceleration)
Specify the time required for the rotational speed of the low-range rotor to change from the low speed to the high speed (or from the high speed to the low speed). More time will be required as the value of this parameter is decreased.

Low Level (Low frequency level)
Specify the volume of the low-range rotor.

Speed #
Select the rotational speed of the low-range rotor and high-range rotor.
SLOW: The specified rotational speeds (the Low Slow Rate/Hi Slow Rate values) will take effect.
FAST : The specified rotational speeds (the Low Fast Rate/Hi Fast Rate values) will take effect.

**For the procedure for using a foot switch to switch the rotational speed, refer to →p. 105.*

High Slow Rate (High frequency slow rate)
Specify the low-speed (SLOW) rotational speed of the high-range rotor.

High Fast Rate (High frequency fast rate)
Specify the high-speed (FAST) rotational speed of the high-range rotor.

High Acceleration (High frequency acceleration)
Specify the time required for the rotational speed of the high-range rotor to change from the low speed to the high speed (or from the high speed to the low speed). More time will be required as the value of this parameter is decreased.

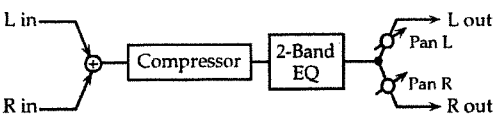
High Level (High frequency level)
Specify the volume of the high-range rotor.

Separation
Specify the spaciousness of the sound.

Level (Output level) #
Specify the output volume.

9: COMPRESSOR

Compressor is an effect which restricts high sound levels and boosts low sound levels, thus smoothing out variations in volume.



Attack (Attack time)
Specify the attack time of the input sound.

Sustain
Specify the time over which low-level sounds are boosted to a constant volume level.

Post Gain
Specify the input level.

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

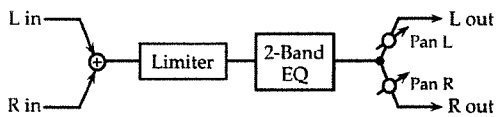
High Gain
Specify the high frequency range gain (amount of boost or cut).
Positive (+) settings will emphasize (boost) the high frequency range.

Pan (Output pan) #
Specify 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) #
Specify the output volume.

10: LIMITER

Limiter is an effect which compresses sounds that are louder than a specified volume level, preventing distortion from occurring.



Threshold (Threshold level)
Specify the volume level at which compression will begin.

Ratio (Compression ratio)
Specify the compression ratio.

Release (Release time)
Specify the time from when the volume falls below the threshold level until the limiter effect no longer applies.

Post Gain
Specify the level of the input sound.

Low Gain
Specify the gain (amount of boost or cut) for the low frequency range.
Positive (+) settings will emphasize (boost) the low frequency range.

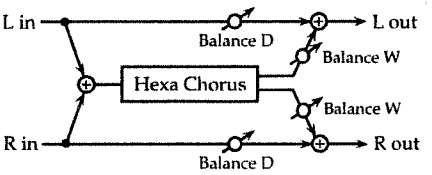
High Gain
Specify the gain (amount of boost or cut) for the high frequency range.
Positive (+) settings will emphasize (boost) the high frequency range.

Pan (Output pan) #
Specify 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) #
Specify the output volume.

11: HEXA-CHORUS

Hexa-chorus is a six-stage chorus which adds depth and spaciousness to the sound. (Six chorus sounds with different delay times are overlaid.)



Pre Delay (Pre delay time)
Specify the delay time from the original sound until when the chorus sound is heard.

Rate (Chorus rate) #
Specify the modulation frequency of the chorus sound.

Depth (Chorus depth)
Specify the modulation depth of the chorus sound.

Pre Delay Deviation
The Pre Delay parameter explained above specified the delay time from the original sound until when the chorus sound is heard. This Pre Delay Deviation parameter specifies the differences in Pre Delay time for each of the chorus sounds. Higher settings will cause each of the chorus sounds to be spread further apart.

Depth Deviation
Specify the difference in modulation depth between each of the chorus sounds.

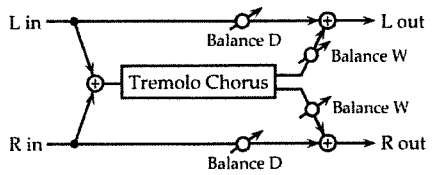
Pan Deviation
Specify the difference in stereo position between each of the chorus sounds.
With a setting of 0, all of the chorus sounds will be panned to the center. With a setting of 20, each chorus sound will be panned at 60 degree intervals relative to the center.

Balance (Effect balance) #
Specify the volume balance between the original sound and the chorus sound.
With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the chorus sound will be output.

Level (Output level)
Specify the output volume.

12: TREMOLO-CHORUS

Tremolo-chorus is a chorus with a tremolo effect (cyclic modulation of volume).



Pre Delay (Pre delay time)

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

Chorus Rate

Specify the modulation frequency of the chorus sound.

Chorus Depth

Specify the modulation depth of the chorus sound.

Tremolo Phase

Specify the spaciousness of the tremolo sound.

Tremolo Rate #

Specify the modulation frequency of the tremolo effect.

Tremolo Separation

Specify the spaciousness of the tremolo effect.

Balance (Effect balance) #

Specify the volume balance between the original sound and the tremolo-chorus sound.

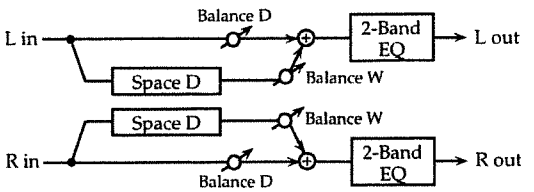
With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the tremolo-chorus sound will be output.

Level (Output level)

Specify the output volume.

13: SPACE-D

Space-D is a multiple chorus that applies two-stage modulation in stereo. It does not produce a sense of modulation, but creates a transparent chorus effect.



Pre Delay (Pre delay time)

Specify the delay time from the original sound until the chorus sound is heard.

Rate (Chorus rate) #

Specify the modulation frequency of the chorus sound.

Depth (Chorus depth)

Specify the modulation depth of the chorus sound.

Phase

Specify the spaciousness of the chorus sound.

Low Gain

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

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

High Gain

Specify the gain (amount of boost or cut) for the high frequency range.

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

Balance (Effect balance) #

Specify the volume balance between the original sound and the chorus sound.

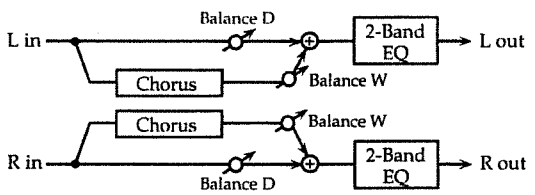
With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the chorus sound will be output.

Level (Output level)

Specify the output volume.

14: STEREO-CHORUS

This is a stereo chorus. A filter allows you to adjust the tone of the chorus sound.



Pre Delay (Pre delay time)

Specify the time delay from the original sound until the chorus sound is heard.

Rate (Chorus rate) #

Specify the modulation frequency of the chorus sound.

Depth (Chorus depth)

Specify the modulation depth of the chorus sound.

Phase

Specify the spaciousness of the chorus sound.

Filter Type

Select the type of filter.

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 Freq (Cutoff frequency)

Specify the frequency at which the filter will begin cutting.

Low Gain

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

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

High Gain

Specify the gain (amount of boost or cut) for the high frequency range.

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

Balance (Effect balance) #

Specify the volume balance between the original sound and the chorus sound.

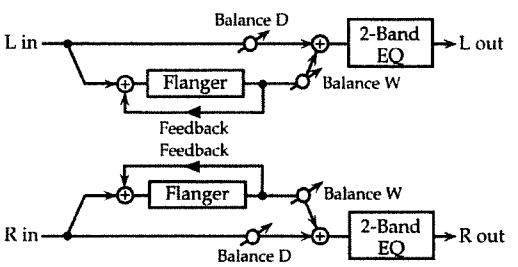
With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the chorus sound will be output.

Level (Output level)

Specify the output volume.

15: STEREO-FLANGER

This is a stereo flanger (the LFO has the same phase for left and right). This produces a metallic resonance reminiscent of a jet airplane taking off and landing. A filter is provided so that you can adjust the tone of the flanger sound.



Pre Delay (Pre delay time)

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

Rate (LFO rate) #

Specify the modulation frequency of the flanger sound.

Depth (LFO depth)

Specify the modulation depth of the flanger sound.

Feedback #

Specify 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

Specify the spaciousness of the flanger sound.

Filter Type

Specify the type of filter.

OFF : A filter will not be used.

LPF : Cut the frequency region above the Cutoff Freq setting.

HPF : Cut the frequency region below the Cutoff Freq setting.

Cutoff Freq (Cutoff frequency)

Specify the frequency at which the filter will begin cutting.

Low Gain

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

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

High Gain

Specify the gain (amount of boost or cut) for the high frequency range.

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

Balance (Effect balance)

Specify the volume balance between the original sound and the flanger sound.

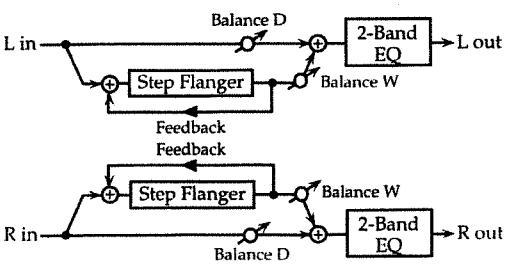
With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the flanger sound will be output.

Level (Output level)

Specify the output volume.

16: STEP-FLANGER

Step flanger is a flanger in which the pitch of the flanger sound changes in steps. The frequency of the pitch change can be specified as a note length of a specific tempo.



Pre Delay (Pre delay time)

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

Rate (LFO rate)

Specify the modulation frequency of the flanger sound.

Depth (LFO depth)

Specify the modulation depth of the flanger sound.

Feedback #

Specify 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

Specify the spaciousness of the flanger sound.

Step Rate #

Specify the frequency of pitch change.

* *Step Rate can be specified as a note length for the specified tempo. In this case, you will specify this value as a note value symbol. For details refer to "Syncing EFX Changes to the Clock (Tempo)," →p. 114.*

Low Gain

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

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

High Gain

Specify the gain (amount of boost or cut) for the high frequency range.

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

Balance (Effect balance)

Specify the volume balance between the original sound and the flanger sound.

With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the flanger sound will be output.

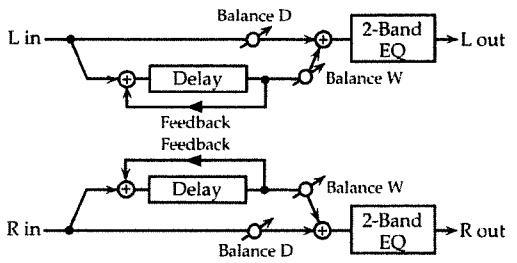
Level (Output level)

Specify the output volume.

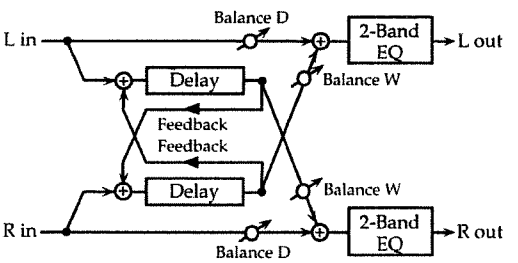
17: STEREO-DELAY

This is a stereo delay.

When Feedback Mode parameter is NORMAL:



When Feedback Mode parameter is CROSS:



Delay Left (Delay time left)

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

Delay Right (Delay time right)

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

Phase Left

Specify the phase of the left delay sound.

NORMAL : The phase will not change.
INVERT : The phase will be inverted.

Phase Right

Specify the phase of the right delay sound.

NORMAL : The phase will not change.
INVERT : The phase will be inverted.

Feedback #

Specify the proportion (%) of the delay sound that is to be returned to the input.

Positive (+) settings will return the sound to the input with the original phase, while negative (-) settings produce an inverted phase.

Feedback Mode

Specify the input destination to which the delay sound will be returned.

NORMAL : The left delay sound will be returned to the left input, and the right delay sound to the right input.
CROSS : The left delay sound will be returned to the right input, and the right delay sound to the left input.

HF Damp

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

If you do not want the sound to be cut, select BYPASS.

Low Gain

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

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

High Gain

Specify the gain (amount of boost or cut) for the high frequency range.

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

Balance (Effect balance) #

Specify the volume balance between the original sound and the delay sound.

With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the delay sound will be output.

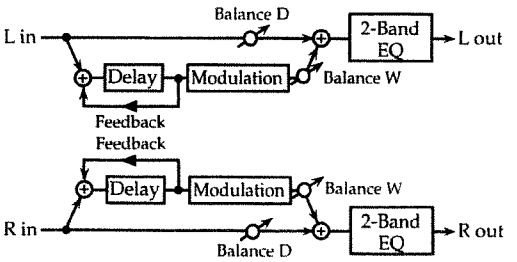
Level (Output level)

Specify the output volume.

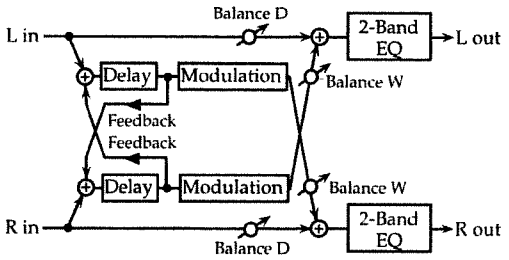
18: MODULATION-DELAY

Modulation-delay is an effect which adds modulation to the delay sound. It produces a flanger-like effect.

When Feedback Mode parameter is NORMAL:



When Feedback Mode parameter is CROSS:



Delay Left (Delay time left)

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

Delay Right (Delay time right)

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

Feedback

Specify the proportion (%) of the modulation-delay sound that is to be returned to the input.

Positive (+) settings will return the sound to the input with the original phase, while negative (-) settings produce an inverted phase.

Feedback Mode

Specify the input destination to which the modulation-delay sound will be returned.

NORMAL : The left modulation-delay sound will be returned to the left input, and the right modulation-delay sound to the right input.

CROSS : The left modulation-delay sound will be returned to the right input, and the right modulation-delay sound to the left input.

Rate (Modulation rate) #

Specify the modulation frequency of the modulation effect.

Depth (Modulation depth)

Specify the modulation depth of the modulation effect.

Phase

Specify the spaciousness of the modulation-delay sound.

HF Damp

Specify the frequency at which the high frequency range of the modulation-delay sound returned to the input will be cut.

If you do not want the sound to be cut, select BYPASS.

Low Gain

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

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

High Gain

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

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

Balance (Effect balance) #

Specify the volume balance between the original sound and the modulation-delay sound.

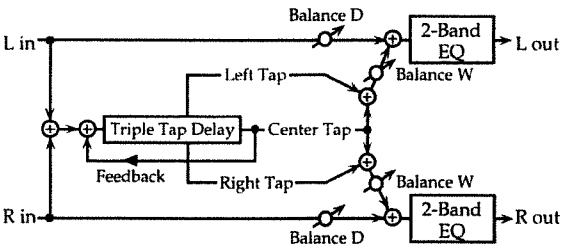
With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the modulation-delay sound will be output.

Level (Output level)

Specify the output volume.

19: TRIPLE-TAP-DELAY

Triple-tap-delay is an effect that produces delays in three directions: center, left and right. The delay time can also be specified as a note length relative to a specific tempo.



Delay Center (Delay time center)

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

Delay Left (Delay time left)

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

Delay Right (Delay time right)

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

** Delay Center, Delay Left and Delay Right can be specified as note value lengths for a specific tempo. In this case you will set the value as a note value symbol. For details refer to "Syncing EFX Changes to the Clock (Tempo)," →p. 114.*

Center Level
Specify the volume of the center delay sound.

Left Level
Specify the volume of the left delay sound.

Right Level
Specify the volume of the right delay sound.

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

HF Damp
Specify the frequency at which the high frequency range of the delayed sound returned to the input will be cut.
If you do not want the sound to be cut, select BYPASS.

Low Gain
Specify the gain (amount of boost or cut) for the low frequency range.
Positive (+) settings will emphasize (boost) the low frequency range.

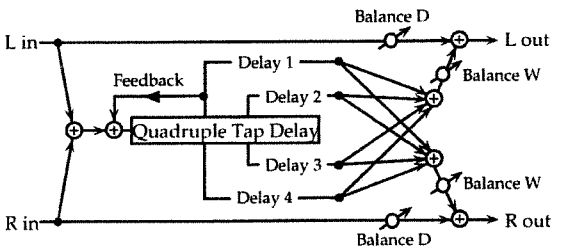
High Gain
Specify the gain (amount of boost or cut) for the high frequency range.
Positive (+) settings will emphasize (boost) the high frequency range.

Balance (Effect balance) #
Specify the volume balance between the original sound and the delay sound.
With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the delay sound will be output.

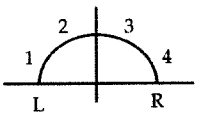
Level (Output level)
Specify the output volume.

20: QUADRUPLE-TAP-DELAY

Quadruple-tap-delay provides four delays. The delay time for each delay can be specified as a note length relative to a specific tempo.



The panning of each delay sound is as follows.



Delay 1 (Delay time 1)
Specify the delay time from the original sound until the delay 1 sound is heard.

Delay 2 (Delay time 2)
Specify the delay time from the original sound until the delay 2 sound is heard.

Delay 3 (Delay time 3)
Specify the delay time from the original sound until the delay 3 sound is heard.

Delay 4 (Delay time 4)
Specify the delay time from the original sound until the delay 4 sound is heard.

** Delay 1, Delay 2, Delay 3 and Delay 4 can be specified as note value lengths for a specific tempo. In this case you will set the value as a note value symbol. For details refer to "Syncing EFX Changes to the Clock (Tempo)," →p. 114.*

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

HF Damp

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

If you do not want the sound to be cut, select BYPASS.

Level 1

Specify the volume level of delay 1.

Level 2

Specify the volume level of delay 2.

Level 3

Specify the volume level of delay 3.

Level 4

Specify the volume level of delay 4.

Balance (Effect balance) #

Specify the volume balance between the original sound and the delay sound.

With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the delay sound will be output.

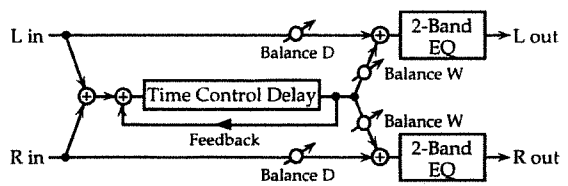
Level (Output level)

Specify the output volume.

21: TIME-CONTROL-DELAY

The MIDI controller specified in the EFX Control page can be used to control the delay time and pitch in real-time. Lengthening the delay time will lower the pitch, and shortening the delay time will raise the pitch.

For details refer to "Modifying the EFX Settings" →p. 104.



Delay (Delay time) #

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

Acceleration

Specify the time over which the current delay time will change to the newly-specified delay time when the delay time is modified. The speed of the pitch change will be proportionate to the delay time.

Feedback #

Specify the proportion (%) of the delay sound that is to be returned to the input.

Positive (+) settings will return the sound to the input with the original phase, while negative (-) settings produce an inverted phase.

HF Damp

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

If you do not want the sound to be cut, select BYPASS.

Pan (Output pan)

Specify the stereo position of the delay sound.

A setting of L64 is far left, 0 is center, and 63R is far right.

Low Gain

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

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

High Gain

Specify the gain (amount of boost or cut) for the high frequency range.

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

Balance (Effect balance)

Specify the volume balance between the original sound and the delay sound.

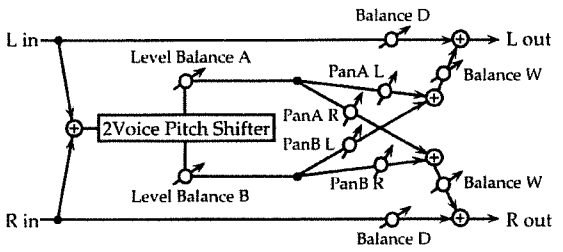
With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the delay sound will be output.

Level (Output level)

Specify the output volume.

22: 2VOICE-PITCH-SHIFTER

Pitch Shifter is an effect that shifts the pitch of the original sound. 2-voice-pitch-shifter has two pitch shifters, and is able to add two pitch-shifted sounds to the original sound.



Coarse A (Coarse pitch A) #1

Specify the pitch shift amount in semitones for pitch shift A. (-2—+1 octave)

Fine A (Fine pitch A) #1

Adjust the pitch shift amount in 2-cent units (1 cent = 1/100th of a semitone) for pitch shift A.

Pan A (Output pan A)

Specify the stereo location of the pitch shift A sound.

A setting of L64 is far left, 0 is center, and 63R is far right.

Pre Delay A (Pre delay time A)

Specify the time delay from the original sound until the pitch shift A sound is heard.

Level Balance

Adjust the volume balance between the pitch shift A and pitch shift B sounds.

With a setting of A100:0B only the pitch shift A sound will be output, and with a setting of A0:100B only the pitch shift B sound will be output.

Mode (Pitch shifter mode)

Higher settings will cause the response to be slower, but the pitch will be steadier.

Coarse B (Coarse pitch B) #2

Specify the pitch shift amount in semitones for pitch shift B. (-2—+1 octave)

Fine B (Fine pitch B) #2

Adjust the pitch shift amount in 2-cent units (1 cent = 1/100th of a semitone) for pitch shift B.

Pan B (Output pan B)

Specify the stereo location of the pitch shift B sound.

A setting of L64 is far left, 0 is center, and 63R is far right.

Pre Delay B (Pre delay time B)

Specify the time delay from the original sound until the pitch shift B sound is heard.

Balance (Effect balance)

Adjust the volume balance between the original sound and the pitch shift sound.

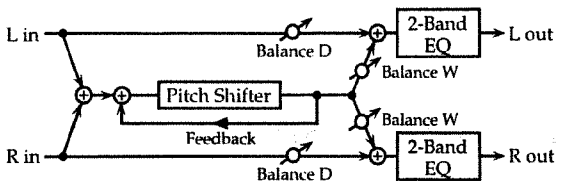
With a setting of D100:0W only the original sound will be output, and with a setting of D0:100W only the pitch shift sound will be output.

Level (Output level)

Specify the output volume.

23: FBK-PITCH-SHIFTER (Feedback pitch shifter)

This is a pitch shifter that is able to return the pitch shifted sound back to the input.



Coarse (Coarse pitch) #1

Specify the pitch shift amount in semitone steps. (-2—+1 octave)

Fine (Fine pitch) #1

Adjust the pitch shift amount in 2-cent steps (1 cent = 1/100th of a semitone).

Pan (Output pan)

Specify the stereo location of the pitch shift sound.

A setting of L64 is far left, 0 is center, and 63R is far right.

Pre Delay (Pre delay time)

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

Mode (Pitch shifter mode)

Higher settings will cause the response to be slower, but the pitch will be steadier.

Feedback #

Specify the proportion (%) of the pitch shift sound that is to be returned to the input.

Positive (+) settings will return the sound to the input with the original phase, while negative (-) settings produce an inverted phase.

Low Gain

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

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

High Gain

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

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

Balance (Effect balance)

Specify the volume balance between the original sound and the pitch shift sound.

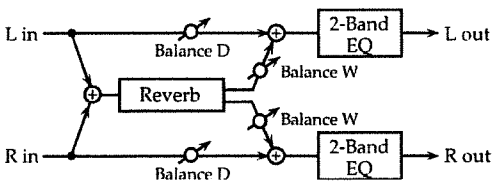
With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the pitch shift sound will be output.

Level (Output level)

Specify the output volume.

24: REVERB

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



Type (Reverb type)

Specify the type of reverb.

ROOM1	: Short reverberation with high density
ROOM2	: Short reverberation with low density
STAGE1	: Reverberation with heavy subsequent reverberation
STAGE2	: Reverberation with strong early reflections
HALL1	: Clear reverberation
HALL2	: Rich reverberation

Pre Delay (Pre delay time)

Specify the time delay from the original sound until the reverb is heard.

Time (Reverb time) #

Specify the length of reverberation.

HF Damp

Specify the frequency at which the high frequency portion of the reverb sound will be cut.

Lower frequency settings will cause a greater portion of the high range to be cut, producing a softer reverb sound.

If you do not want the sound to be cut, select BYPASS.

Low Gain

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

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

High Gain

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

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

Balance (Effect balance) #

Specify the volume balance between the original sound and the reverb sound.

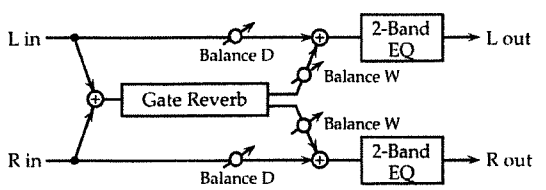
With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the reverb sound will be output.

Level (Output level)

Specify the output volume.

25: GATE-REVERB

Gate reverb is a type of reverb effect which cuts the reverb sound during its decay.



Type (Reverb type)

Specify the type of reverb.

NORMAL : Conventional gated reverb.
REVERSE : Reverse reverb.
SWEEP1 : The reverb sound moves from right to left.
SWEEP2 : The reverb sound moves from left to right.

Pre Delay (Pre delay time)

Specify the time delay from the original sound until the reverb is heard.

Gate Time

Specify the length of the reverb sound.

Low Gain

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

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

High Gain

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

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

Balance (Effect balance) #

Specify the volume balance between the original sound and the reverb sound.

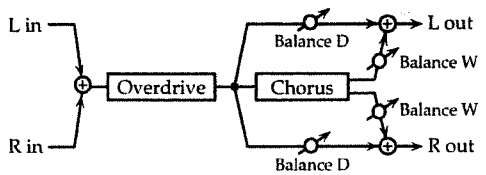
With a setting of DRY100:0WET only the original sound will be output, and with a setting of DRY0:100WET only the reverb sound will be output.

Level (Output level) #

Specify the output volume.

26: OVERDRIVE → CHORUS

This effect connects an overdrive and chorus in series.



OD Drive

Specify the amount of distortion for the overdrive. The volume will change together with the amount of distortion.

OD Pan (Overdrive pan) #

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

Chorus Pre Delay (Chorus pre delay time)

Specify the time delay from the original sound until the chorus sound is heard.

Chorus Rate

Specify the modulation frequency of the chorus sound.

Chorus Depth

Specify the modulation depth of the chorus sound.

Chorus Balance #

Specify the relative volume levels for the overdrive sound that does not pass through chorus, versus that which does.

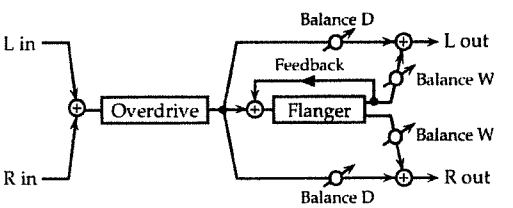
A setting of D100:0W will result in output of solely the overdrive sound, while a setting of D0:100W will cause only the overdrive sound that is passed through chorus to be output.

Level (Output level)

Specify the output volume.

27: OVERDRIVE → FLANGER

This effect connects an overdrive and a flanger in series.



OD Drive

Specify the amount of distortion for the overdrive. The volume will change together with the amount of distortion.

OD Pan (Overdrive pan) #

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

FLNG Pre Delay (Flanger pre delay time)

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

FLNG Rate (Flanger Rate)

Specify the modulation frequency of the flanger sound.

FLNG Depth (Flanger Depth)

Specify the modulation depth of the flanger sound.

FLNG Feedback (Flanger Feedback)

Specify the proportion (%) of the flanger sound that is to be returned to the input.

Positive (+) settings will return the sound to the input with the original phase, while negative (-) settings produce an inverted phase.

FLNG Balance (Flanger Balance) #

Specify the volume balance between the overdrive sound that does not pass through the flanger and the overdrive sound that does pass through the flanger.

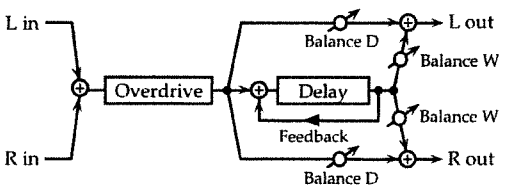
A setting of D100:0W will output only the overdrive sound, and a setting of D0:100W will output only the overdrive sound that is passed through the flanger.

Level (Output level)

Specify the output volume.

28: OVERDRIVE → DELAY

This effect connects an overdrive and a delay in series.



OD Drive

Specify the amount of distortion for the overdrive. The volume will change together with the amount of distortion.

OD Pan (Overdrive pan) #

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

Delay Time

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

Delay Feedback

Specify the proportion (%) of the delay sound that is to be returned to the input.

Positive (+) settings will return the sound to the input with the original phase, while negative (-) settings produce an inverted phase.

Delay HF Damp

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

If you do not want the sound to be cut, select BYPASS.

Delay Balance #

Specify the volume balance between the overdrive sound that does not pass through the delay and the overdrive sound that does pass through the delay.

A setting of D100:0W will output only the overdrive sound, and a setting of D0:100W will output only the overdrive sound that is passed through the delay.

Level (Output level)

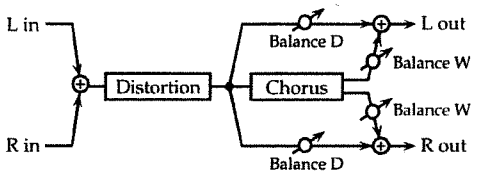
Specify the output volume.

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.)

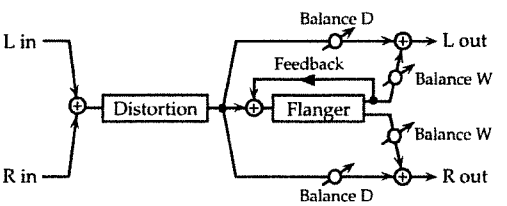


30: DISTORTION → FLANGER

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.)

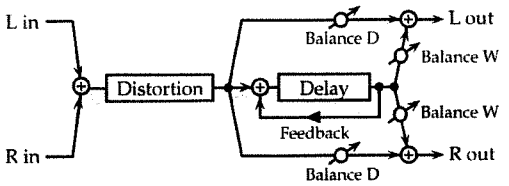
OD Pan → DIST Pan (Specify the stereo location of the distortion sound.)



31: DISTORTION → DELAY

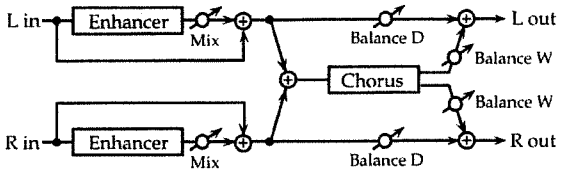
This effect connects distortion and delay in series. The parameters are essentially the same as in "28: OVERDRIVE → DELAY," with the exception of the following two.

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 (Enhancer sensitivity) #
Specify the sensitivity of the enhancer.

Enhancer Mix (Enhancer mix level)
Specify the volume of the overtones generated by the enhancer, relative to the original sound.

Chorus Pre Delay (Chorus pre delay time)
Specify the time delay from the original sound until the chorus sound is heard.

Chorus Rate
Specify the modulation frequency of the chorus sound.

Chorus Depth
Specify the modulation depth of the chorus sound.

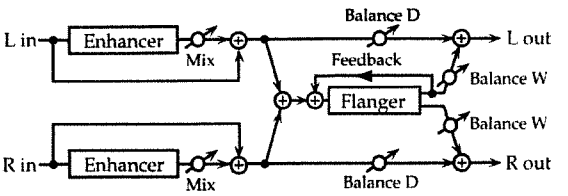
Chorus Balance #
Specify the volume balance between the enhancer sound that does not pass through the chorus and the enhancer sound that does pass through the chorus.

A setting of D100:0W will output only the enhancer sound, and a setting of D0:100W will output only the enhancer sound that is passed through the chorus.

Level (Output level)
Specify the output volume.

33: ENHANCER → FLANGER

This effect connects an enhancer and a flanger in series.



Enhancer Sens (Enhancer sensitivity) #
Specify the sensitivity of the enhancer.

Enhancer Mix (Enhancer mix level)
Specify the volume of the overtones generated by the enhancer, relative to the original sound.

FLNG Pre Delay (Flanger pre delay time)
Specify the time delay from the original sound until the flanger sound is heard.

FLNG Rate (Flanger Rate)
Specify the modulation frequency of the flanger sound.

FLNG Depth (Flanger Depth)
Specify the modulation depth of the flanger sound.

FLNG Feedback (Flanger Feedback)
Specify the proportion (%) of the flanger sound which will be returned to the input.
Positive (+) settings will return the sound to the input with the original phase, while negative (-) settings produce an inverted phase.

FLNG Balance (Flanger Balance) #

Specify the volume balance between the enhancer sound that does not pass through the flanger and the enhancer sound that does pass through the flanger.

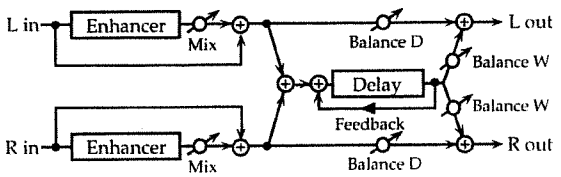
A setting of D100:0W will output only the enhancer sound, and a setting of D0:100W will output only the enhancer sound that is passed through the flanger.

Level (Output level)

Specify the output volume.

34: ENHANCER → DELAY

This effect connects an enhancer and delay in series.



Enhancer Sens (Enhancer sensitivity) #

Specify the sensitivity of the enhancer.

Enhancer Mix (Enhancer mix level)

Specify the volume of the overtones generated by the enhancer, relative to the original sound.

Delay Time

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

Delay Feedback

Specify the proportion (%) of the delay sound that is to be returned to the input.

Positive (+) settings will return the sound to the input with the original phase, while negative (-) settings produce an inverted phase.

Delay HF Damp

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

If you do not want the sound to be cut, select BYPASS.

Delay Balance #

Specify the volume balance between the enhancer sound that does not pass through the delay and the enhancer sound that does pass through the delay.

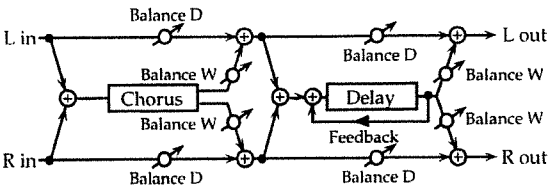
A setting of D100:0W will output only the enhancer sound, and a setting of D0:100W will output only the enhancer sound that is passed through the delay.

Level (Output level)

Specify the output volume.

35: CHORUS → DELAY

This effect connects a chorus and a delay in series.



Chorus Pre Delay (Chorus pre delay time)

Specify the time delay from the original sound until the chorus sound is heard.

Chorus Rate

Specify the modulation frequency of the chorus sound.

Chorus Depth

Specify the modulation depth of the chorus sound.

Chorus Balance #

Specify the volume balance between the original sound and the chorus sound.

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

Delay Time

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

Delay Feedback

Specify the proportion (%) of the delay sound that is to be returned to the input.

Positive (+) settings will return the sound to the input with the original phase, while negative (-) settings produce an inverted phase.

Delay HF Damp

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

If you do not want the sound to be cut, select BYPASS.

Delay Balance #

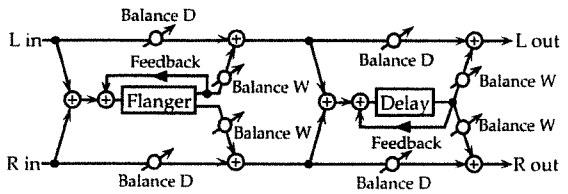
Specify the volume balance between the chorus sound that passes through the delay and the chorus sound which does not pass through the delay.

With a setting of D100:0W only the chorus sound will be output, and with a setting of D0:100W only the chorus sound that passes through the delay will be output.

Level (Output level)
Specify the output volume.

36: FLANGER → DELAY

This effect connects a flanger and a delay in series.



FLNG Pre Delay (Flanger pre delay time)
Specify the time delay from the original sound until the flanger sound is heard.

FLNG Rate (Flanger Rate)
Specify the modulation frequency of the flanger sound.

FLNG Depth (Flanger Depth)
Specify the modulation depth of the flanger sound.

FLNG Feedback (Flanger Feedback)
Specify the proportion (%) of the flanger sound that is to be returned to the input.
Positive (+) settings will return the sound to the input with the original phase, while negative (-) settings produce an inverted phase.

FLNG Balance (Flanger Balance) #
Specify the volume balance between the original sound and the flanger sound.
With a setting of D100:0W only the original sound will be output, and with a setting of D0:100W only the flanger sound will be output.

Delay Time
Specify the time delay from the original sound until the delay sound is heard.

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

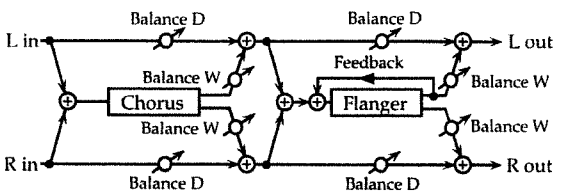
Delay HF Damp
Specify the frequency at which the high frequency range of the delayed sound returned to the input will be cut.
If you do not want the sound to be cut, select BYPASS.

Delay Balance #
Specify the volume balance of the flanger sound that passes through the delay and the flanger sound which does not pass through the delay.
With a setting of D100:0W only the flanger sound will be output, and with a setting of D0:100W only the flanger sound that passes through the delay will be output.

Level (Output level)
Specify the output volume.

37: CHORUS → FLANGER

This effect connects a chorus and flanger in series.



Chorus Pre Delay (Chorus pre delay time)
Specify the time delay from the original sound until the chorus sound is heard.

Chorus Rate
Specify the modulation frequency of the chorus sound.

Chorus Depth
Specify the modulation depth of the chorus sound.

Chorus Balance #
Specify the volume balance between the original sound and the chorus sound.
With a setting of D100:0W only the original sound will be output, and with a setting of D0:100W only the chorus sound will be output.

FLNG Pre Delay (Flanger pre delay time)
Specify the time delay from the original sound until the flanger sound is heard.

FLNG Rate (Flanger Rate)
Specify the modulation frequency of the flanger sound.

FLNG Depth (Flanger Depth)
Specify the modulation depth of the flanger sound.

FLNG Feedback (Flanger Feedback)

Specify the proportion (%) of the flanger sound that is to be returned to the input.

Positive (+) settings will return the sound to the input with the original phase, while negative (-) settings produce an inverted phase.

FLNG Balance (Flanger Balance) #

Specify the volume balance between the chorus sound that passes through the flanger and the chorus sound that does not pass through the flanger.

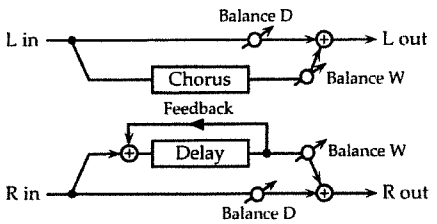
With a setting of D100:0W only the chorus sound will be output, and with a setting of D0:100W only the chorus that passes through the flanger sound will be output.

Level (Output level)

Specify the output volume.

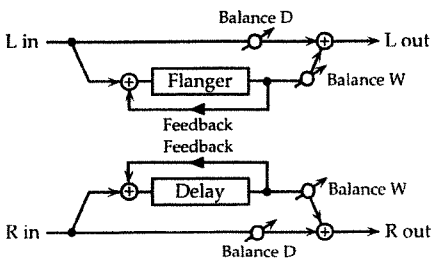
38: CHORUS/DELAY

This effect connects a chorus and a delay in parallel. The parameters are essentially the same as "35: CHORUS → DELAY." However, Delay Balance specifies the volume balance between the original sound and the delay sound.



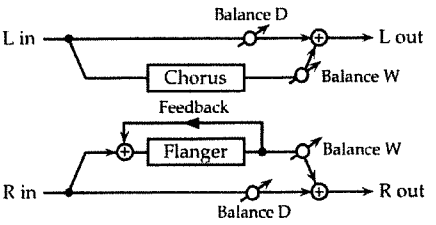
39: FLANGER/DELAY

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



40: CHORUS/FLANGER

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



Modifying the Chorus Settings

Here's how to adjust the way that the chorus will sound and how it will be output.

Chorus settings can be made for each Performance, for each Patch, and for GM System.

** Rhythm Sets will use the settings of the Performance that is in the temporary area. (Column **Internal organization** →p. 18)*

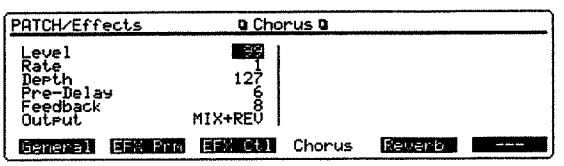
1. From the various Play pages, press the buttons in the following procedure to access the Chorus page.

Performance or GM System

[F5] (Effects)→[F4] (Chorus)

Patch or Rhythm Set

[F6] (Effects)→[F4] (Chorus)



2. Use [▲][▼] to move the cursor to the item that you wish to set.
3. Either by rotating the VALUE dial or by pressing [INC][DEC], set the value.

** If you make a mistake, press [UNDO] and the setting will return to the value that it had when the cursor was moved to that item.*

4. Press [EXIT] to return to the Play page from which you started.

Level (Chorus level)
Specify the volume of the sound routed through chorus.

**This setting is linked with the Chorus Level setting (General page). (→p. 26, 27, 30, 31)*

Rate (Chorus rate)
Specify the modulation frequency of the chorus sound.

Depth (Chorus depth)
Specify the modulation depth of the chorus sound.

Pre-Delay (Chorus pre delay)
Specify the time delay from the original sound until the chorus sound is heard.
Higher settings will make the sound more spacious.

Feedback (Chorus feedback)
Specify the amount of the sound which passed through the chorus that is to be returned (fed back) to the input of the chorus.
Higher settings will create a more complex chorus effect.

Output (Chorus output assign)
Specify how the sound from the chorus will be output.

MIX : Output from the "MIX" OUTPUT jacks.
REVERB : Output to reverb.
MIX+REV : Output from the "MIX" OUTPUT jacks and to reverb.

**This setting is linked with the Chorus Output Assign setting (General page). (→p. 27, 30, 31)*

Modifying the Reverb Settings

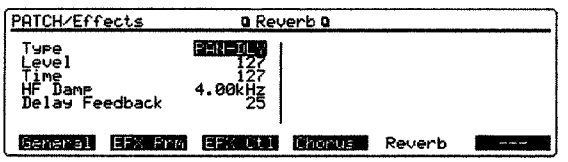
Here's how to specify the type of reverb or delay and the reverb time.
Reverb settings can be made for each Performance, each Patch, and for GM System.

** Rhythm Sets will use the settings of the Performance that is in the temporary area. (Column **Internal organization** →p. 18)*

1. From one of the Play pages, press buttons in the following order to access the Reverb page.

Performance or GM System
[F5] (Effects)→[F5] (Reverb)

Patch or Rhythm Set
[F6] (Effects)→[F5] (Reverb)



2. Use [▲][▼] to move the cursor to the item that you wish to set.

3. Either by rotating the VALUE dial or by pressing [INC][DEC], specify the value.

**If you make a mistake, press [UNDO] and the setting will return to the value that it had when the cursor was moved to that item.*

4. Press [EXIT] to return to the Play page from which you started.

Type (Reverb/Delay type)
Specify the type of reverb or delay.

ROOM1 : Short reverb with high density
ROOM2 : Short reverb with low density.
STAGE1 : Reverb with much subsequent reverberation
STAGE2 : Reverb with strong early reflections
HALL1 : Clear reverb
HALL2 : Rich reverb
DELAY : A standard delay
PAN-DLY : A delay that pans (moves) the reflections to left and right

Level (Reverb/delay level)

Specify the volume of the reverb sound (or delay sound).

**This setting is linked with the Reverb Level setting (General page). (→p. 27, 30, 31)*

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 will produce a more spacious effect.

HF damp (Reverb/delay HF damp)

Specify the frequency at which the high frequency portion of the reverb will be cut.

Lower settings of this frequency will cause a greater portion of the high frequencies to be cut, producing a softer reverb sound.

If you do not want the sound to be cut, select BYPASS.

Delay Feedback

When the Type setting is DELAY or PAN-DLY, this specifies the amount of delay sound that is returned (feed back) to the delay input.

Higher settings will produce more delay repeats.

Copying Effect Settings

You can copy effect settings from any Performance or Patch into the currently selected Performance, Patch, or GM System. This function can help you save time.

You can select the following effect contents to be copied.

Copy Type

ALL	: All the contents copied for EFX, CHORUS, and REVERB
EFX	: The EFX settings of the General page (EFX Type, EFX Reverb Send Level, EFX Chorus Send Level, EFX Output Level, EFX Output Assign), the settings of the EFX Param page (→p. 33), and the settings of the EFX Control page (→p. 104)
CHORUS	The settings of the Chorus page (→p. 53)
REVERB	: The settings of the Reverb page (→p. 54)

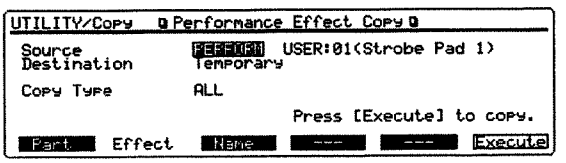
**If the copy source is a Performance, the contents copied for "EFX" will be the EFX settings for the Performance itself (the values displayed when the General page EFX-A—C Source is PERFORM).*

In the same way, when "EFX" is copied to the currently selected Performance, the data will be copied as the EFX settings for the Performance itself.

1. Make sure that a Performance, Patch, or the GM System is selected.
2. Press [UTILITY] to make the indicator light.
3. Press [F2] (Copy).
4. Press [F2] (Effect).

**In the case of GM System, this procedure is not necessary.*

The corresponding Effect Copy page will appear.



Destination "Temporary" or "GM Temporary" indicates that the copy destination is the currently selected Performance, Patch, or GM System.

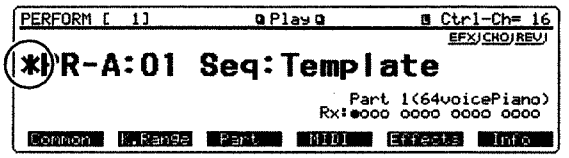
5. Use [▲][▼][◄][►] to move the cursor to the item that you wish to set.
6. Either by rotating the VALUE dial or by pressing [INC][DEC], set the value.

   When the cursor is at group:number, you can also use [USER][CARD][PRESET][EXP][A]—[H] to select the group.
7. Press [F6] (Execute) to execute the copy.
8. Press [EXIT] several times to return to the Play page from which you started.

Saving a Sound You Create

Modifications you make to a sound are temporary, and will be lost when the power is turned off or when another Performance, Patch or Rhythm Set is selected. (Column **Internal organization** →p. 18) If you wish to keep the modified data, you must use the save operation.

If the settings of a Performance, Patch, or Rhythm Set have been modified, an "*" symbol will appear at the left of the group in the corresponding Play page, indicating that the data has been modified. When you save the data to internal memory or to an optional DATA card, the "*" symbol will disappear.



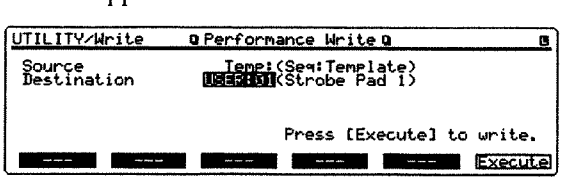
There are three ways to save data: to internal memory, to an optional DATA card, or to an external MIDI device.

Saving to Internal Memory

Here's how to save data to the internal "USER" group.

** When you perform the save procedure, the data that previously occupied the save destination will be lost. However, the factory setting data can be recovered by performing the Initialization procedure. (Restoring the Factory Preset Data (Initialize) →p. 60)*

1. Make sure the Performance, Patch or Rhythm Set that you wish to save is selected.
2. Press [UTILITY] to make the indicator light.
3. Press [F1] (Write). The corresponding Write page will appear.



The Source setting "Temp" indicates the temporary area, meaning that the currently selected data will be saved.

4. Either by rotating the VALUE dial or by pressing [INC][DEC], select the save destination (USER:XX).

** If you are saving a Patch, you will be able to audition the Patch that currently occupies the save destination. (Compare function → Refer to the following item.)*

5. Press [F6] (Execute) to execute the save operation.

   To exit the Write page without saving, press [EXIT].

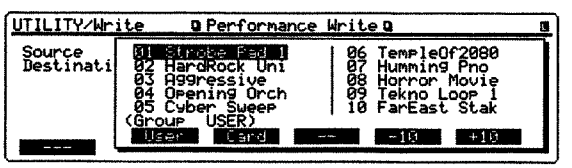
The following number of Performances, Patches, and Rhythm Sets can be saved in internal memory.

32 Performances, 128 Patches, 2 Rhythm Sets

** In some cases, the display will indicate "Write Protect ON." If you are sure you want to save, press [DEC] to turn the setting to "Write Protect OFF," and then press [F6] (OK) to clear the message. Then press [F6] (Execute) once again to execute the save operation. (Write Protect →p. 61)*

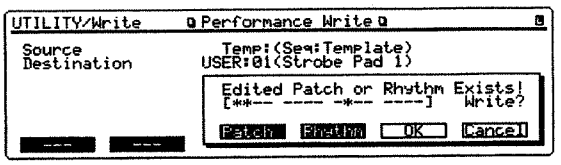
** In step 4 you can also press the VALUE dial (SOUND LIST) and select the save destination from the list.*

- By pressing [F5] (-10) or [F6] (+10) you can switch the display in steps of 10.
- If a DATA card is inserted into the slot, you can press [F2] (User) or [F3] (Card) to switch groups.
- When you press the VALUE dial (SOUND LIST) or [EXIT], the normal display will reappear.



When you have modified the settings of the Patch assigned to a Part of the Performance

When you modify the settings of the Patch (or Rhythm Set, for Part 10) assigned to a Part of a Performance, and attempt to save the Performance without saving that Patch, the following message will appear.



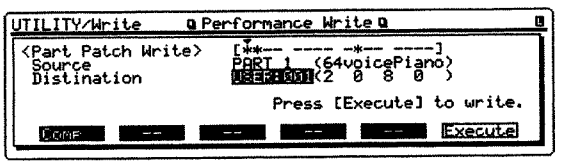
The display will indicate the Part(s) for which Patches have not been saved.

If you wish to keep the Patch settings, you must first save the Patch, and then save the Performance.

1. Press [F3] (Patch) or [F4] (Rhythm).

   The Patch or Rhythm Set save page will appear.

   Source indicates the Part of the Patch being saved, and Destination indicates the saving destination.



2. Use the VALUE dial or [INC][DEC] to select the save destination.

** When saving a Patch, you can press [F1] (Comp) to check the Patch currently occupying the saving destination. (Compare function → following item)*

3. Press [F6] (Execute) to execute saving.

   The * symbol will change to -.

   If there is more than one Patch that needs to be saved, the Source will automatically change to the next unsaved Part.

   You can also press [▲] to move the cursor to Source and freely select the Part whose Patch will be saved.

4. Repeat steps 2 and 3 to save the data.

   When you have finished saving all the data, you will automatically return to the Perform Write page.

   To return to the previous Perform Write page without completing the process, press [EXIT].

5. Press [F6] (Execute) to save the Performance.

** If you do not need to save the Patch settings, press [F5] (OK). A message will ask for confirmation, so press [F5] (OK) once again to save the Performance. (The Patch settings will be lost.)*

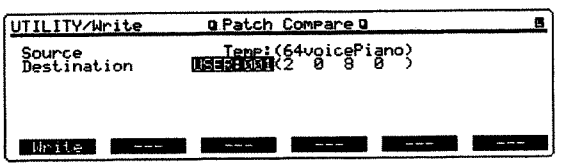
** If you press [F6] (Cancel), you will return to the previous Perform Write page.*

■ Comparing with the Save Destination Patch

Before you save a Patch, you can audition the Patch which currently occupies the save destination to make sure that it is one you don't mind overwriting. This can help prevent important Patches from being accidentally overwritten and lost.

1. Follow the procedure Saving to internal memory up to step 4 to select the save destination.
2. Press [F1] (Compare). The Patch Compare page will appear.

   The Patch currently in the save destination can now be played. Make sure that it is one that you don't mind overwriting.



** The Patch auditioned using the Compare function may sound slightly different than when it is played normally.*

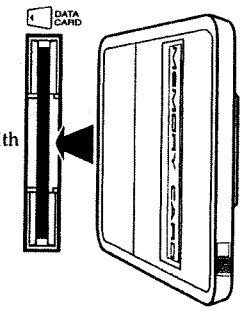
3. If you wish to select a different save destination, either rotate the VALUE dial or press [INC][DEC].
4. Press [F1] (Write) or [EXIT] to return to the Patch Write page.
5. Press [F6] (Execute) to execute the save operation.

** The Compare function cannot be used when the Patch list is displayed in the Patch Write page. Press either the VALUE dial (SOUND LIST) or [EXIT] to return to the normal Patch Write page.*

Saving to a Data Card

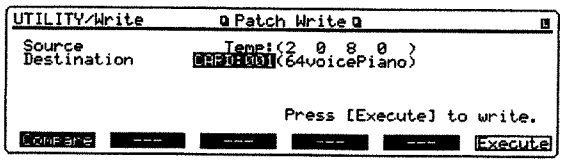
Sounds you create can be saved on an optional DATA card (MEMORY CARD M-512E, M-256E).
A DATA card must first be formatted before it can be used. (Formatting a Memory Card →p. 10)

1. Make sure the Performance, Patch or Rhythm Set that you wish to save is selected.
2. Insert a formatted DATA card into the card slot.



Be sure you insert the card into the DATA Card slot with the label side facing left.

3. Press [UTILITY] to make the indicator light.
4. Press [F1] (Write). The corresponding Write page will appear.



Source "Temp" indicates the temporary area, meaning that the currently selected data will be saved.

5. Either by rotating the VALUE dial or by pressing [INC][DEC], select the save destination (CARD:XX).

   If the save destination is indicated as USER, press [CARD] to specify CARD as the save destination.

** When saving a Patch, you can audition the Patch that currently occupies the save destination. (Compare function → Refer to the previous item.)*

6. Press [F6] (Execute) to execute the save operation.

   To exit the Write page without saving, press [EXIT].

The number of Performances, Patches and Rhythm Sets which can be stored on a DATA card is as follows.

M-512E
32 Performances, 128 Patches, 2 Rhythm Sets

M-256E
16 Performances, 64 Patches, 1 Rhythm Set

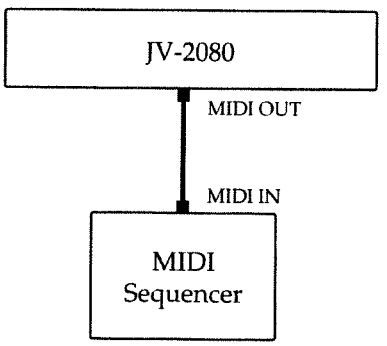
** In step 5, you can also press the VALUE dial (SOUND LIST) and select the save destination from the list.*

- Press [F2] (User) or [F3] (Card) to select the group.
- Press [F5] (-10) or [F6] (+10) to switch the display in steps of 10.
- Press either the VALUE dial (SOUND LIST) or [EXIT] to return to the normal display.

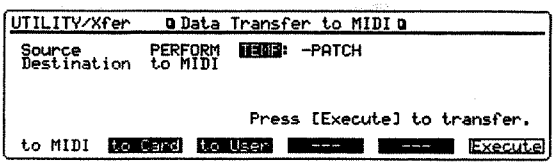
** If you have modified the settings of a Patch assigned to one of the Parts in the Performance, please read (Column →p. 57).*

Saving to an External MIDI Device

You can save data by transmitting it to an external MIDI device (MIDI sequencer, etc.).
Connect the JV-2080 and external MIDI device as shown in the diagram.



1. Press [UTILITY] to make the indicator light.
2. Press [F4] (Xfer).
3. Press [F1] (to MIDI). The Data Transfer to MIDI page will appear.



4. Use [◄][►] to move the cursor to the item that you wish to set, and either rotate the value dial or press [INC][DEC] to make the following setting.

Saving a Performance

Source PERFORM TEMP: -PATCH

** If you have modified the settings of a Patch or Rhythm Set assigned to a Part, select "+PATCH." (Creating Patches for Each Part While still in Performance Mode →p. 69)*

Saving a Patch

Source PATCH TEMP

Saving a Rhythm Set

Source RHYTHM TEMP

"TEMP" indicates the temporary area, meaning that the currently selected data will be transmitted.

5. Set the external MIDI device so that it will be ready to receive data, and press [F6] (Execute) to execute data transmission.

   While the data is being transmitted, the display will indicate "Transmitting..."

** To halt transmission during the process, press [EXIT].*

6. Press [EXIT] several times to return to the Play page from which you started.

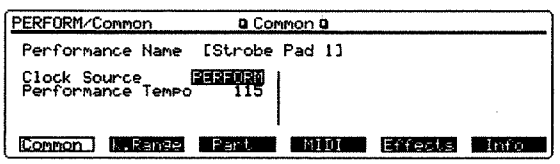
** Before data that was saved on an external MIDI device can be transmitted back to the JV-2080, the Device ID Number (MIDI Param 1 page [SYSTEM]→[F3] (MIDI)) must be set to the value that it had when the data was saved, and Rx Sys.Excl(MIDI Param 1 page [SYSTEM]→[F3] (MIDI)) must be turned ON. With the factory settings, Device ID Number is 17, and Rx Sys.Excl is ON. (→p. 136)*

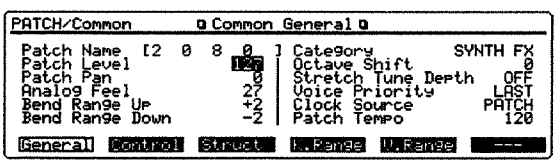
Modifying the Name

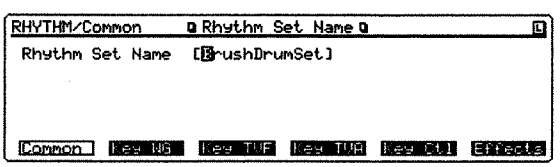
You can assign a new name to a Performance, Patch, or Rhythm Set that you create.

1. Select the Performance, Patch or Rhythm Set to which you wish to assign a name, and access the appropriate Play page.
2. Press [F1] (Common). In the case of a Patch, you will also need to press [F1] (General).

   One of the following displays will appear.

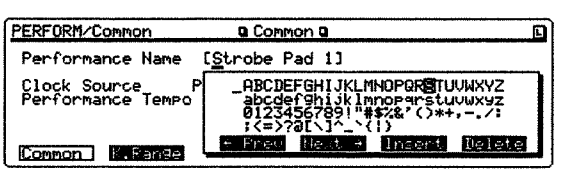






3. Press [F1] (for Performance or Rhythm Set this will be Common, for Patch this will be General) once again.

   Move the cursor to the location for entering the characters of the name, and a list of the available characters will appear.



4. Press the VALUE dial or [F3] (← Prev) [F4] (Next→) to move the cursor to the location where you wish to enter a character.
5. Either rotate the VALUE dial or press [INC][DEC] or [▲][▼][◄][►] to select the character that you wish to input.

   To insert a space at the cursor location, press [F5] (Insert). To delete the character at the cursor location, press [F6] (Delete).
6. Repeat steps 4 and 5 to complete the name.

7. Press [F1] or [EXIT] to return to the normal page.
8. Press [EXIT] to return to the Play page.

   An "*" symbol will appear at the left of the group to indicate that the settings have been modified. If you wish to save the new name, perform the Save procedure. (→p. 56)

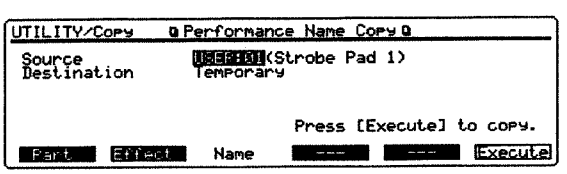
** Even without displaying the list of characters, you can use [▲][▼][◄][►] after step 2 to move the cursor to the location where you wish to input a character, and then either rotate the VALUE dial or press [INC][DEC] to assign the name. The following characters can be used.*

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

■ Copying a Name

The name of another Performance can be copied to the currently selected Performance.
Similarly, names can be copied between Patches or Rhythm Sets.

1. Make sure that the Performance, Patch, or Rhythm Set whose name you wish to change is selected.
2. Press [UTILITY] to make the indicator light.
3. Press [F2] (Copy).
4. For a Performance or Patch press [F3] (Name), or for a Rhythm Set press [F2] (Name). The corresponding Name Copy page will appear.



   Destination "Temporary" indicates the temporary area, meaning that the name will be copied to the currently selected data.
5. Either rotate the VALUE dial or press [INC][DEC] to select the copy source name.

   At this time, pressing [USER][CARD][PRESET][EXP][A]—[H] will switch to the corresponding group.
6. Press [F6] (Execute) to execute the Name Copy operation.
7. Press [EXIT] several times to return to the Play page.

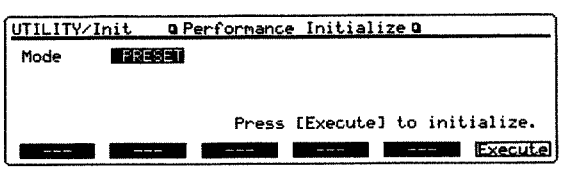
   An "*" symbol will appear at the left of the group to indicate that the settings have been modified. If you wish to save the new name, perform the save procedure. (→p. 56)

Restoring the Factory Preset Data (Initialize)

If the factory preset data has been lost because you saved your own data to the internal "USER" group, you can use the Initialize operation to bring back the factory preset data.

● For Performances or Patches

1. Make sure that the Performance or Patch number within the USER group for which you wish to bring back the factory preset data is selected.
2. Press [UTILITY] to make the indicator light.
3. Press [F3] (Init). The corresponding Initialize page will appear.



4. Either rotate the VALUE dial or press [INC][DEC] to select "PRESET."
5. Press [F6] (Execute) to execute the Initialize operation.

   You will return to the Play page. An "*" symbol will appear at the left of the group to indicate that the settings have been modified. If you wish to keep these settings, perform the Save operation. (→p. 56)

** If you select PR-A—C, E, or PR-D (GM (General MIDI)) data and use "PRESET" to initialize, the data of the corresponding number in the USER group will be restored.*

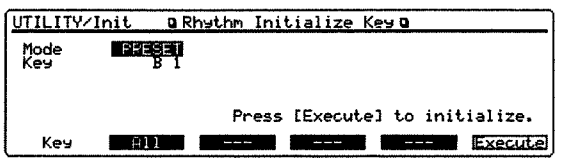
● For Rhythm Sets

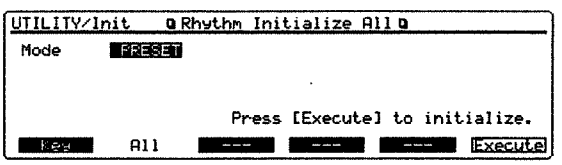
There are two ways to initialize Rhythm Set data: a single percussion instrument (key) within the Rhythm Set can be initialized (Key), or the settings of the entire Rhythm Set can be initialized (All).

1. Make sure that the Rhythm Set number of the USER group that you wish to initialize is selected.
2. Press [UTILITY] to make the indicator light.
3. Press [F3] (Init).

4. **For Key**
Press [F1] (Key). The Rhythm Initialize Key page will appear.

For All
Press [F2] (All). The Rhythm Initialize All page will appear.





5. Either rotate the VALUE dial or press [INC][DEC] to set Mode to "PRESET."

In the case of Key, you must also specify the percussion instrument (key) that you wish to initialize.

Use [▲][▼] to move the cursor to the item you wish to set, and either rotate the VALUE dial or press [INC][DEC] to select the value.

You can also press [E]—[H] to select the value.

[E] : The key 1 octave below the currently selected key will be selected.
[F] : The key a semitone below the currently selected key will be selected.
[G] : The key a semitone above the currently selected key will be selected.
[H] : The key 1 octave above the currently selected key will be selected.

** When the cursor is located at Key, you can also select the percussion instrument (key) to be initialized by pressing a key on a connected MIDI keyboard. In this case, the Rhythm Edit Key (Setup page [SYSTEM]→[F1] (Setup)) must be set to PNL&MIDI. With the factory settings, it is set to PNL&MIDI. (→p. 90)*

6. Press [F6] (Execute) to execute the Initialize operation.

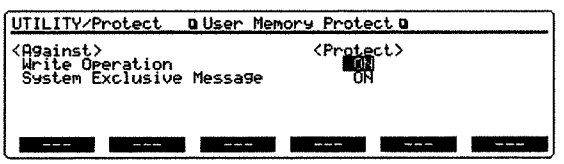
You will return to the RHYTHM Play page. An "*" symbol will appear at the left of the group to indicate that the settings have been modified. If you wish to keep the modified settings, perform the Save operation. (→p. 56)

** If you select PR-A—C, E or PR-D (GM (General MIDI)) data and use "PRESET" to initialize, the data of the corresponding number in the USER group will be recovered.*

Protecting the Internal Memory

So that the Performance, Patch and Rhythm Set data saved in the USER group will not be accidentally be overwritten, you can prohibit writing to internal memory.

1. Press [UTILITY] to make the indicator light.
2. Press [F5] (Protect). The User Memory Protect page will appear.



3. Use [▲][▼] to move the cursor to the item you wish to set.
4. By either rotating the VALUE dial or by pressing [INC][DEC], turn the setting ON (write prohibit).
5. Press [EXIT] several times to return to the Play page.

Write Operation
This will prohibit the "Save (→p. 56)," "Factory Preset (→p. 101)," and "Transmit data to internal memory (→p. 131)" operations from rewriting USER group data.

If the setting is ON (write prohibit) and you attempt to execute one of the above operations, a message of "Write Protect ON" will appear, and the operation will be halted.

When the power is turned on, this setting will always be Write Protect ON (write prohibit).

System Exclusive Message
This will prevent the USER group data from being rewritten when system exclusive messages are received from an external MIDI device.

** In order for system exclusive messages to be received, the Device ID number (MIDI Param 1 page [SYSTEM] →[F3] (MIDI)) of both devices must match, and the Rx Sys.Excl setting (MIDI Param 1 page [SYSTEM]→[F3] (MIDI)) must be ON. With the factory settings, the Device ID Number is 17, and Rx Sys.Excl is ON. (→p. 136)*

** Even if the Write Operation setting is Protect ON (write prohibit), incoming system exclusive messages can rewrite data in the USER group if the System Exclusive Message setting is set to Protect OFF (write permit).*

Creating a Performance

Tips for Creating a Performance

There are essentially three ways to use a Performance. Settings can be made as follows.

Playing multiple Patches together (Layer)

- Select the same MIDI receive channel for each of the Parts you wish to use. (Channel →p. 67)
- Select the Parts you wish to use. (Rx Switch →p. 67)
- Select the Patch for each Part that you are using. (Patch Group, Patch Number →p. 66, 67)
- Set the same keyboard range for each Part. (Part Key Range Lower:Upper page →p. 66)

Playing separate Patches in different areas of the keyboard (Split)

- Select the same MIDI receive channel for each of the Parts you wish to use. (Channel →p. 67)
- Select the Parts you wish to use. (Rx Switch →p. 67)
- Select the Patch for each Part you are using. (Patch Group, Patch Number →p. 66, 67)
- Set different keyboard ranges for each Part. (Part Key Range Lower:Upper page →p. 66)

Creating songs

- Initialize a Performance. (→p. 63)
- If there is a melody that you want to be played on multiple Parts, select the same MIDI channel for these Parts. (Channel →p. 67)
- Select the Parts you wish to use. (Rx Switch →p. 67)
- Select the Patch for each Part you are using. (Patch Group, Patch Number →p. 66, 67)

Here are some tips that will be useful whenever you create a Performance.

- A Performance can use up to three EFX. (→p. 28)
- Take advantage of the convenient Copy function. This function makes it easy to copy Part settings (→p. 68) or effects (→p. 55).
- You can modify the Patch (Tone) settings of each Part while still in Performance mode. (→p. 69)

** Actual examples of using a performance are given in Quick Start (→p. 24, 32, 34).*

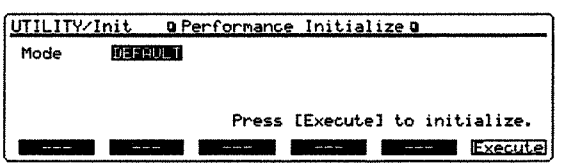
Initializing—Creating a Performance From Scratch

When you wish to create a Performance completely from scratch without starting with an internal Performance (in particular when you are creating a Performance that will be used for creating a song), it is a good idea to use the following procedure. When a Performance is initialized, the settings will be as follows.

- The Patch for Parts 1—9 and 11—16 will be PR-A:001 64voicePiano, and the Rhythm Set for Part 10 will be PR-A:001 PopDrumSet 1. All data will have the default values.
- The MIDI receive channel for each Part will be ch.1 for Part 1, ch.2 for Part 2, ... ch.15 for Part 15 and ch.16 for Part 16.
- The Receive Switch will be ON for all Parts.

1. Press [PERFORM] to make the indicator light.

   The Performance that is selected does not matter.
2. Press [UTILITY] to make the indicator light.
3. Press [F3] (Init). The Performance Initialize page will appear.



4. Either rotate the VALUE dial or press [INC][DEC] to select "DEFAULT."
5. Press [F6] (Execute) to execute the Initialize operation.

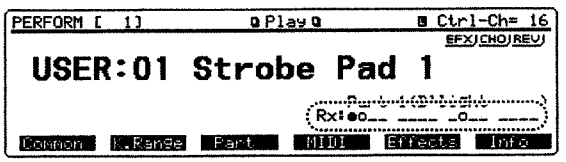
   You will return to the PERFORM Play page. The name of the Performance will be "INIT PERFORM."

Selecting the Parts You Will Use (Part On/Off)

Use the following procedure to select the Parts that you will use.

1. Select the Performance that you will use. (→p. 17)
2. Press [RX] to make the indicator light.
3. Use PART SELECT [1/9]—[8/16] to turn each Part either on (indicator lit) or off (indicator dark).

   To turn Parts 9—16 on/off, make the [1-8/9-16] indicator light, and then use PART SELECT [1/9]—[8/16].



In the PERFORM Play page, Parts which are on will be indicated as "○" or "●", and Parts which are off as "_."

4. Press [RX] to make the indicator go dark.

** This setting is linked with the Rx Switch setting (Part MIDI page [PERFORM]→[F4] (MIDI)). (→p. 67)*

** If the [RX] indicator is lit, when a Part which is turned on receives a MIDI message, the indicator for that part will blink. (However only in the case of the Part Information page, the indicator of a Part which receives a MIDI message will blink regardless of [RX] or the Part on/off setting.)*

Settings for Each Part

The parameters that can be set for each Part of the Performance are assigned to the function buttons as follows.

Creating a Performance

* Performance settings are indicated by "*". Unmarked items are settings for each Part.

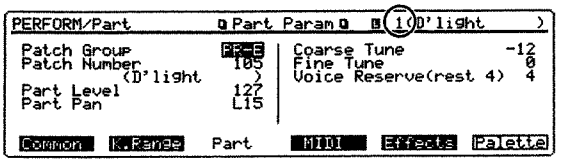
- [F2] (K.Range)
  Keyboard range (p. 66)
- [F3] (Part)
  Patch select / Volume / Pan / Pitch / Polyphony (p. 66)
- [F4] (MIDI)
  Settings concerned with MIDI (p. 67)
- [F5] (Effects)
  - [F1] (General) Effect unit structure (p. 28)
  - [F2] (EFX Prm) * EFX Type (p. 33)
  - [F3] (EFX Ctl) * Use MIDI controllers to modify EFX settings (p. 104)
  - [F4] (Chorus) * Chorus (p. 53)
  - [F5] (Reverb) * Reverb (p. 54)

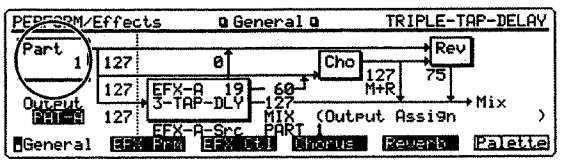
Use the following procedure to set each Part. For each setting, refer to the reference page given in the diagram above.

1. Select the Performance you wish to use, and access the PERFORM Play page. (→p. 17)
2. Press [F2] (K.Range)—[F5] (Effects). The desired page will appear.
3. If you have selected Effects, press [F1] (General)—[F5] (Reverb). The desired page will appear.
4. Press PART SELECT [1/9]—[8/16] to select the Part you wish to set.

   If you wish to select a Part 9—16, make the [1-8/9-16] indicator light, and use PART SELECT [1/9]—[8/16].

   The indicator will blink, and the Part number will appear in the upper right of the display (left, in the case of the General page of Effects).





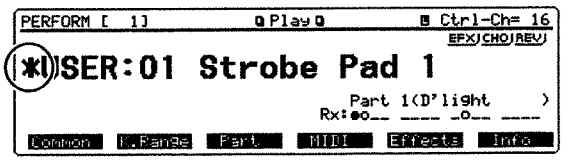
** Since the Effects [F2] (EFX Prm)—[F5] (Reverb) settings are common to all Parts, it is not possible to select the Part to which the settings will apply.*

5. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
6. Either rotate the VALUE dial or press [INC][DEC] to set the value.

** If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

7. Repeat steps 1—6 to complete settings for the Performance.
8. Press [EXIT] to return to the PERFORM Play page.

   An "*" symbol will appear at the left of the Performance group to indicate that the settings have been modified.



** If the power is turned off or another Performance selected while the "*" symbol is displayed, the modified Performance settings will be lost. If you wish to keep them, use the Save procedure. (→p. 56)*

** Settings common to all Parts are made in [F1] (Common). For details refer to "Performance Name →p. 59," "Clock Source, Performance Tempo →p. 110—123."*

** [F6] (Info) allows you to verify the MIDI receive status of each Part. (→p. 143)*

To change a value in large steps

On the JV-2080, data values can be modified using either the VALUE dial or [INC][DEC]. When using these methods, the data values will change more quickly if the following procedures are used.

VALUE dial

Rotate the VALUE dial while pressing it. Alternatively, rotate the VALUE dial while pressing [SHIFT].

[INC] [DEC]

To increase a value quickly

Hold down [INC] and press [DEC]. Alternatively, hold down [SHIFT] and press [INC].

To decrease a value quickly

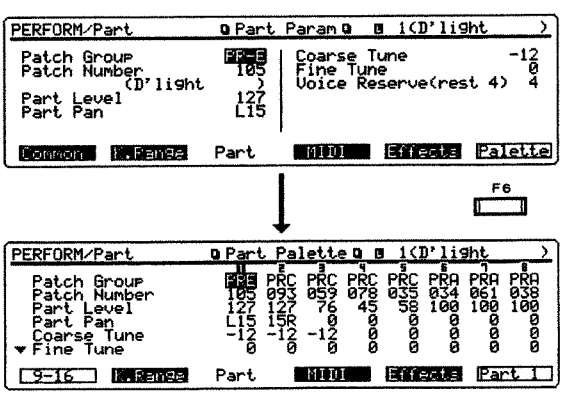
Hold down [DEC] and press [INC]. Alternatively, hold down [SHIFT] and press [DEC].

● Comparing the settings of each Part as you make settings

You can view the setting values of eight Parts (Parts 1—8 or Parts 9—16) in a single page.

1. If you have been making settings for each Part, press [F6] (Palette) to access the Part Palette page.

** [F6] (Palette) will be displayed only when you have the option of selecting the Part Palette display.*



2. Use PART SELECT [1/9]—[8/16] to select the Part which you wish to set.

   To select a Part 9—16, make the [1-8/9-16] indicator light and then press PART SELECT [1/9]—[8/16].

You can also use [◄][►] to select the Part which you wish to set.

Each time you press [F1] the Part 1—8 and Part 9—16 Part Palette displays will alternate.

3. Use [▲][▼] to move the cursor to the item you wish to set.

If you hold down [SHIFT] and press [▲] the cursor will move to the top item, and if you hold down [SHIFT] and press [▼] the cursor will move to the bottom item.

4. Either rotate the VALUE dial or press [INC][DEC] to set the value.

** If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

5. Repeat steps 1—4 to complete settings for the Performance.

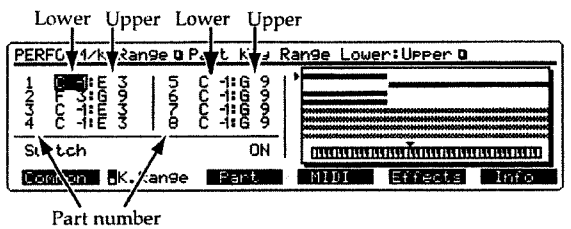
6. To exit the Part Palette page press [F6].

[F6] will display the Part number to which you will return.

■ Keyboard Range ([PERFORM]→[F2] (K.Range))

Here you can set the range of notes that each Part will sound (Key Range). Make these settings when you wish to divide the keyboard into areas with a different Patch in each area (Split).

The screen will show a keyboard graphic to indicate the specified area.



1—16 (Parts 1—16)

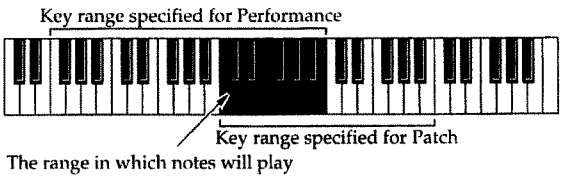
For each Part, specify the lower and upper note limit in the range of C -1—G 9.

Switch (Key range switch)

Specify whether the note range for each Part will be valid (ON), or ignored (OFF).

** The Part Key Range Lower:Upper page contains pages for Parts 1—8 and Parts 9—16. To switch between these, press [F2] (K.Range).*

** If a note range is specified for each Tone within the Patch (Tone Key Range Lower:Upper page [PATCH]→[F1] (Common)→[F4] (K.Range)) (→p. 76), notes will sound only in the area where the settings of each Tone in the Patch overlap with the settings of the Part.*

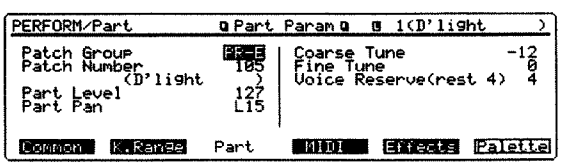


** If you attempt to raise the lower key higher than the upper key, or to lower the upper key below the lower key, the other value will be automatically modified to the same setting.*

** If a Part is turned off, the graphic will be displayed as a gray line.*

■ Patch Selection / Volume / Pan / Pitch / Polyphony ([PERFORM]→[F3] (Part))

Here you can select the Patch assigned to each Part, and set the volume, pan, pitch, and polyphony of each Part.



Patch Group

Select the group of the Patch (or Rhythm Set in the case of Part 10) that will be assigned to each Part.

** You can also press the VALUE dial (SOUND LIST) to select from the Patch list.*

** You can use the Patch Search function. (→p. 19)*

** It is not possible to select XP-A—H unless a wave expansion board is inserted into the corresponding slot. (→p. 9)*

** It is not possible to select CARD unless a DATA card is inserted into the CARD slot. (→p. 11)*

** When XP-A—H is selected, the name of the wave expansion board will appear in the lower part of the display.*

Patch Number

Select the Patch (or Rhythm Set in the case of Part 10) that is to be assigned to each Part. The name will be displayed inside the parentheses ( ).

** You can also press the VALUE dial (SOUND LIST) and select from the Patch list.*

** You can use the Patch Search function. (→p. 19)*

Part Level

Specify the volume of each Part. This is used mainly to create the volume balance between Parts.

Part Pan

Specify the stereo location of the sound of each Part. A setting of L64 is far left, 0 is center, and 63R is far right.

** Patches also contain a pan setting. (The Tone Pan setting for each Tone (TVA Param page [PATCH]→[F4] (TVA)→[F1] (TVA Prm)) and Patch Pan setting for the entire Patch (Common General page [PATCH]→[F1] (Common)→[F1] (General)) This means that the Part Pan setting will only adjust the stereo position relative to the location specified within the Patch.*

Coarse Tune (Part coarse tune)

Adjust the basic pitch for each Part in semitone steps over a range of +/-4 octaves. This is a relative setting, with a setting of 0 resulting in the pitch setting of the Patch.

Fine Tune (Part fine tune)

Adjust the pitch specified by the Coarse Tune setting in 1-cent steps over a range of half a semitone up or down (1 cent is 1/100th of a semitone).

Voice Reserve

This setting specifies the number of voices that will be reserved for each Part when more than 64 voices are played simultaneously.

** It is not possible for the settings of all Parts to total more than 64. The remaining number of available voices will be displayed at the right of this item (rest). Be aware of this display as you make settings.*

How simultaneous polyphony is counted

The number of notes that can be sounded simultaneously will depend on the number of Tones in the Patch that you are using and the number of keys that are being pressed. For example if you are using a Patch which consists of only one Tone and you play one key, this will use up one voice of polyphony. If you are using a Patch which consists of four Tones and you play two keys, this will use up eight voices of polyphony. In other words, the number of voices being used will be the number of Tones x the number of keys.

The JV-2080 is able to play up to 64 notes simultaneously. When you are using the JV-2080 to play an ensemble, keep the above points in mind, and make Voice Reserve settings as appropriate to ensure that each Part will always be guaranteed a minimum number of voices.

Another way to select the Patch assigned to each Part (or Rhythm Set, in the case of Part 10)

1. In the PERFORM Play page use [◄][►] to select the Part you wish to set. (The display will indicate the Part number.)
2. Hold down [PERFORM] and press [PATCH].

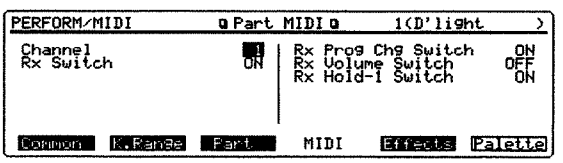
   The Play page for the Patch or Rhythm Set assigned to the Part will appear.
3. Use the usual procedure to select a Patch or Rhythm Set.

** If you make a mistake, press [UNDO] and the value that was in effect when the the Play page for the Patch or Rhythm Set assigned to the Part appeared will be restored.*

4. Press [PERFORM] or [EXIT] to return to the PERFORM Play page.

■ Settings Concerned with MIDI ([PERFORM]→[F4] (MIDI))

Here you can specify how each Part will transmit and receive MIDI messages.



Channel (MIDI channel)

Specify the MIDI channel for each Part.

Rx Switch (Receive switch)

Specify whether each Part will receive MIDI messages (ON), or not (OFF).

In other words, this specifies whether each Part will be used (ON) or not (OFF).

**In each PERFORM page, you can use the [RX] and PART SELECT [1/9]—[8/16] and [1-8/9-16] buttons to switch RX Switch. (→p. 64)*

Rx Prog Chg Switch (Receive program change switch)
Specify whether each Part will receive MIDI Program Change messages (ON) or not (OFF).

Rx Volume Switch (Receive volume switch)
Specify whether each Part will receive MIDI Volume messages (ON) or not (OFF).

Rx Hold-1 Switch (Receive hold 1 switch)
Specify whether each Part will receive MIDI Hold 1 messages (ON) or not (OFF).

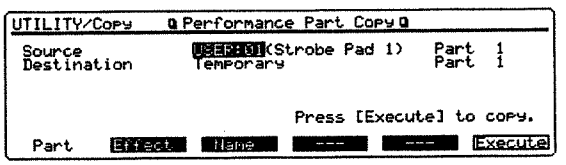
■ Effects ([PERFORM]→[F5] (Effects)→[F1]—[F5])

For effect settings, refer to ([F1] (General)→p. 28, [F2] (EFX Prm)→p. 33, [F3] (EFX Ctl)→p. 104, [F4] (Chorus)→p. 53, [F5] (Reverb)→p. 54).

Copying Settings from Some Other Part

Part settings can be copied from a Part of another performance to a desired Part of the currently selected Performance. This function can save you time.

1. Make sure a Performance is selected.
2. Press [UTILITY] to make the indicator light.
3. Press [F2] (Copy).
4. Press [F1] (Part). The Performance Part Copy page will appear.



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

Destination "Temporary" indicates that the currently selected Performance is the copy destination.

5. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
6. Either rotate the VALUE dial or press [INC][DEC] to set the value.

   When the cursor is located at group:number, you can also use [USER][CARD][PRESET][A][B] to select the group.

   When the cursor is located at Part, you can also use PART SELECT [1/9]—[8/16] and [1-8/9-16] to select the Part.
7. Press [F6] (Execute) to execute the copy operation.
8. Press [EXIT] several times to return to the PERFORM Play page.

Creating Patches for Each Part While still in Performance Mode

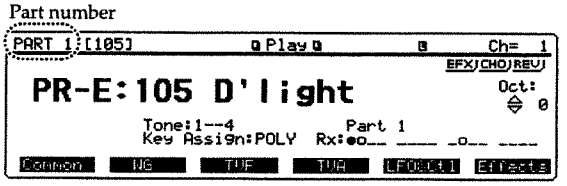
Even while you are creating a Performance, you can easily call up the Patch (or Rhythm Set in the case of Part 10) assigned to each Part and modify its settings.

1. Make sure the PERFORM Play page is displayed.
2. Use [◄][►] to select the Part to which the Patch you wish to modify is assigned.
3. Hold down [PERFORM] and press [PATCH].

   The Play page for the Patch assigned to the Part will appear.

   In this page as well, you can use [◄][►] to select the Part to which the Patch you wish to modify is assigned.

Part number



4. Modify the Patch settings in the usual way. (Creating a Patch →p. 70)
5. When you finish making settings, press [EXIT] to return to the Patch Play page.

   An "*" symbol will appear at the left of the Patch group to indicate that the settings have been modified.
6. Press either [PERFORM] or [EXIT] to return to the PERFORM Play page.

If you wish to keep the modified Patch, save it into internal memory after step 5. (→p. 56) After saving the Patch, return to the PERFORM Play page in step 6, and save the Performance as well. (→p. 56) If you save the Performance without saving the Patch, the modified Patch settings will not be saved. (Column **When you have modified the settings of the Patch assigned to a Part of the Performance →p. 57)*

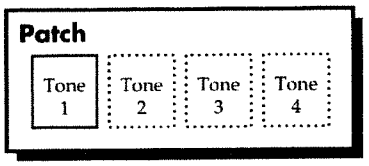
**In the Play page of a Patch which is assigned to a Part, you can use the [RX] and PART SELECT [1/9]—[8/16] and [1-8/9-16] buttons to switch Parts on/off.*

Creating a Patch

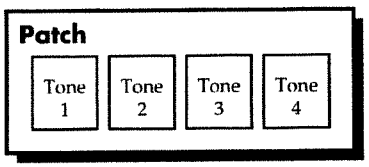
How a Patch Is Organized

■ Patches Sound 1—4 Tones

On the JV-2080, the sounds that you normally play are called "Patches." Each Patch consists of up to four "Tones."



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

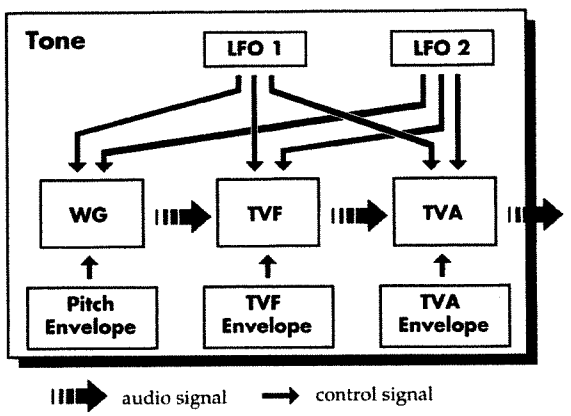


Example 2: A Patch consisting of four Tones.

By switching Tones on/off you can specify which Tones will actually sound. (→p. 71)
You can also specify how Tones 1 and 2 and Tones 3 and 4 will be combined internally (Structure). (→p. 74)

■ How a Tone Is Organized

On the JV-2080, tones are the smallest unit of sound. However, it is not possible to play a Tone by itself. The Patch is the unit of sound which can be played, and the Tones are the basic building blocks which make up the Patch. Tones consist of the following five components.



WG (Wave generator)
This specifies the PCM waveform (wave) that is the basis of the sound, and determines how the pitch of the sound will change.
The JV-2080 has 448 different waveforms (INT-A: 255 and INT-B: 193). (Factory settings "Waveforms" →p. 182). All Patches built into the JV-2080 consist of combinations of Tones which are created based on these waveforms.

TVF (Time variant filter)
This specifies how the frequency characteristics of the sound will change.

TVA (Time variant amplifier)
This specifies how the volume and panning will change.

Envelope
The envelope specifies how change will occur over time. There are separate envelopes for Pitch, TVF (filter), and TVA (volume). For example if you wish to modify the way in which the sound attacks or decays over time, you would adjust the TVA envelope.

LFO (Low frequency oscillator)
The LFO creates cyclic change (modulation). There are two LFOs, and the WG (pitch), TVF (filter), and TVA (volume) effects can be applied to each of the LFOs. When an LFO is applied to the WG pitch, a vibrato effect is produced. When an LFO is applied to the TVF cutoff frequency, a wah effect is produced. When an LFO is applied to the TVA volume, a tremolo effect is produced.

Tips for Creating a Patch

● Select a Patch that is close to what you have in mind

When you wish to create a new sound, simply selecting a Patch at random and blindly changing the settings will not get you very close to the sound that you want. It is important to first select a Patch that is close to the sound that you have in mind. (Selecting Patches →p. 17)

● 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 unnecessary Tones so that the available simultaneous voices will not be wasted. (Selecting the Tones That Will Sound →p. 71)

● Check the way in which the Tones are combined

Structure Type 1&2 and 3&4 (Structure page [PATCH]→[F1] (Common)→[F3] (Struct)) are important parameters which determine how the four Tones will be combined. Before you actually select different Tones, you should be sure to understand how each Tone is related to the other. (→p. 74)

● Turn off the effects

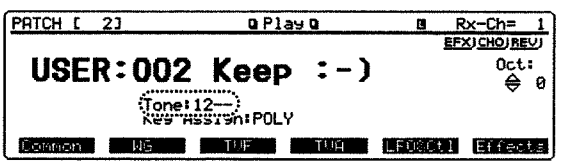
The effects have a very great influence on the sound, and simply turning off the effects may make the sound quite different. Since you will hear the original sound of the Patch itself when the effects are turned off, the results of your modifications will be easier to hear. Also, there may be cases in which simply changing the effect settings is sufficient to produce the sound that you want. (Effect Settings →p. 25)

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

Here's how to turn on the Tones that you want to sound. Also, you can audition just a specific Tone by turning all the other Tones off.

1. Select the Patch that you wish to use, and access the PATCH Play page. (→p. 17)
2. Hold down [SHIFT] and press a TONE SWITCH [1]—[4] to switch the Tone on (indicator lit) or off (indicator dark).

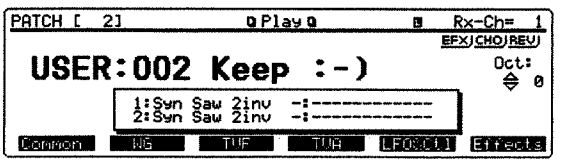
   "Tone:" in the lower center of the PATCH Play page will indicate the numbers of the Tones which are on. Tones which are off will be indicated as "-."



** This setting is linked with the Tone Switch setting (Wave Param page [PATCH]→[F2] (WG)→[F1] (WG Prm)). (→p. 80)*

** If you wish to view the name of the waveform that each Tone is based on as you switch the Tones on/off, hold down [SHIFT] and press [F2] (W.Info).*

The name of the waveform that each Tone is based on will be displayed. Tones which are turned off will be displayed as "----------." Press [EXIT] to return to the normal display.



Settings Common to the Entire Patch ([PATCH]→[F1] (Common)→[F1]—[F5])

1. Select the Patch that you wish to use, and access the PATCH Play page. (→p. 17)
2. Press [F1] (Common).
3. Then press [F1]—[F5] to access the desired page.

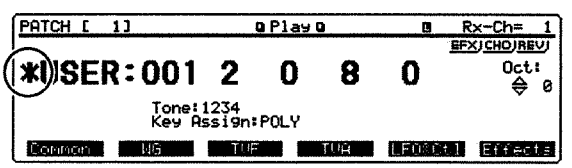
** When the setting pages are displayed, you can press TONE SWITCH [1]—[4] to turn each Tone on/off.*

4. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
5. Either rotate the VALUE dial or press [INC] [DEC] to set the value.

** If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

6. Press [EXIT] to return to the PATCH Play page.

   An (*) symbol will appear at the left of the group to indicate that the settings have been changed.



** If you turn off the power or select another Patch while the "*" symbol is displayed, the modified Patch settings will be lost. If you wish to keep them, perform the Save procedure. (→p. 56)*

To change a value in large steps

On the JV-2080, data values can be modified using either the VALUE dial or [INC][DEC]. When using these methods, the data values will change more quickly if the following procedures are used.

VALUE dial

Rotate the VALUE dial while pressing it. Alternatively, rotate the VALUE dial while pressing [SHIFT].

[INC] [DEC]

To increase a value quickly

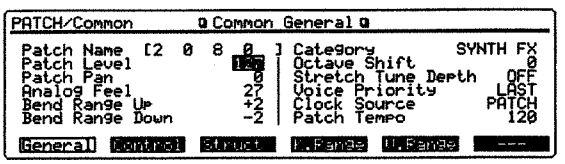
Hold down [INC] and press [DEC]. Alternatively, hold down [SHIFT] and press [INC].

To decrease a value quickly

Hold down [DEC] and press [INC]. Alternatively, hold down [SHIFT] and press [DEC].

● Common General page ([PATCH]→[F1] (Common)→[F1] (General))

Here you can assign a name to the Patch, and make settings such as volume or pan for the entire Patch.



Patch Name

Assign a name to the Patch (up to 12 characters). For details refer to "Modifying the Name" →p. 59.

Patch Level

Specify the volume of the Patch.

** The volume of each Tone is specified by the Tone Level setting (TVA Param page [PATCH]→[F4] (TVA)→[F1] (TVA Prm)). (→p. 85)*

Patch Pan

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

** The stereo location of each Tone is specified by the Tone Pan setting (TVA Param page [PATCH]→[F4] (TVA)→[F1] (TVA Prm)). (→p. 85)*

Analog Feel (Analog feel depth)

Specify the depth of 1/f modulation that is to be applied to the Patch. (1/f modulation is a pleasant and naturally-occurring ratio of modulation that occurs in a babbling brook or rustling wind.)

By adding this "1/f" modulation, you can simulate the natural instability characteristic of an analog synthesizer.

Bend Range Up

Specify the amount (in semitones) of pitch bend that will occur when the bender lever of a connected MIDI keyboard is moved to the far right position (or for a wheel, the fully upward position). With a setting of 12, moving the pitch bend lever to the far right position will raise the pitch 1 octave.

Bend Range Down

Specify the amount (in semitones) of pitch bend that will occur when the bender lever of a connected MIDI keyboard is moved to the far left position (or for a wheel, the fully downward position). With a setting of 48, moving the pitch bend lever to the far left position will lower the pitch 4 octaves.

Category (Patch category)

Specify the type (category) of the Patch.

The Patch Search function uses this setting. This setting also determines the phrase that will be sounded by the Phrase Preview function.

For details on the category names, refer to →p. 20.

Octave Shift

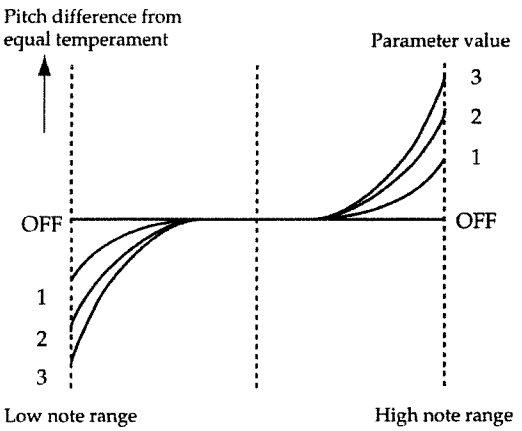
Specify the pitch of the Patch in units of an octave (+/-3 octaves).

** This setting can also be made in the PATCH Play page. (→p. 23)*

Stretch Tune Depth

This setting allows you to apply "stretched tuning" to the Patch. (Stretched tuning is a system by which acoustic pianos are normally tuned, causing the lower range to be lower and the higher range to be higher than the mathematical tuning ratios would otherwise dictate.) With a setting of OFF the tuning will be equal temperament. A setting of 3 will produce the maximum difference in the pitch of the low and high ranges.

The diagram shows the pitch change relative to equal temperament that will occur in the low and high ranges. This setting will have a subtle effect on the way in which chords resonate.



Voice Priority

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

Clock Source (Patch clock source)

The LFO cycle, EFX changes, phrase loop (break beats), and Tone delay time can be synchronized to a clock (tempo). When this is used, this Clock Source setting determines the clock which will be used.

PATCH : The Patch Tempo will be used.

SYSTEM : The System Tempo common to the entire JV-2080 or the clock messages from an external sequencer will be used.

** Ways in which clock (tempo) synchronization can be used are discussed in the explanations for LFO frequency (→p. 110), EFX changes (→p. 114), Phrase Loop (Break Beats)(→p. 117), and Tone delay time (→p. 119).*

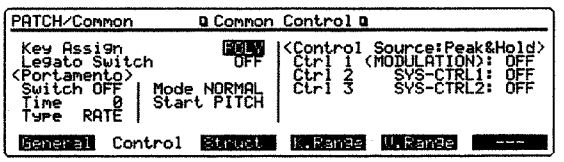
Patch Tempo

If Clock Source is set to Patch Tempo, the setting you make here will be valid.

** Clock messages for the Patch Tempo will not be transmitted from the MIDI OUT connector.*

● Common Control page ([PATCH]→[F1] (Common)→[F2] (Control))

Here you can make settings for the operation and effects of various controllers.



Key Assign

Specify whether the Patch will play polyphonically (POLY) or monophonically (SOLO). When using a Patch that simulates a monophonic instrument (such as a sax or flute), it is effective to select SOLO. This setting is also displayed in the PATCH Play page.

POLY : Multiple notes can be played simultaneously.

SOLO : Only the last-played note will sound.

** This setting can also be changed in the PATCH Play page. (→p. 24)*

Legato Switch (Solo legato switch)

Solo Legato is valid when Key Assign is set to SOLO. This setting specifies whether the Solo Legato function will be used (ON) or not (OFF).

When the Legato Switch is ON, pressing a key while a previous key is still pressed will cause the existing sound to be maintained while the pitch changes to that of the newly-pressed key. This allows you to simulate the hammering-on and pulling-off playing technique of a guitarist.

<Portamento>

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).

Switch (Portamento switch)

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

Time (Portamento time)

When portamento is used, this specifies the time over which the pitch will change. Higher settings will cause the pitch change to the next note to take more time.

Type (Portamento type)

Specify the type of portamento effect.

RATE : The time of the pitch change will change proportionately to the pitch.

TIME : The pitch will change over a fixed time, regardless of the pitch.

Mode (Portamento mode)

Specify the performance conditions for which portamento will be applied.

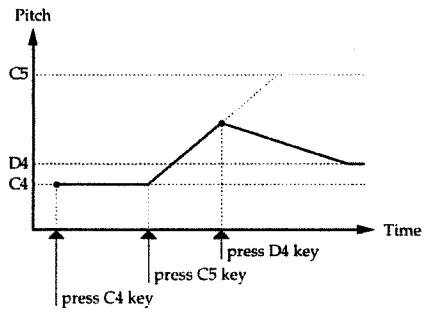
NORMAL : Portamento will always apply.

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

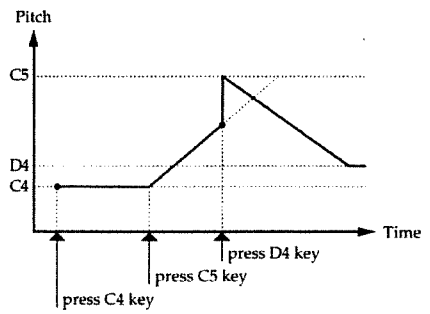
Start (Portamento start)

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

PITCH : When another key is pressed while the pitch is moving, portamento will begin anew from the pitch that had been reached at that moment.



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



<Control Source:Peak&Hold>

(Patch contoroller 1—3 control source:peak&hold)

The JV-2080 allows you to use external MIDI controllers (modulation lever, foot switch, expression pedal etc.) to modify Tone settings in real-time. MIDI messages are transmitted when you operate a MIDI controller. Tone settings are controlled by these MIDI messages.

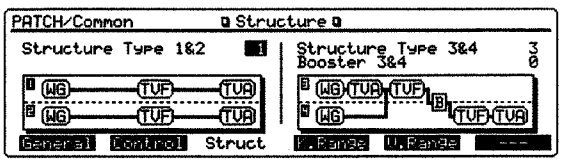
This specifies which MIDI messages will be used for control, and whether pedal messages (Hold1, 2, Sostenuto, Soft) will be used to maintain the modified condition.

For details refer to "Modifying Tone Settings " →p. 106.

** The Control Source settings are linked with the Common Source settings (Control Param page [PATCH]→[F5] (LFO&Ctl)→[F3] (Control)).*

● Structure page ([PATCH]→[F1] (Common)→[F3] (Struct))

Specify how the Tones will be combined.



Structure Type 1&2

Structure Type 3&4

Specify how Tones 1 and 2 or Tones 3 and 4 will be combined. The following 10 different Types of combination are available.

** To save space, the settings are indicated in the display using abbreviations. These abbreviations have the following meanings.*

B: Booster (What is a booster →p. 75)

R: Ring Modulator (What is a ring modulator →p. 76)

TYPE1 : In this type, Tones 1 and 2 (3 and 4) are independent. Use this setting when you wish to take advantage of the PCM sound itself, or when you wish to create separate sounds with each Tone and layer them.

TYPE2 : This type stacks the two filters together to intensify the characteristics of the filters. The TVA of Tone 1 (3) will control the volume balance of the two Tones.

TYPE3 : This type mixes Tone 1 (3) and Tone 2 (4), applies a filter to the mixed sound, and passes the result through a booster to distort the waveform.

TYPE4 : This type uses a booster to distort the waveform, and stacks the two filters together. The TVA of Tone 1 (3) will control the volume balance of the two Tones to adjust the effect of the booster.

TYPE5 : This type passes the sound through a ring modulator to create new overtones, and stacks the two filters. The TVA of Tone 1 (3) will control the volume balance of the two Tones to adjust the depth of ring modulator.

TYPE6 : This type passes the sound through a ring modulator to create new overtones, and also mixes the sound of Tone 2 (4) and stacks the two filters. The sound produced by the ring modulator can be mixed with Tone 2 (4), allowing the Tone 1 (3) TVA to adjust the amount of ring modulation sound.

TYPE7 : This type sends the filtered Tone 1 (3) and Tone 2 (4) through a ring modulator to generate new overtones.

TYPE8 : This type sends the filtered Tone 1 (3) and Tone 2 (4) through a ring modulator, and then mixes in the sound of Tone 2 (4) and applies a filter to the result.

TYPE9 : This type sends the filtered sound of each Tone through a ring modulator to generate new overtones. The Tone 1 (3) TVA will control the volume balance of the two Tones, adjusting the depth of ring modulator.

TYPE10: This type sends the filtered sound of each Tone through a ring modulator to generate new overtones, and then mixes in the sound of Tone 2 (4). Since the ring-modulated sound can be mixed with Tone 2 (4), Tone 1 (3) TVA can adjust the amount of the ring-modulated sound.

** When a Tone is turned off, the graphic will be displayed as a gray figure.*

** When TYPE 2—10 is selected and one Tone of a pair is turned off, the other Tone will be sounded as TYPE 1 regardless of the displayed setting.*

** If you limit the keyboard area in which a Tone will sound (→p. 76) or limit the range of velocities for which it will sound (→p. 76), the result in areas or ranges where the Tone does not sound is just as if the Tone had been turned off. This means that if TYPE 2—10 is selected and you create a keyboard area or velocity range in which one Tone of a pair does not sound, notes played in that area or range will be sounded by the other Tone as TYPE 1 regardless of the displayed setting.*

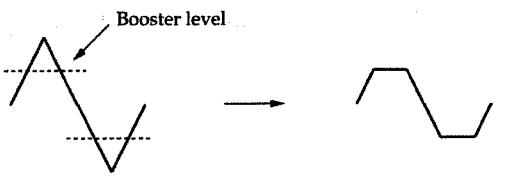
Booster 1&2 (Booster gain 1&2)
Booster 3&4 (Booster gain 3&4)

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

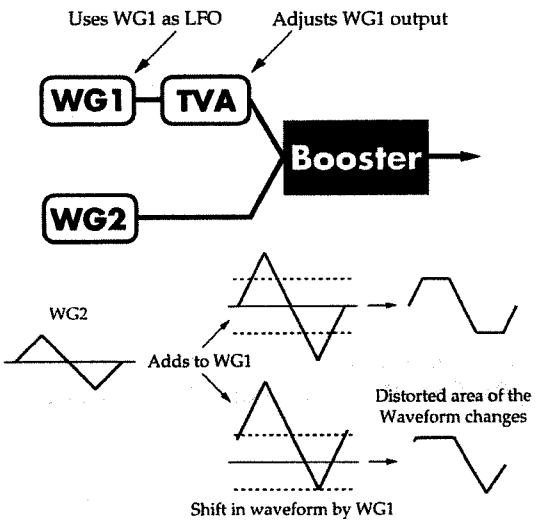
** This parameter will be displayed only when Structure Type is set to Type 3 or Type 4.*

<What is a booster?>

Booster is a function which distorts the input signal.

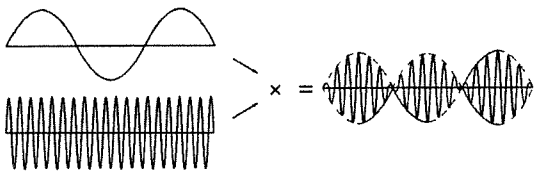


In addition to using this to create distortion, you can use the waveform (WG1) of one of the Tones as an LFO which shifts the other waveform (WG2) upward or downward to create modulation similar to PWM (pulse width modulation). This is even more effective when used in conjunction with Wave Gain (Wave Param page [PATCH]→[F2] (WG)→[F1] (WG Prm)). (→p. 80)



<What is a ring modulator?>

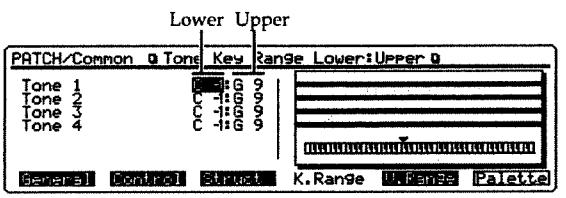
A ring modulator multiplies the waveforms of two Tones with each other, generating many new overtones (inharmonic partials) which were not present in either waveform. (Unless one of the waveforms is a sine wave, evenly-spaced frequency components will not usually be generated.) Since the overtone structure will change according to the pitch difference between the two waveforms, the sound will be unpitched and have a metallic resonance. This function is suitable for creating metallic sounds such as bells.



● Tone Key Range Lower:Upper page ([PATCH]→[F1] (Common)→[F4] (K.Range))

This specifies the keyboard range of each Tone. Make these settings when you want different Tones to sound in different areas of the keyboard.

The specified area will be displayed graphically.



Tone 1—4

Specify the lower (Lower) and upper (Upper) limits in which each Tone will sound, in the range of C -1—G 9.

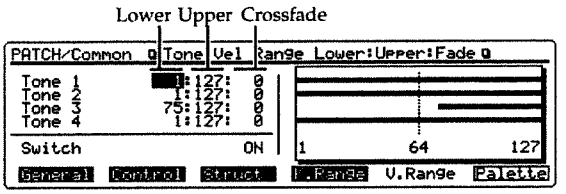
** If you attempt to set the Lower key above the Upper, or the Upper key below the Lower, the other setting will automatically be adjusted to the same value.*

** If a Tone is turned off, the graphic will be displayed as a gray line.*

● Tone Vel Range Lower:Upper:Fade page ([PATCH]→[F1] (Common)→[F5] (V.Range))

Specify the range of playing dynamics (key velocity) which will sound the Tone. Make these settings when you want different Tones to sound in response to notes played at different strengths.

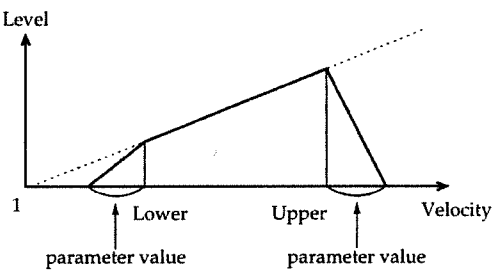
The specified range will be displayed as graphically.



Tone 1—4

For each Tone, specify the upper and lower limit of the key velocities that will sound the Tone, in a range of 1 to 127. When a key is played more softly than the lower limit, or more strongly than the upper limit, the sound will either not be heard at all or will be extremely weak.

Set the Crossfade setting to specify how the volume will change when the key velocity falls outside of the specified range. Higher settings will produce a more gradual change in volume. If you want notes played outside the specified key velocity range to not be sounded at all, set this to 0.



** If you attempt to set the Lower velocity limit above the Upper, or the Upper below the Lower, the other value will automatically be adjusted to the same setting.*

** If a Tone is turned off, the graphic will be displayed as a gray line.*

Switch (Velocity range switch)

Specify whether the three settings (velocity lower limit, upper limit, crossfade) will be valid for each Tone (ON) or will be ignored (OFF).

** When the Tone Key Range Lower:Upper page and the Tone Vel Range Lower:Upper:Fade page are displayed, you can press [F6] (Palette) to view the settings of the two pages in a single Tone Palette page. For details refer to "Comparing the settings of Tones as you make settings" →p. 78.*

Settings for Each Tone

The parameters which can be set for each Tone of the Patch are assigned to the function buttons as follows.

Creating a Patch

* Patch settings are indicated by an "*," and unmarked items are settings for each Tone.

- [F2] (WG)
  - [F1] (WG Prm) — Waveform select / Tone on/off / Delay etc. (p. 79)
  - [F2] (Pitch) — Pitch (p. 82)
  - [F3] (Pch Env) — Pitch envelope (p. 82)
- [F3] (TVF)
  - [F1] (TVF Prm) — Use the filter to modify the brightness (p. 83)
  - [F2] (TVF Env) — TVF envelope (p. 84)
- [F4] (TVA)
  - [F1] (TVA Prm) — Volume / Pan (p. 85)
  - [F2] (TVA Env) — TVA envelope (p. 85)
- [F5] (LFO & Ctl)
  - [F1] (LFO 1) — Apply vibrato or tremolo (p. 86)
  - [F2] (LFO 2) — Apply vibrato or tremolo (p. 86)
  - [F3] (Control) — Use MIDI controllers to modify Tone settings (p. 106)
  - [F4] (Ctrl Sw) — How MIDI messages are received (p. 88)
- [F6] (Effects)
  - [F1] (General) — Effect unit structure (p. 25)
  - [F2] (EFX Prm) — * EFX Type (p. 33)
  - [F3] (EFX Ctl) — * Use MIDI controllers to modify EFX settings (p. 104)
  - [F4] (Chorus) — * Chorus (p. 53)
  - [F5] (Reverb) — * Reverb (p. 54)

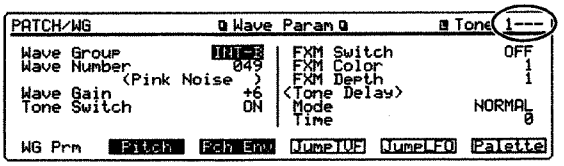
Use the following procedure to make settings for each Tone. For details on each parameter, refer to the page given in the diagram.

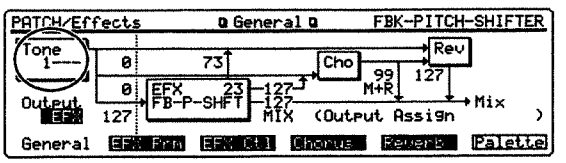
1. Select the Patch you wish to use, and access the PATCH Play page. (→p. 17)
2. Press [F2] (WG)—[F6] (Effects) to select the page group.
3. Then press [F1]—[F5] to access the desired page.

* *While the various setting pages are displayed, you can press TONE SWITCH [1]—[4] to turn the Tones on/off.*

4. Press TONE SELECT [1]—[4] to select the Tone you wish to set.

   The indicator will blink, and the Tone number will appear in the upper right of the display (left, for the General page of Effects).





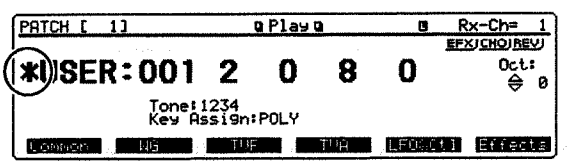
* *Since Effects settings [F2] (EFX Prm)—[F5] (Reverb) are common to all Tones, it is not possible to select the Tone to which the settings will apply.*

5. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
6. Either rotate the VALUE dial or press [INC][DEC] to set the value.

* *If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

7. Repeat steps 1—6 to complete the Patch settings.
8. Press [EXIT] to return to the PATCH Play page.

   An "*" symbol will appear at the left of the Patch group to indicate that the settings have been modified.



* *If you turn off the power or select another Patch while the "*" symbol is displayed, the modified Patch settings will be lost. If you wish to keep them, perform the Save operation. (→p. 56)*

Jumping to a page group

In the pages of the WG, TVF, TVA, and LFO&Ctl groups, a page jump function is assigned to [F4] and [F5].

The [F4] button circulates through the WG, TVF, and TVA page groups, jumping in the order of WG→TVF→TVA→WG... For example when you are making settings for the various envelopes, this function provides a quick and convenient way to do so.

The [F5] button moves back and forth between the LFO&Ctl and WG, LFO&Ctl and TVF, and LFO&Ctl and TVA page groups. This is convenient when you are setting LFO depth and control 1&2 depth, etc.

To change a value in large steps

On the JV-2080, data values can be modified using either the VALUE dial or [INC][DEC]. When using these methods, the data values will change more quickly if the following procedures are used.

VALUE dial

Rotate the VALUE dial while pressing it. Alternatively, rotate the VALUE dial while pressing [SHIFT].

[INC] [DEC]

To increase a value quickly

Hold down [INC] and press [DEC]. Alternatively, hold down [SHIFT] and press [INC].

To decrease a value quickly

Hold down [DEC] and press [INC]. Alternatively, hold down [SHIFT] and press [DEC].

● Comparing the settings of Tones as you make settings

You can view the settings for all 4 Tones in a single page.

1. When you are making settings for each Tone, press [F6] (Palette) to display the Tone Palette page.

**[F6] (Palette) is displayed only when it is possible to switch to the Tone Palette page.*

The parameters of multiple pages will be displayed in a single Tone Palette page.

The two Common pages (Tone Key Range Lower:Upper, Tone Vel Range Lower: Upper:Fade)

The three WG pages (Wave Param, Pitch, Pitch Envelope)

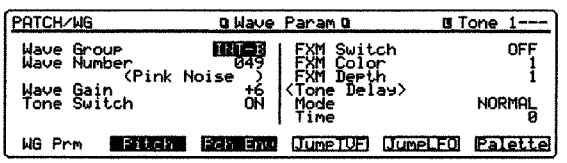
The two TVF pages (TVF Param, TVF Envelope)

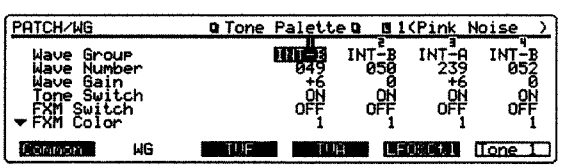
The two TVA pages (TVA Param, TVA Envelope)

The four LFO&Ctl pages (LFO1, LFO2, Control Param, Control Switch)

Only the General page will be displayed for Effects.

When the Tone Palette page is displayed, the [F1]—[F5] button names will be the same as when the PATCH Play page is displayed.





2. Use TONE SELECT [1]—[4] or [◄][►] to select the Tone you wish to set.

   The indicator will blink.

   To select two or more Tones simultaneously, press and hold one of the TONE SELECT [1]—[4] buttons, and then press the other TONE SELECT [1]—[4] button(s). Tone numbers other than the first-specified one will be indicated by a "*" symbol.

   The second- and subsequently-specified Tones can be selected/de-selected by holding down [SHIFT] and pressing TONE SELECT [1]—[4].

3. Use [▲][▼] to move the cursor to the item you wish to set.

   If you hold down [SHIFT] and press [▲] the cursor will jump to the top item. If you hold down [SHIFT] and press [▼] the cursor will jump to the bottom item.

4. Either rotate the VALUE dial or press [INC][DEC] to set the value.

   If two or more Tones are selected for modification, the difference between their values will maintained as you adjust the value.

   If you wish to set these Tones to match the setting of the first-selected Tone number, hold down [SHIFT] and press the VALUE dial.

** If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

5. Repeat steps 1—4 to complete settings for the Patch.
6. To exit the Tone Palette page, press [F6].

   [F6] will display the Tone number to which you will return.

■ Tips for Selecting the Waveform

The sounds of the JV-2080 are based on complex PCM waveforms, and if you attempt to make settings that are contrary to the type of the original waveform, the results will not be as you expect.
The internal waveforms of the JV-2080 fall into the following two groups.

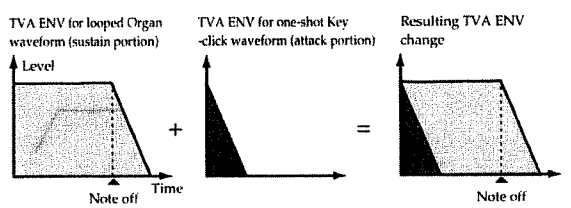
One-shot

These are sounds with a short decay. One-shot waveforms are recorded in their entirety, from the attack until the end of the sound. This group includes waveforms which constitute a complete sound, such as percussion instruments, but also includes many waveforms which provide attack components of a sound, such as the hammer strike of a piano or the fret noise of a guitar.

Loop

These are sounds that have a long decay or which are sustained. Loop waveforms repeatedly play back (loop) the portion of the waveform after the sound has reached a relatively steady state. This group also includes many component waveforms such as the string resonances of a piano or the bore resonances of a wind instrument.

The following diagram shows an example of combining one-shot and loop waveforms to create a sound (Electric organ).

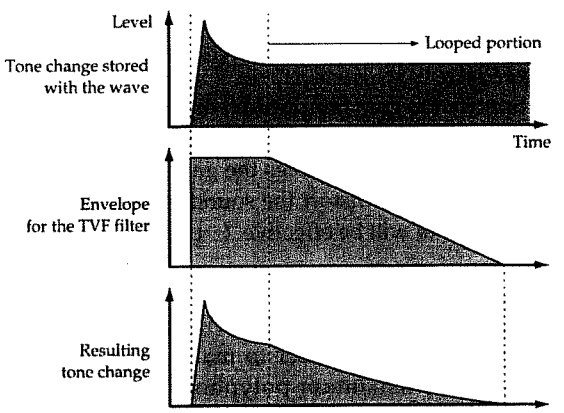


● Cautions when using a one-shot waveform

It is not possible to use the envelope to modify a one-shot waveform to create a decay that is longer than the original waveform, or to turn it into a sustaining sound. Even if you made such envelope settings, it is impossible to bring out sound that is not present in the original waveform.

● Cautions when using a loop waveform

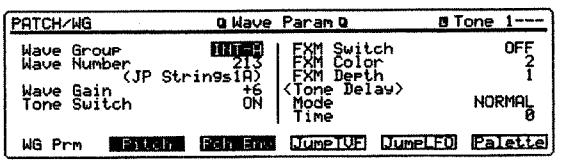
The tone of most acoustic instruments such as piano or sax changes rapidly and significantly during the first moments of the attack, and it is this initial portion that gives the instrument its characteristic sound or identity. For such waveforms, it is best to use the complex tonal changes of the attack portion of the waveform just as they are, and to use the envelope only to modify the decay portion. If you attempt to use the envelope to modify the attack portion as well, the characteristics of the original waveform may prevent you from getting the sound that you intend.



■ Modifying the Waveform and Pitch ([F2] (WG))

● Wave Param page ([PATCH]→[F2] (WG)→[F1] (WG Prm))

Select the PCM waveform that is to be the basis of the Tone, and apply effects to the waveform.



Wave Group

Select the group for the waveform that is to be the basis of the Tone.

INT-A—B : Waveforms stored in internal memory

XP-A—H : Waveforms from a wave expansion board installed in an EXP-A—H slot.

** You can also press the VALUE dial (SOUND LIST) and select waveforms from the waveform list.*

** It is not possible to select groups for which a wave expansion board is not installed.*

** When you select XP-A—H, the name of the wave expansion board will be displayed in the lower part of the screen.*

Wave Number

Select the waveform that is to be the basis of the Tone. In addition to the wave number, the wave name will be displayed in parentheses ( ).

** You can also press the VALUE dial (SOUND LIST) and select waveforms from the waveform list.*

Wave Gain

Specify the gain (amplitude) of the waveform. The value will change in 6 dB (decibel) steps. An increase of 6 dB doubles the gain. If you are using the booster to distort the sound, setting this to the maximum will be effective. (→p. 75)

Tone Switch

Specify whether the Tone will be sounded (ON) or not (OFF). In order to make good use of the available maximum polyphony, unused Tones should be turned OFF.

** When TONE SWITCH [1]—[4] are turned on/off, this setting will also change.*

** This setting can also be made in the PATCH Play page. (→p. 71)*

<FXM (Frequency Cross Modulation)>

FXM (Frequency Cross Modulation) uses a specified waveform to apply frequency modulation to the selected waveform, creating complex overtones. This is suitable for creating intense sounds or sound effects.

FXM Switch

Specify whether FXM will be used (ON) or not (OFF).

FXM Color

Specify how FXM will perform frequency modulation. Higher settings will produce an increasingly rough sound, and lower settings will produce a more metallic sound.

FXM Depth

Specify the depth of function modulation produced by FXM.

<Tone Delay>

Tone Delay inserts a time delay from when the key is pressed (or released) until the Tone begins to sound, and can also be used to stagger the timing at which each Tone will sound. This is different from the Tone Delay effect, and you can change the timbre of the delayed sound or change the pitch of each Tone so that an arpeggio is produced when you press a single key.

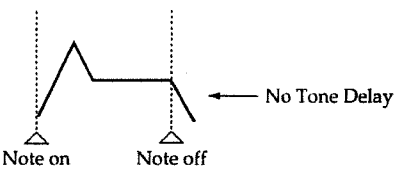
The delay time can also be synchronized with an internal or external clock (tempo).

** If you do not wish to use the Tone Delay, set the following Mode parameter to NORMAL, and Time to 0.*

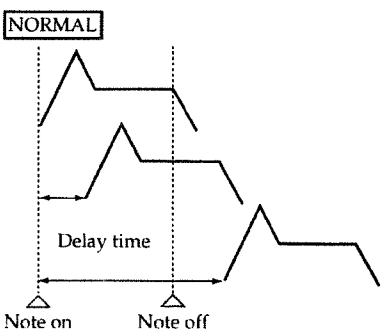
** If the Structure Type 1&2 (3&4) setting (Structure page [PATCH]→[F1] (Common)→[F3] (Struct)) has been set to Type2—10, the output of Tones 1 and 2 will be combined into Tone 2, and the output of Tones 3 and 4 will be combined into Tone 4. For this reason the setting of Tone 1 will follow the setting of Tone 2, and the setting of Tone 3 will follow the setting of Tone 4. (→p. 74)*

Mode (Tone delay mode)

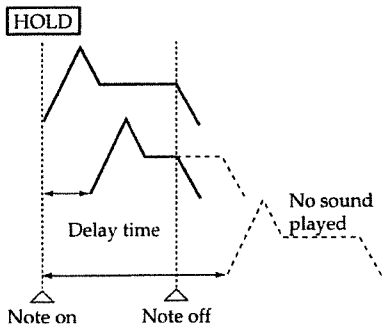
Select the type of tone delay.



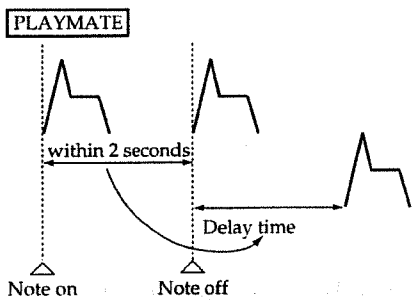
NORMAL : The Tone will sound after the time specified by Time.



HOLD : The Tone will sound after the time specified by Time, but the delay effect will apply only while the key is being pressed. This means that if you release the key before the specified Time has elapsed, the Tone will not sound.

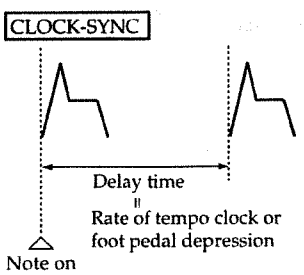


PLAYMATE: If less than 2 seconds elapses from when the previous key was pressed until the next key is pressed, the Tone will sound at that time interval. The Time setting will specify whether this interval will be the delay time, or whether the delay will be twice or 1/2 of this interval. If the interval is greater than 2 seconds, the Tone will not sound.

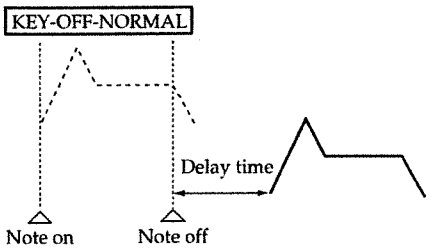


Delay time changes in accordance with the preceding and following Note On times

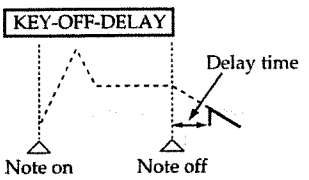
CLOCK-SYNC: The delay time will be synchronized with the internal or external clock (tempo) or with pedal messages. For the clock that will be used and for details on using this function, refer to "Syncing Delay Time to the Clock (Tempo)" →p. 119.



KEY-OFF-N : The Tone will not sound as long as you continue pressing the key. When you release the key, the Tone will sound after the interval specified by Time.



KEY-OFF-D: The Tone will not sound as long as you continue pressing the key. When you release the key, the Tone will sound after the interval specified by Time. In this case, the changes of the TVA envelope will begin when you press the key, so in most cases only the decay portion will sound.



** If a decay-type waveform (which decays naturally even if you do not release the key) is selected, no sound may be heard in some cases if KEY-OFF-N or KEY-OFF-D are selected.*

TEMPO-SYNC:Use this setting when you wish to synchronize a phrase loop (Break Beats) to the clock (tempo). This is valid only when the optional wave expansion board, such as "SR-JV80-10:BASS&DRUMS", etc. is installed, and you have selected a Tone which uses a waveform that displays tempo (BPM). For details refer to "Syncing Phrase Loops (Break Beats) to the Clock (Tempo)" →p. 117.

** If TEMPO-SYNC is selected, pitch-related settings and FXM-related settings will be ignored.*

** If TEMPO-SYNC is selected, set Time to 0. With other settings, a delay effect will be applied, and you will be not be able to play as you expect.*

Time (Tone delay time)

Specify the time from when the key is pressed (or if Mode is set to KEY-OFF-N or KEY-OFF-D, the time from when the key is released) until when the Tone will sound.

If Mode is set to PLAYMATE, specify a setting of 64 if you want the interval between the previous and next key strikes to be the delay time. To make the delay time approximately twice this interval, specify a setting of 127. To make the delay time half this interval, specify a setting of 32. With a setting of 0 the Tone will not sound. For example if you want to play just the down-beats and have the back-beats sound automatically, use two Tones and set a Time of 0 for one and a Time of 32 for the other.

If Mode is set to CLOCK-SYNC, the delay time can be set in terms of note lengths of the synchronization tempo.

Example : For a tempo of 120 (120 quarter notes occur in 1 minute (60 seconds))

Setting	Delay time
192= 𝅗𝅥 (half note)	1 second (60 / 60 =1 (second))
96= ♩ (quarter note)	0.5 seconds (60 / 120= 0.5 (seconds))
48= ♪ (eighth note)	0.25 seconds (60 / 240= 0.25 (seconds))

To sound back-beats automatically by playing only down-beats

You can use Tone Delay to cause back-beats to be played automatically when you play down-beats.

For example, make the following Tone Delay settings for Tone 1 of Patch PR-A:087 Music Bells.

Mode "PLAYMATE"
Time "32"

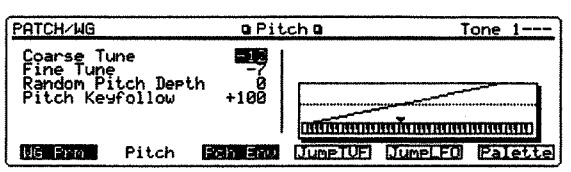
Successively play notes at a fixed tempo.

Tones 1 and 2 will sound alternately. Tone 1 will sound at intervals of one-half the interval at which you play the notes. Try various settings, such as using different waveforms for each Tone, or changing the pitch.

**If more than 2 seconds elapses between the notes you play, Tone 1 will not sound.*

● Pitch page ([PATCH]→[F2] (WG)→[F2] (Pitch))

Make settings for the WG pitch of the Tone.



Coarse Tune

Adjust the pitch of the Tone in semitone steps over a range of +/-4 octaves.

Fine Tune

Adjust the pitch of the Tone in 1-cent steps (1/100th of a semitone) over a range of 1/2 semitone up or down.

Random Pitch Depth

Specify the width of random pitch deviation that will occur each time a key is pressed. If you do not want the pitch to change randomly, set this to 0. The value is in units of 1 cent (1/100th of a semitone).

Pitch Keyfollow

Specify how the pitch will change when the key rises 1 octave (12 notes).

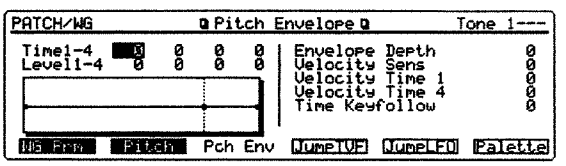
The specified setting will be shown graphically in the display.

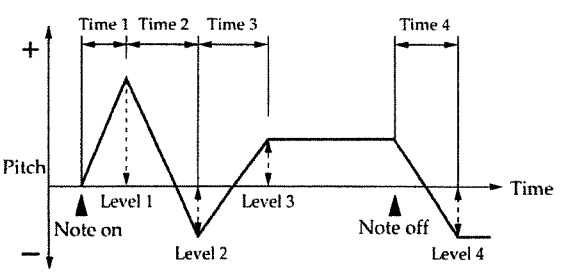
If you want the pitch to change 1 octave for every 12 notes (as on a conventional keyboard), set this to +100. If you want to pitch to change 2 octaves for every 12 notes, set this to +200. Conversely, if you want the pitch to fall, set a negative (-) value. If you want the same pitch to sound regardless of the key that is pressed, set this to 0.

● Pitch Envelope page ([PATCH]→[F2] (WG)→[F3] (Pch Env))

Here you can make pitch envelope settings (changes in pitch over time).

The specified pitch envelope will be shown graphically in the display.





Time 1—4 (Pitch envelope times 1—4)

Specify the pitch envelope times (Time 1—4). Higher settings will result in a longer time until the next pitch is reached. (For example, Time 2 is the time over which the pitch changes from Level 1 to Level 2.)

Level 1—4 (Pitch envelope levels 1—4)

Specify the pitch envelope levels (Level 1—4). At each point, you can specify the difference in pitch relative to the standard pitch (the Coarse Tune and Fine Tune values specified in [F2] (Pitch)). Positive (+) settings will cause the pitch to be higher than the standard pitch, and negative (-) settings will cause it to be lower.

Envelope Depth (Pitch envelope depth)

Specify the depth of the pitch envelope. Higher settings will cause the pitch envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.

Velocity Sens (Pitch envelope velocity sensitivity)

Keyboard playing dynamics can be used to control the depth of the pitch envelope. If you want the pitch envelope to have more effect for strongly played notes, set this parameter to a positive (+) value. If you want the pitch envelope to have less effect for strongly played notes, set this to a negative (-) value.

Velocity Time 1 (Pitch envelope velocity time 1 sensitivity)

Keyboard playing dynamics can be used to modify Time 1 of the pitch envelope. If you want Time 1 to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

Velocity Time 4 (Pitch envelope velocity time 4 sensitivity)

The speed at which the key is released can be used to modify Time 4 of the pitch envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

** If the MIDI keyboard that is connected is unable to transmit Note-off velocity, this effect will not be obtained.*

Time Keyfollow (Pitch envelope time key follow)

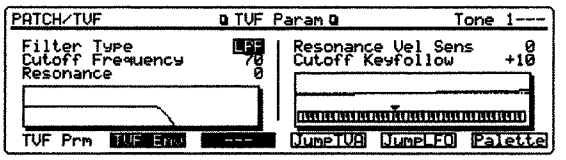
Use this setting if you want the pitch envelope times (Time 2—4) to be affected by the keyboard location. Based on the pitch envelope times for the C4 key, positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Higher settings will produce a correspondingly greater effect.

■ Using the Filter to Modify the Brightness ([F3] (TVF))

● TVF Param page ([PATCH]→[F3] (TVF)→[F1] (TVF Prm))

Here you can make settings for the TVF (Time Variant Filter). This allows you to modify the brightness or thickness of the sound, changing the timbre of the Tone.

The filter setting is shown graphically in the lower left of the display.



Filter Type

Select the filter type. The filter cuts a specific portion of the frequency range to modify the brightness or thickness of the sound.

OFF : The filter will not be used.

LPF : Low Pass Filter. This type of filter cuts the portion that lies above the cutoff frequency. Since the high frequency range is cut, the sound will become more mellow. This is the most frequently-used type of filter.

BPF : Band Pass Filter. This type of file leaves only the region in the vicinity of the cutoff frequency, and cuts the rest. It is useful for making distinctive sounds.

HPF : High Pass Filter. This type of filter cuts the portion that lies below the cutoff frequency. It is useful for making percussive sounds etc. that have a distinctive high range.

PKG : Peaking filter. This type of filter emphasizes the region in the vicinity of the cutoff frequency. When an LFO is used to modulate the cutoff frequency, this produces a wah effect.

Cutoff Frequency

Specify the frequency (cutoff frequency) at which the filter will begin to affect the frequency characteristics of the waveform.

When Filter Type is LPF, lower settings of the cutoff frequency will decrease the amount of high frequency range partials, causing the sound to become more mellow. Higher settings will make the sound brighter.

When Filter Type is BPF, the portion of the overtones that will be heard will depend on the cutoff frequency setting. This is suitable for creating distinctive sounds.

When Filter Type is HPF, higher settings of the cutoff frequency will decrease the amount of low frequency range partials, causing only the bright portion of the sound to be emphasized.

When Filter Type is PKG, the portion of the overtones that will be emphasized will depend on the cutoff frequency setting.

Resonance

This emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings may produce oscillation, causing the sound to distort.

Resonance Vel Sens (Resonance velocity sensitivity)

This allows keyboard dynamics to modify the amount of Resonance. If you want strongly played notes to have a greater Resonance effect, set this parameter to positive (+) settings. If you want strongly played notes to have less Resonance, use negative (-) settings.

Cutoff Keyfollow (Cutoff frequency key follow)

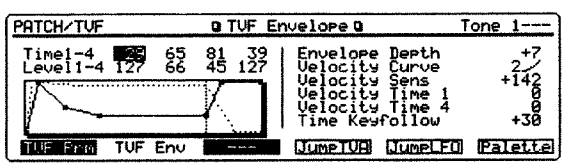
Use this setting when you want the cutoff frequency to be affected by the keyboard location. Relative to the cutoff frequency at the C4 key, positive (+) settings will cause the cutoff frequency to rise for notes higher than C4, and negative (-) settings will cause the cutoff frequency to fall for notes higher than C4. Higher values will produce a correspondingly greater change.

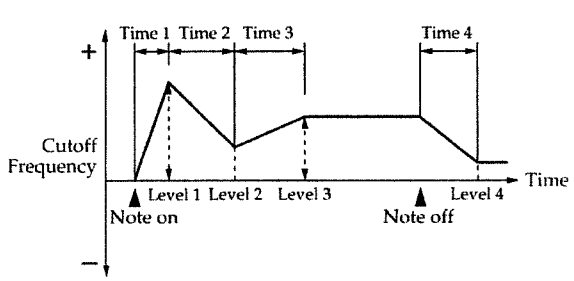
The specified value will be shown graphically in the lower right of the display.

● TVF Envelope page ([PATCH]→[F3] (TVF)→[F2] (TVF Env))

Here you can make settings for the TVF (time varying changes in the cutoff frequency).

The TVF envelope settings are displayed graphically.





Time 1—4 (TVF envelope times 1—4)

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

Level 1—4 (TVF envelope levels 1—4)

Specify the TVF envelope levels (Level 1—4). These settings specify how the cutoff frequency will change at each point, relative to the standard cutoff frequency (the Cutoff Frequency value specified by [F1] (TVF Prm)).

Envelope Depth (TVF envelope depth)

Specify the depth of the TVF envelope. Higher settings will produce a greater change. Negative (-) settings will invert the shape of the envelope.

Velocity Curve (TVF envelope velocity curve)

Select one of seven curves to specify how keyboard dynamics will affect the cutoff frequency. The curve is displayed at the right of the parameter value.

Velocity Sens (TVF envelope velocity sensitivity)

Specify how keyboard playing dynamics will affect the depth of the TVF envelope. Positive (+) settings will cause the TVF envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less.

Velocity Time 1 (TVF envelope velocity time 1 sensitivity)

This allows keyboard dynamics to affect the Time 1 of the TVF envelope. Positive (+) settings will cause Time 1 to speed up for strongly played notes, and negative (-) settings will cause it to slow down.

Velocity Time 4 (TVF envelope velocity time 4 sensitivity)

The speed at which the key is released can be used to modify Time 4 of the TVF envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

** If the MIDI keyboard that is connected is unable to transmit Note-off velocity, this effect will not be obtained.*

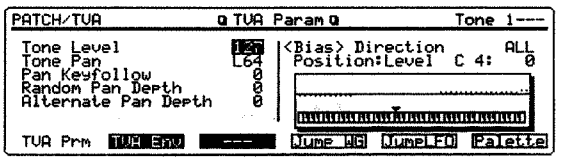
Time Keyfollow (TVF envelope time key follow)

Use this setting if you want the TVF envelope times (Time 2—4) to be affected by the keyboard location. Based on the TVF envelope times for the C4 key, positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Higher settings will produce a correspondingly greater effect.

■ Making the Volume Change([F4] (TVA))

● TVA Param page ([PATCH]→[F4] (TVA)→[F1] (TVA Prm))

Here you can make settings for the TVA (Time Variant Amplifier). This specifies how the volume of the Tone will change.



Tone Level

Specify the volume of the Tone. This is used mainly to adjust the volume balance between Tones.

** The overall volume of the Patch is set by the Patch Level setting (Common General page [PATCH]→[F1] (Common)→[F1] (General)), and the Tone Level setting is multiplied to this setting. (→p. 72)*

Tone Pan

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

** The overall panning of the entire Patch is set by the Patch Pan parameter (Common General page [PATCH]→[F1] (Common)→[F1] (General)), and the Tone Pan setting is added to this setting. (→p. 72)*

Pan Keyfollow

This causes the stereo location to be affected by the keyboard position. Positive (+) settings will cause notes higher than C4 to be panned increasingly further toward the right, and negative (-) settings will cause notes higher than C4 to be panned toward the left. Higher settings will produce a correspondingly greater effect.

Random Pan Depth

This setting causes the panning to be varied randomly each time a key is pressed. Higher settings will produce a greater change.

Alternate Pan Depth

This setting causes the panning to be alternated between left and right each time a key is pressed. Higher settings will produce a greater width of change. This can be set either to L or R, which will invert the order in which the panning is moved between left and right. For example if two Tones are set to L and R respectively, the panning of the two Tones will alternate each time they are played.

** When making settings for Tone Pan, Pan Keyfollow, Random Pan Depth, and Alternate Pan Depth, be aware that if the Structure Type 1&2 (3&4) parameter (Structure page [PATCH]→[F1] (Common)→[F3] (Struct)) is set to a setting of Type2—10, the output of Tones 1 and 2 will be combined into Tone 2, and the output of Tones 3 and 4 will be combined into Tone 4. For this reason, Tone 1 will follow the settings of Tone 2, and Tone 3 will follow the settings of Tone 4. (→p. 74)*

<Bias>

Bias causes the volume to be affected by the keyboard position. This can be used to simulate acoustic instruments whose volume changes across their register (pitch).

The setting you specify will be displayed graphically.

Direction (Bias direction)

Specify the direction in which change will occur relative to the Position.

LOWER	:	The volume will be modified in the range below the Position setting.
UPPER	:	The volume will be modified in the range above the Position setting.
LOW&UP	:	The volume will be modified symmetrically to the left and right of the Position setting.
ALL	:	The volume will be modified linearly, centered at the Position setting.

Position:Level (Bias position: Bias level)

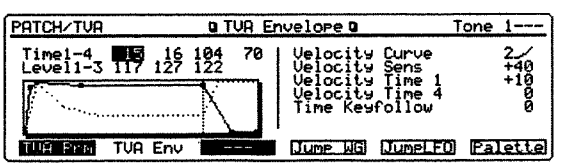
Position specifies the key in relation to which the volume will be modified.

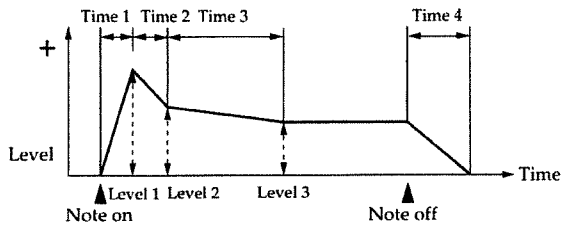
Level specifies the angle of the volume change in the direction specified by Direction. Higher settings will produce greater change. Negative (-) settings will invert the change.

● TVA Envelope page ([PATCH]→[F4] (TVA)→[F2] (TVA Env))

Here you can make settings for the TVA envelope (time-variant changes in volume).

The specified TVA envelope will be displayed graphically.





Time 1—4 (TVA envelope times 1—4)

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

Level 1—3 (TVA envelope levels 1—3)

Specify the TVA envelope levels (Level 1—3). These settings specify how the volume will change at each point, relative to the standard volume (the Tone Level value specified by [F1] (TVA Prm)).

Velocity Curve (TVA envelope velocity curve)

Select one of seven curves to specify how keyboard dynamics will affect the TVA envelope. The curve is displayed at the right of the parameter value.

Velocity Sens (TVA envelope velocity sensitivity)

Specify how keyboard playing dynamics will affect the depth of the TVA envelope. Positive (+) settings will cause the TVA envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less.

Velocity Time 1
(TVA envelope velocity time 1 sensitivity)

This allows keyboard dynamics to affect the Time 1 of the TVA envelope. Positive (+) settings will cause Time 1 to speed up for strongly played notes, and negative (-) settings will cause it to slow down.

Velocity Time 4
(TVA envelope velocity time 4 sensitivity)

The speed at which the key is released can be used to modify Time 4 of the TVA envelope. If you want Time 4 to be speeded up for quickly released notes, set this parameter to a positive (+) value. If you want it to be slowed down, set this to a negative (-) value.

* *If the MIDI keyboard that is connected is unable to transmit Note-off velocity, this effect will not be obtained.*

Time Keyfollow (TVA envelope time key follow)

Use this setting if you want the TVA envelope times (Time 2—4) to be affected by the keyboard location. Based on the TVA envelope times for the C4 key, positive (+) settings will cause notes higher than C4 to have increasingly shorter times, and negative (-) settings will cause them to have increasingly longer times. Higher settings will produce a correspondingly greater effect.

■ Applying Vibrato or Tremolo ([F5] (LFO&Ctl))

● LFO1 Param page ([PATCH]→[F5] (LFO&Ctl)→[F1] (LFO 1))

● LFO2 Param page ([PATCH]→[F5] (LFO&Ctl)→[F2] (LFO 2))

LFO (Low Frequency Oscillator) produces cyclic change. There are two LFOs for each Tone, and they can be used to create cyclic change in pitch, cutoff frequency, or volume, thereby producing modulation effects such as vibrato, wah, and tremolo. Since both LFOs have the same parameters, they will be explained together.

Waveform (LFO waveform)

Specify the LFO waveform. The waveform will be displayed graphically.

TRI : Triangle wave
SIN : Sine wave
SAW : Sawtooth wave
SQR : Square wave
TRP : Trapezoid wave
S&H : Sample and hold wave
RND : Random wave
CHS : Chaos wave

Key Sync (LFO key sync)

This specifies whether the LFO cycle will be synchronized to begin when the key is pressed (ON) or not (OFF).

Rate (LFO rate)

Specify the speed of the LFO cycle.

If Ext Sync is set to CLK, the LFO rate can be set in terms of note lengths of the synchronization tempo.

Example : For a tempo of 120 (120 quarter notes occur in 1 minute (60 seconds))

Setting	LFO frequency period
192= 𝅗𝅥 (half note)	1 second (60 / 60 =1 (second))
96= ♩ (quarter note)	0.5 seconds (60 / 120= 0.5 (seconds))
48= ♪ (eighth note)	0.25 seconds (60 / 240= 0.25 (seconds))

** If Waveform is set to CHS, this setting will be ignored.*

Ext Sync (LFO external sync)

Specify how the LFO will be synchronized.

OFF : The LFO will not be synchronized.

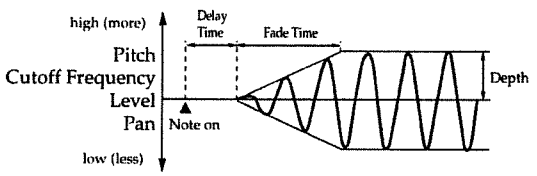
CLK : The LFO will synchronize to an internal or external clock (tempo) or to pedal messages.

** In order to use this function, you must specify which clock or pedal message will be used. For details refer to "Syncing LFO Frequency to the Clock (Tempo)" →p. 110.*

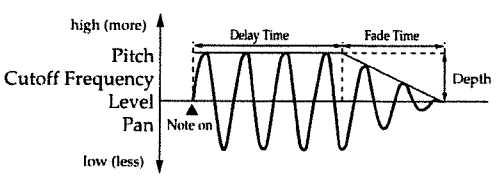
Fade Mode (LFO fade mode)

Specify how the LFO will be applied.

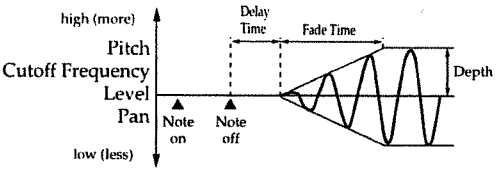
ON-IN : The LFO will gradually begin to apply after the key is pressed.



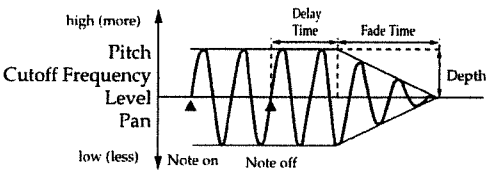
ON-OUT : The LFO will apply when the key is pressed, and its effect will gradually diminish.



OFF-IN : The LFO will gradually begin to apply after the key is released.



OFF-OUT : The LFO will apply from when the key is pressed until it is released, and its effect will gradually diminish after the key is released.



Delay Time (LFO delay time)

When Fade Mode is ON-IN, this specifies the time from when the key is pressed until the LFO begins to take effect. (For a setting of ON-OUT, the duration that the LFO effect will continue.)

When Fade Mode is OFF-IN, this specifies the time from when the key is released until when the LFO begins to take effect. (For a setting of OFF-OUT, the duration that the LFO effect will continue.)

Refer to the Fade Mode diagram.

Fade Time (LFO fade time)

Specify the time over which the LFO amplitude will reach the maximum (minimum) after the delay time has elapsed.

Refer to the Fade Mode diagram.

Offset (LFO level offset)

This setting offsets the LFO waveform upward or downward from the central value (e.g., pitch or cutoff frequency). Positive (+) settings will cause the waveform to modulate upward from the central value, and negative (-) settings will cause the waveform to modulate downward from the central value.

<Depth> (LFO depth)

For each item, specify the amount of the LFO effect.

The effect produced by modulating the pitch is known as "vibrato."

The effect produced by modulating the cutoff frequency is known as "wah."

The effect produced by modulating the volume is known as "tremolo."

Pitch (Pitch LFO depth)

Specify how deeply the LFO will affect pitch.

Filter (Filter LFO depth)

Specify how deeply the LFO will affect the cutoff frequency.

Level (Level LFO depth)

Specify how deeply the LFO will affect the volume.

Pan (Pan LFO depth)

Specify how deeply the LFO will affect the panning.

**For each item, positive (+) and negative (-) settings will produce the opposite effects. For example if one Tone has a Depth setting with a positive (+) value and another Tone has the identical setting but with a negative (-) value, the modulation applied to the Tones will be in opposite phase. This can be used to exchange two Tones while they sound, or used in conjunction with the Pan setting to cyclically move the stereo position.*

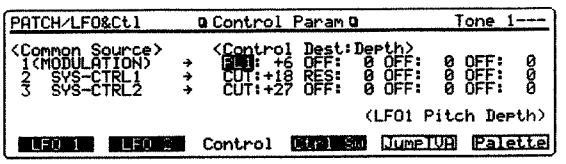
**When making Pan settings, be aware that if the Structure Type 1&2 (3&4) parameter (Structure page [PATCH]→[F1] (Common)→[F3] (Struct)) is set to a setting of Type 2—10, the output of Tones 1 and 2 will be combined into Tone 2, and the output of Tones 3 and 4 will be combined into Tone 4. For this reason, Tone 1 will follow the settings of Tone 2, and Tone 3 will follow the settings of Tone 4. (→p. 74)*

● Control Param page ([PATCH]→[F5] (LFO&Ctl)→[F3] (Control))

External MIDI controllers (modulation lever, foot switch, expression pedal etc.) can be used to modify the Tone settings in realtime. When a MIDI controller is operated, MIDI messages are transmitted. These MIDI messages can modify the Tone settings.

Here you can specify which MIDI messages will modify which parameters of the Tone.

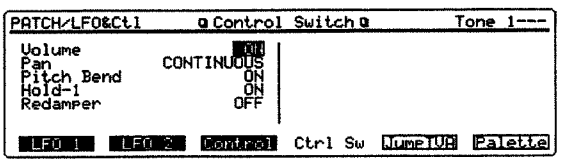
For details refer to "Modifying Tone Settings " →p. 106.



**The Common Source settings are linked to the Control Source settings (Control Param page [PATCH]→[F1] (Common)→[F2] (Control)).*

● Control Switch page ([PATCH]→[F5] (LFO&Ctl)→[F4] (Ctrl Sw))

Here you can specify for each Tone how MIDI messages such as volume, pan, and pitch bend will be received.



**In general, volume messages control the volume, pan messages control the stereo location, and pitch bend messages control the pitch. In addition to this, the JV-2080 allows these MIDI messages to be used to control EFX settings or Tone settings as well. If you are using this capability, turn reception of these MIDI messages OFF. If the receive switch is ON for these messages, they will control their usual function (in addition to their special function). (→p. 105, 107)*

Volume (Volume control switch)

Specify whether volume messages will be received (ON) or not (OFF).

Pan (Pan control switch)

Specify how pan messages will be received.

OFF : Pan messages will not be received.

CONTINUOUS : Pan messages will be received at any time to change the stereo location of the sound.

KEY-ON : The specified stereo location will take effect when a note is sounded. If a pan message is received while a note is sounding, the panning will not change until the next key is pressed. In this case, the new pan setting will apply only to the subsequently-played note, and the panning of the currently-sounding note will not be affected.

Pitch Bend (Pitch bend control switch)

Specify whether pitch bend messages will be received (ON) or not (OFF).

Hold-1 (Hold 1 control switch)

Specify whether hold 1 messages will be received (ON) or not (OFF).

Redamper (Redamper control switch)

When a Hold 1 message is received after a key was released but before the sound has completely decayed, this setting specifies whether or not the sound will be sustained at that level. To cause the sound to be sustained, turn this ON. If you use this function, you must also set Hold-1 ON. It is effective to turn this ON for sounds such as piano, etc.

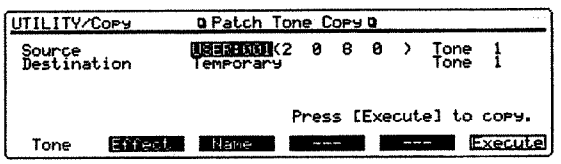
■ Making Effect Settings ([PATCH]→[F6] (Effects)→[F1]—[F5])

For effect settings, refer to ([F1] (General)→p. 25, [F2] (EFX Prm)→p. 33, [F3] (EFX Ctl)→p. 104, [F4] (Chorus)→p. 53, [F5] (Reverb)→p. 54).

Copying Tone Settings

Tone settings from any desired Patch can be copied to any desired Tone of the currently selected Patch. This function can be a time-saver.

1. Make sure that a Patch is selected.
2. Press [UTILITY] to make the indicator light.
3. Press [F2] (Copy).
4. Press [F1] (Tone) to access the Patch Tone Copy page.



If you want the currently selected Patch to be the copy source, set Source to "TEMP."

Destination "Temporary" indicates that the copy destination is the currently selected Patch.

5. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
6. Either rotate the VALUE dial or press [INC][DEC] to set the value.

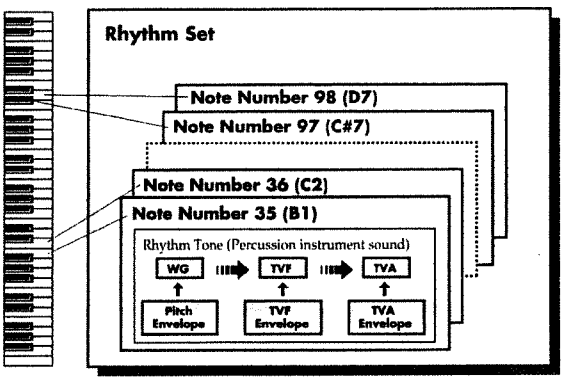
   When the cursor is located at the group:number, you can also use [USER] [CARD] [PRESET] [EXP] [A]—[H] to select the group.

   When the cursor is located at Tone, you can also use TONE SELECT [1]—[4] to select the Tone.
7. Press [F6] (Execute) to execute the copy operation.
8. Press [EXIT] several times to return to the PATCH Play page.

Creating a Rhythm Set

How Percussion Instruments Are Constructed

A Rhythm Set is a collection of percussion instrument sounds. Each percussion instrument consists of the following four elements.



WG (Wave generator)

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

The JV-2080 has 448 different waveforms (INT-A: 255 and INT-B: 193). (Factory settings "Waveforms" →p. 182). All percussion instrument sounds built into the JV-2080 are created using these waveforms, and are assigned to each key to create a Rhythm Set.

TVF (Time variant filter)

This specifies how the frequency characteristics of the sound will change.

TVA (Time variant amplifier)

This specifies volume change and panning.

Envelope

The envelope specifies how change will occur over time. There are separate envelopes for Pitch, TVF (filter), and TVA (volume). For example if you wish to modify the way in which the sound attacks or decays over time, you would adjust the TVA envelope.

Using a MIDI Keyboard to Select the Percussion Instruments to be Set

You can specify whether the percussion instrument sounds for which you are making settings can be selected only by operating the JV-2080's control panel or whether you will also be able to select them by pressing keys on a connected MIDI keyboard.

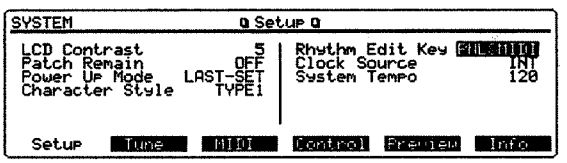
Rhythm Edit Key

PNL : Percussion instrument sounds can be selected only by the JV-2080's [E]—[H].

PNL&MIDI : Percussion instrument sounds can be selected both by the JV-2080's [E]—[H] and by pressing a key on a connected MIDI keyboard.

For example, if you have connected a sequencer to the JV-2080 and would like to make settings while you listen to the song data, you should set this to "PNL." If this were set to PNL&MIDI, playing back the song data would cause the percussion instrument sound for which settings were being made to change in rapid succession.

1. Press [SYSTEM] to make the indicator light.
2. Press [F1] (Setup) to access the Setup page.



3. Use [▲][▼][◄][►] to move the cursor to the "Rhythm Edit Key" setting.
4. Either rotate the VALUE dial or press [INC][DEC] to set the value.
5. Press [EXIT] several times to return to the Play page.

Settings for Each Percussion Instrument

The settings which can be made for each percussion instrument sound of a Rhythm Set are assigned to the function buttons as follows.

Creating a Rhythm Set

* Unmarked items are settings for each percussion instrument sound.
* The # symbol indicates items which affect the Performance settings in the temporary area.
* [F2] (Key WG)—[F4] (Key TVA) will alternate between two pages each time they are pressed.

- [F2] (Key WG)
  Waveform select / Percussion instrument sound on/off / Pitch etc. (p. 92)
  Pitch envelope (p. 93)
- [F3] (Key TVF)
  Use the filter to modify the brightness (p. 94)
  TVF envelope (p. 94)
- [F4] (Key TVA)
  Volume / Pan (p. 95)
  TVA envelope (p. 95)
- [F5] (Key Ctl)
  Pitch bend width / Prohibit simultaneous sounding / Make sounds decay naturally / MIDI message reception (p. 96)
- [F6] (Effects)
  [F1] (General) Effect unit structure (p. 32)
  [F2] (EFX Prm) # EFX Type (p. 33)
  [F3] (EFX Ctl) # Use MIDI controllers to modify EFX settings (p. 104)
  [F4] (Chorus) # Chorus (p. 53)
  [F5] (Reverb) # Reverb (p. 54)

Use the following procedure to make settings for each percussion instrument sound. Explanations of each parameter item will be found on the reference page given in the diagram.

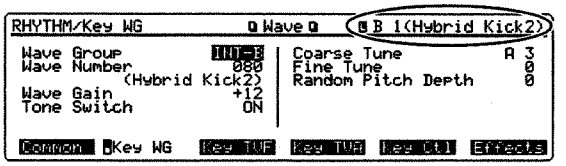
1. Select the Rhythm Set you wish to use, and access the RHYTHM Play page. (→p. 17)
2. Press [F2] (Key WG)—[F6] (Effects) to access the desired page.

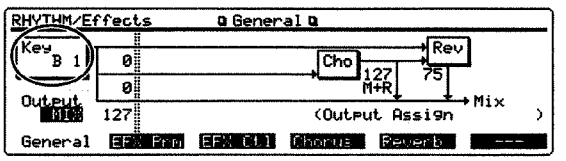
   [F2] (Key WG), [F3] (Key TVF), and [F4] (Key TVA) each have two pages. Each time you press [F2]—[F4] these two pages will alternate.
3. If you select Effects, you will again need to press [F1] (General)—[F5] (Reverb) to access the desired page.
4. Use [E]—[H] to select the percussion instrument sound (key) for which you wish to make settings.
   - [E] : Select a key 1 octave below the currently selected key.
   - [F] : Select a key a semitone below the currently selected key.
   - [G] : Select a key a semitone above the currently selected key.
   - [H] : Select a key 1 octave above the currently selected key.

**You can also press a key on a connected MIDI keyboard to select the percussion instrument sound (key). In this case you will need to set Rhythm Edit Key (Setup page [SYSTEM]→[F1] (Setup)) to PNL&MIDI. With the factory settings, this is set to PNL&MIDI. (→p. 90)*

The key (note name) and wave name will be shown in the upper right of the display.

In the General page of Effects, only the key (note name) is shown in the left of the display.





**Since the Effects settings [F2] (EFX Prm)—[F5] (Reverb) are common to all the percussion instruments, it is not possible to select the individual percussion instrument to which the settings will apply.*

5. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
6. Either rotate the VALUE dial or press [INC][DEC] to set the value.

**If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

7. Repeat steps 1—6 to complete settings for the Rhythm Set.
8. Press [EXIT] to return to the RHYTHM Play page.

   An "*" symbol will appear at the left of the Rhythm Set group to indicate that the settings have been modified.

**If you turn off the power or select another Rhythm Set while the "*" symbol is displayed, the modified Rhythm Set settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

To change a value in large steps

On the JV-2080, data values can be modified using either the VALUE dial or [INC][DEC]. When using these methods, the data values will change more quickly if the following procedures are used.

VALUE dial

Rotate the VALUE dial while pressing it. Alternatively, rotate the VALUE dial while pressing [SHIFT].

[INC] [DEC]

To increase a value quickly

Hold down [INC] and press [DEC]. Alternatively, hold down [SHIFT] and press [INC].

To decrease a value quickly

Hold down [DEC] and press [INC]. Alternatively, hold down [SHIFT] and press [DEC].

■ Tips for Selecting the Waveform

The sounds of the JV-2080 are based on complex PCM waveforms, and if you attempt to make settings that are contrary to the type of the original waveform, the results will not be as you expect.
The internal waveforms of the JV-2080 fall into the following two groups.

One-shot

These are sounds with a short decay. One-shot waveforms are recorded in their entirety, from the attack until the end of the sound. This group includes waveforms which constitute a complete sound, such as percussion instruments, but also includes many waveforms which provide attack components of a sound, such as the hammer strike of a piano or the fret noise of a guitar.

Loop

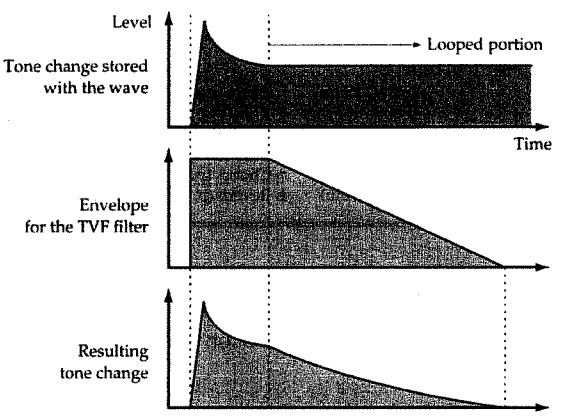
These are sounds that have a long decay or which are sustained. Loop waveforms repeatedly play back (loop) the portion of the waveform after the sound has reached a relatively steady state. This group also includes many component waveforms such as the string resonances of a piano or the bore resonances of a wind instrument.

● Cautions when using a one-shot waveform

It is not possible to use the envelope to modify a one-shot waveform to create a decay that is longer than the original waveform, or to turn it into a sustaining sound. Even if you made such envelope settings, it is impossible to bring out sound that is not present in the original waveform.

● Cautions when using a loop waveform

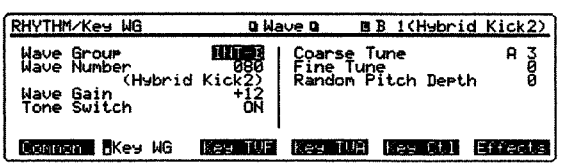
The tone of most acoustic instruments such as piano or sax changes rapidly and significantly during the first moments of the attack, and it is this initial portion that gives the instrument its characteristic sound or identity. For such waveforms, it is best to use the complex tonal changes of the attack portion of the waveform just as they are, and to use the envelope only to modify the decay portion. If you attempt to use the envelope to modify the attack portion as well, the characteristics of the original waveform may prevent you from getting the sound that you intend.



■ Modifying the Waveform and Pitch ([RHYTHM]→[F2] (Key WG))

● Wave page

Select the PCM waveform that is to be the basis of the percussion instrument sound, and apply effects to the waveform and specify its pitch.



Wave Group

Select the group for the waveform that is to be the basis of the percussion instrument sound.

INT-A—B : Waveforms stored in internal memory

XP-A—H : Waveforms from a wave expansion board installed in an EXP-A—H slot.

** You can also press the VALUE dial (SOUND LIST) and select waveforms from the waveform list.*

** It is not possible to select groups for which a wave expansion board is not installed.*

** When you select XP-A—H, the name of the wave expansion board will be displayed in the lower part of the screen.*

Wave Number

Select the waveform that is to be the basis of the percussion instrument sound. The wave name will be displayed in parentheses ( ) as well.

** You can also press the VALUE dial (SOUND LIST) and select waveforms from the waveform list.*

Wave Gain

Specify the gain (amplitude) of the waveform. The value will change in 6 dB (decibel) steps. An increase of 6 dB doubles the gain.

Tone Switch

Specify whether the percussion instrument sound will be sounded (ON) or not (OFF).

Coarse Tune

Select the pitch at which the percussion instrument sound will sound.

Fine Tune

Adjust the pitch of the percussion instrument sound in 1-cent steps (1/100th of a semitone) over a range of 1/2 semitone up or down.

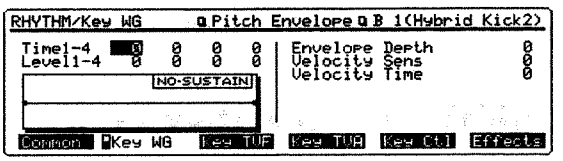
Random Pitch Depth

Specify the width of random pitch deviation that will occur each time a key is pressed. If you do not want the pitch to change randomly, set this to 0. The value is in units of 1 cent (1/100th of a semitone).

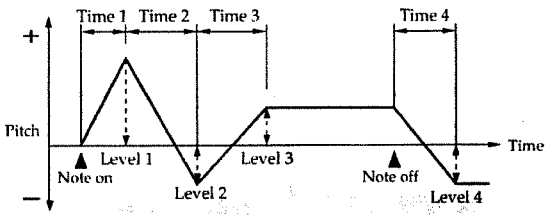
● Pitch Envelope page

Here you can make pitch envelope settings (changes in pitch over time).

The specified pitch envelope will be shown graphically in the display.



** If the Envelope Mode setting (Control Param page [RHYTHM]→[F5] (Key Ctl)) is set to "NO-SUS," the display will indicate "NO-SUSTAIN."*



Time 1—4 (Pitch envelope times 1—4)

Specify the pitch envelope times (Time 1—4). Higher settings will result in a longer time until the next pitch is reached. (For example, Time 2 is the time over which the pitch changes from Level 1 to Level 2.)

Level 1—4 (Pitch envelope levels 1—4)

Specify the pitch envelope levels (Level 1—4). At each point, you can specify the difference in pitch relative to the standard pitch (the Coarse Tune and Fine Tune values specified in the Wave page). Positive (+) settings will cause the pitch to be higher than the standard pitch, and negative (-) settings will cause it to be lower.

Envelope Depth (Pitch envelope depth)

Specify the depth of the pitch envelope. Higher settings will cause the pitch envelope to produce greater change. Negative (-) settings will invert the shape of the envelope.

Velocity Sens (Pitch envelope velocity sensitivity)

Keyboard playing dynamics can be used to control the depth of the pitch envelope. If you want the pitch envelope to have more effect for strongly played notes, set this parameter to a positive (+) value. If you want the pitch envelope to have less effect for strongly played notes, set this to a negative (-) value.

Velocity Time (Pitch envelope velocity time sensitivity)

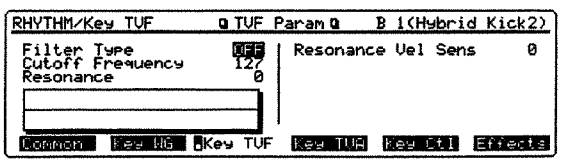
Keyboard playing dynamics can be used to modify the times of the entire pitch envelope. If you want pitch envelope times to be speeded up for strongly played notes, set this parameter to a positive (+) value. If you want them to be slowed down, set this to a negative (-) value.

■ Using the Filter to Modify the Brightness ([RHYTHM]→[F3] (Key TVF))

● TVF Param page

Here you can make settings for the TVF (Time Variant Filter). This allows you to modify the brightness or thickness of the sound, changing the timbre of the percussion instrument sound.

The filter setting is shown graphically in the lower left of the display.



Filter Type

Select the filter type. The filter cuts a specific portion of the frequency range to modify the brightness or thickness of the sound.

OFF : The filter will not be used.

LPF : Low Pass Filter. This type of filter cuts the portion that lies above the cutoff frequency. Since the high frequency range is cut, the sound will become more mellow. This is the most frequently-used type of filter.

BPF : Band Pass Filter. This type of filter leaves only the region in the vicinity of the cutoff frequency, and cuts the rest. It is useful for making distinctive sounds.

HPF : High Pass Filter. This type of filter cuts the portion that lies below the cutoff frequency. It is useful for making percussive sounds etc. that have a distinctive high range.

PKG : Peaking filter. This type of filter emphasizes the region in the vicinity of the cutoff frequency. This adjusts the "resonance" of a drum.

Cutoff Frequency

Specify the frequency (cutoff frequency) at which the filter will begin to affect the frequency characteristics of the waveform.

When Filter Type is LPF, lower settings of the cutoff frequency will decrease the amount of high frequency range partials, causing the sound to become more mellow. Higher settings will make the sound brighter.

When Filter Type is BPF, the portion of the overtones that will be heard will depend on the cutoff frequency setting. This is suitable for creating distinctive sounds.

When Filter Type is HPF, higher settings of the cutoff frequency will decrease the amount of low frequency range partials, causing only the bright portion of the sound to be emphasized.

When Filter Type is PKG, the portion of the overtones that will be emphasized will depend on the cutoff frequency setting.

Resonance

This emphasizes the portion of the sound in the region of the cutoff frequency, adding character to the sound. Excessively high settings may produce oscillation, causing the sound to distort.

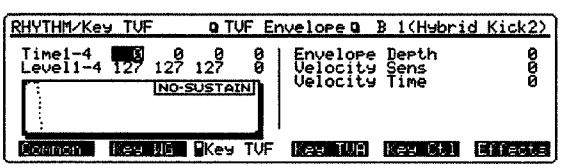
Resonance Vel Sens (Resonance velocity sensitivity)

This allows keyboard dynamics to modify the amount of Resonance. If you want strongly played notes to have a greater Resonance effect, set this parameter to positive (+) settings. If you want strongly played notes to have less Resonance, use negative (-) settings.

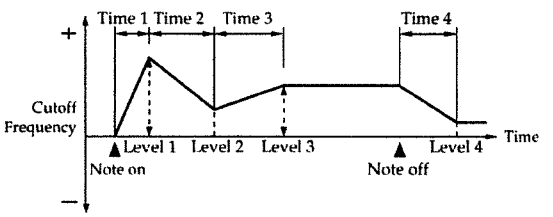
● TVF Envelope page

Here you can make settings for the TVF (time varying changes in the cutoff frequency).

The TVF envelope settings are displayed graphically.



**If the Envelope Mode setting (Control Param page [RHYTHM]→[F5] (Key Ctl)) is set to "NO-SUS," the display will indicate "NO-SUSTAIN."*



Time 1—4 (TVF envelope times 1—4)

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

Level 1—4 (TVF envelope levels 1—4)
Specify the TVF envelope levels (Level 1—4). These settings specify how the cutoff frequency will change at each point, relative to the standard cutoff frequency (the Cutoff Frequency value specified in the TVF Param page).

Envelope Depth (TVF envelope depth)
Specify the depth of the TVF envelope. Higher settings will produce a greater change. Negative (-) settings will invert the shape of the envelope.

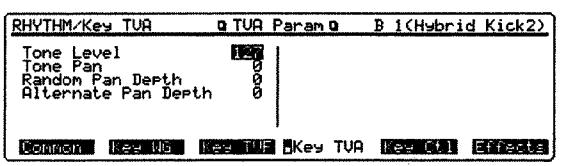
Velocity Sens (TVF envelope velocity sensitivity)
Specify how keyboard playing dynamics will affect the depth of the TVF envelope. Positive (+) settings will cause the TVF envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less.

Velocity Time (TVF envelope velocity time sensitivity)
This allows keyboard dynamics to affect the overall time of the TVF envelope. Positive (+) settings will cause envelope times to speed up for strongly played notes, and negative (-) settings will cause it to slow down.

■ Making the Volume Change ([RHYTHM]→[F4] (Key TVA))

● TVA Param page

Here you can make settings for the TVA (Time Variant Amplifier). This specifies how the volume of the percussion instrument sound will change, and how the sound will be panned.



Tone Level (Rhythm tone level)
Specify the volume of the percussion instrument sound. Use this to adjust the volume balance between the percussion instrument sounds.

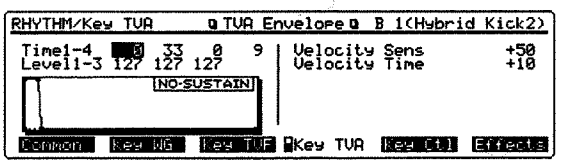
Tone Pan (Rhythm tone pan)
Specify the stereo position of the percussion instrument sound. A setting of L64 is far left, 0 is center, and 63R is far right.

Random Pan Depth
This setting causes the panning to be varied randomly each time a key is pressed. Higher settings will produce a greater change.

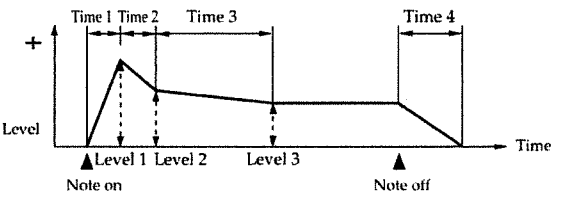
Alternate Pan Depth
This setting causes the panning to be alternated between left and right each time a key is pressed. Higher settings will produce a greater width of change. This can be set either to L or R, which will invert the order in which the panning is moved between left and right. For example if two percussion instrument sounds are set to L and R respectively, the panning of the two sounds will alternate each time they are played.

● TVA Envelope page

Here you can make settings for the TVA envelope (time-variant changes in volume).
The specified TVA envelope will be displayed graphically.



**If the Envelope Mode setting (Control Param page [RHYTHM]→[F5] (Key Ctl)) is set to "NO-SUS," the display will indicate "NO-SUSTAIN."*



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

Level 1—3 (TVA envelope levels 1—3)
Specify the TVA envelope levels (Level 1—3). These settings specify how the volume will change at each point, relative to the standard volume (the Tone Level value specified in the TVA Param page).

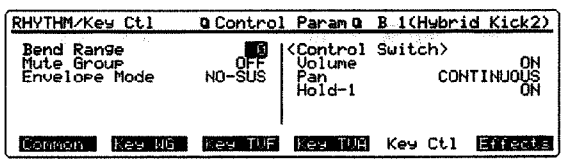
Velocity Sens (TVA envelope velocity sensitivity)
Specify how keyboard playing dynamics will affect the depth of the TVA envelope. Positive (+) settings will cause the TVA envelope to have a greater effect for strongly played notes, and negative (-) settings will cause the effect to be less.

Velocity Time (TVA envelope velocity time sensitivity)
This allows keyboard dynamics to affect the overall times of the TVA envelope. Positive (+) settings will cause envelope times to speed up for strongly played notes, and negative (-) settings will cause it to slow down.

■ Pitch Bend Range / Preventing Simultaneous Notes / Creating Natural Decays ([RHYTHM]→[F5] (Key Ctl))

● Control Param page

Here you can specify the functions of various controllers, and how each key will sound.



Bend Range
Specify the width of the pitch change that will occur when the bender lever of a connected MIDI keyboard is moved fully left or right, in semitone steps over a maximum of +/-1 octaves.

Mute Group
Mute Group is a function which can be used to prevent percussion instrument sounds with the same mute group setting from sounding simultaneously.

For example, it is physically impossible for an acoustic drum set to produce both open hi-hat and closed hi-hat sounds simultaneously. To simulate this situation, you would specify the same mute group number for both hi-hat sounds.

31 different mute groups can be specified. If you do not wish to use this function, turn the setting OFF.

Envelope Mode
When a loop waveform (→p. 92) is selected, the sound will normally continue as long as the key is pressed. If you want the sound to decay naturally even if the key remains pressed, set this to NO-SUS.

**If a one-shot waveform (→p. 92) is selected, the sound will not continue even if you select SUSTAIN.*

Volume (Volume control switch)
Specify whether volume messages will be received (ON) or not (OFF).

Pan (Pan control switch)
Specify how pan messages will be received.

OFF : Pan messages will not be received.
CONTINUOUS : Pan messages will be received at any time to change the stereo location of the sound.
KEY-ON : The specified stereo location will take effect when a note is sounded. If a pan message is received while a note is sounding, the panning will not change until the next key is pressed. In this case, the new pan setting will apply only to the subsequently-played note, and the panning of the currently-sounding note will not be affected.

Hold-1 (Hold 1 control switch)
Specify whether hold 1 messages will be received (ON) or not (OFF).

**If Envelope Mode is set to NO-SUS, this setting is ignored.*

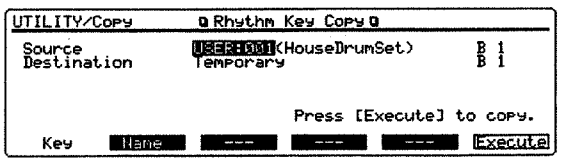
■ Making Effects Settings ([RHYTHM]→[F6] (Effects)→[F1]—[F5])

For effect settings, refer to ([F1] (General)→p. 32, [F2] (EFX Prm)→p. 33, [F3] (EFX Ctl)→p. 104, [F4] (Chorus)→p. 53, [F5] (Reverb)→p. 54).

Copying Percussion Instrument Settings

Percussion instrument sound settings from any Rhythm Set can be copied to any key of the currently selected Rhythm Set. This function can help you save time.

1. Make sure that a Rhythm Set is selected.
2. Press [UTILITY] to make the indicator light.
3. Press [F2] (Copy).
4. Press [F1] (Key). The Rhythm Key Copy page will appear.



If you want the currently selected Rhythm Set to be the copy source, set Source to "TEMP."

Destination "Temporary" indicates that the currently selected Rhythm Set is the copy destination.

5. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
6. Either rotate the VALUE dial or press [INC][DEC] to set the value.

When the cursor is located at group:number, you can also use [USER][CARD][PRESET][EXP][A]—[H] to select the group.

When the cursor is located at the percussion instrument sound (key), you can also use [E]—[H] to select the percussion instrument sound (key).

- [E] : Select the key 1 octave below the currently selected key.
- [F] : Select the key a semitone below the currently selected key.
- [G] : Select the key a semitone above the currently selected key.
- [H] : Select the key 1 octave above the currently selected key.

Alternatively, you can press a key on a connected MIDI keyboard to specify the percussion instrument sound (key). In this case, you will need to set the Rhythm Edit Key setting (Setup page [SYSTEM]→[F1] (Setup)) to PNL&MIDI. With the factory settings, this is set to PNL&MIDI. (→p.90)

7. Press [F6] (Execute) to execute the copy operation.
8. Press [EXIT] several times to return to the RHYTHM Play page.

Tuning

Overall Settings

■ 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 System.

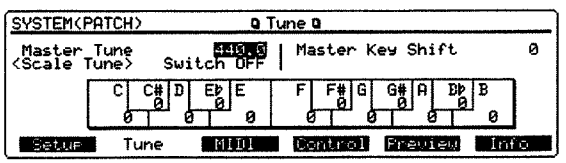
Master Tune

Adjust the overall tuning of the JV-2080. The setting is expressed as the frequency of the A4 key.

Master Key Shift

Shift the overall pitch of the JV-2080 in semitone steps.

1. [SYSTEM] to make the indicator light.
2. Press [F2] (Tune). The Tune page will appear.



3. Use [▲][▼][◄][►] to move the cursor to the "Master Tune" or "Master Key Shift" setting.
4. Either rotate the VALUE dial or press [INC][DEC] to set the Master Tune.

* *If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

5. Press [EXIT] several times to return to the Play page.

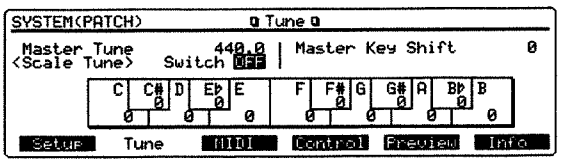
■ Scale Tune

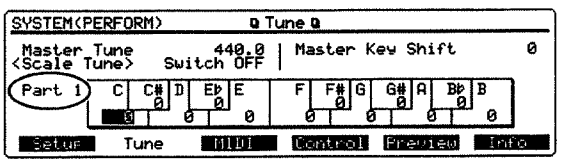
The JV-2080 allows you to use a variety of temperaments other than equal temperament. The pitch of each note name can be adjusted in 1-cent steps (1/100th of a semitone) relative to the equal tempered pitch.

One set of Scale Tune settings can be made in the Patch mode.

In the Performance mode and GM system mode, each Part has one set of Scale Tune settings.

1. Press [SYSTEM] to make the indicator light.
2. Press [F2] (Tune). The Tune page will appear.





3. If a Performance or the GM System is selected, press PART SELECT [1/9]—[8/16] to select the Part for which you wish to make settings.

   To select Parts 9—16, make the [1-8/9-16] indicator light, and press PART SELECT [1/9]—[8/16].

   The indicator will blink, and the Part number will appear in the left of the display.
4. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
5. Either rotate the VALUE dial or press [INC][DEC] to set the value.

* *If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

6. Press [EXIT] several times to return to the Play page.

<Scale Tune>Switch

This specifies whether Scale Tune will be used (ON) or not (OFF).

Turn it ON if you wish to play using a temperament other than equal temperament.

Scale Tune

Specify the temperament in the keyboard page of the display. When you make settings for each note in the octave (C—B), your settings will be applied to all octaves.

<Equal temperament>

This temperament divides the octave into 12 equally-spaced notes, and is the most widely used temperament in western music. When the Switch setting is OFF, the JV-2080 will use equal temperament.

<Just intonation (tonic of C)>

Compared with equal temperament, the principle triads will sound more pure. However, this effect can be obtained only in one key, and if you modulate to a different key the chords will become muddy.

<Arabian temperament>

Compared with equal temperament, E and B are 1/2 semitone low, and C#, F# and G# are 1/2 a semitone high. The intervals G—B, C—E, F—G#, B♭—C#, and E♭—F# are neutral thirds (an interval mid-way between a major third and a minor third). On the JV-2080 you can use Arabian temperament in the three keys of G, C and F.

Example:

Not name	Equal temperament	Just intonation (for a tonic of C)	Arabian temperament
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
E♭	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
B♭	0	+14	-10
B	0	-12	-49

Settings for Each Part of a Performance

The following two tuning-related settings can be made.

■ Coarse Tune

Coarse Tune (Part coarse tune)

Adjust the standard pitch of each Part in semitone steps over a range of +/-4 octaves. This adjustment is a relative change, with a setting of 0 corresponding to the pitch of the Patch.

■ Fine Tune

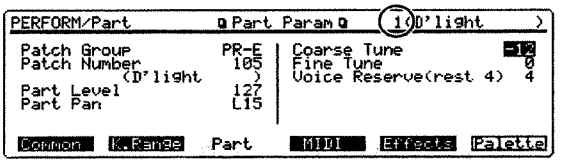
Fine Tune (Part fine tune)

Adjust the pitch specified by Coarse Tune in 1-cent steps (1/100th of a semitone) over a range of 1/2 a semitone upward or downward.

1. Select the Performance you wish to use, and access the PERFORM Play page. (→p. 17)
2. Press [F3] (Part). The Part Param page will appear.
3. Use PART SELECT [1/9]—[8/16] to select the Part for which you wish to make settings.

   To select a Part 9—16, make the [1-8/9-16] indicator light, and press PART SELECT[1/9]—[8/16].

   The indicator will blink, and the Part number will appear in the upper right of the display.



4. Use [▲][▼][◄][►] to move the cursor to the "Coarse Tune" or "Fine Tune" setting.
5. Either rotate the VALUE dial or press [INC][DEC] to set the value.

** If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

6. Press [EXIT] to return to the PERFORM Play page.

   An (*) symbol will appear at the left of the Performance group to indicate that the settings have been changed.

** If you turn off the power or select another Performance while the "*" symbol is displayed, the modified Performance settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

Restoring the Original Settings

Initializing the Selected Sound

Two methods of initialization are provided: "DEFAULT" and "PRESET."

Mode (Initialize mode)

DEFAULT : The data will be set to the "basic" values. This is useful when you wish to create sounds from scratch.

PRESET : The data that was in the USER group when the JV-2080 was shipped from the factory will be brought back.

For a Rhythm Set, you have the additional choice of either initializing only a single percussion instrument sound (key) within the Rhythm Set (Key), or initializing all settings of the entire Rhythm Set (All).

**To initialize the GM System, refer to "Initializing" →p. 128.*

● Performance or Patch

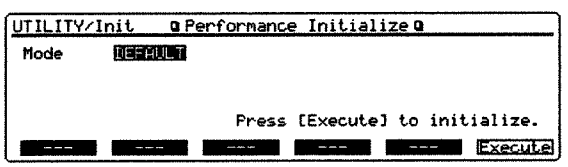
1. Select a Performance or Patch. (→p. 17)

   If you will be using "DEFAULT" to initialize, it does not matter which Performance or Patch is selected.

   If you will be using "PRESET" to initialize, select the USER group Performance or Patch number whose data you wish to bring back.

2. Press [UTILITY] to make the indicator light.

3. Press [F3] (Init). The corresponding Initialize page will appear.



4. Either rotate the VALUE dial or press [INC][DEC] to select "DEFAULT" or "PRESET."

5. Press [F6] (Execute) to execute the initialize operation.

   You will return to the Play page. If you used DEFAULT to initialize, the name will be either "INIT PERFORM" or "INIT PATCH."

   An "*" symbol will appear at the left of the group to indicate that the settings have been modified. If you wish to keep the modified settings, perform the save operation. (→p. 56)

**If you select data from PR-A—C, E, PR-D (GM (General MIDI)) and use "PRESET" to initialize, the USER group data of the corresponding number will be brought back.*

● Rhythm Set

1. Select a Rhythm Set. (→p. 17)

   If you will be using "DEFAULT" to initialize, it does not matter which Rhythm Set is selected.

   If you will be using "PRESET" to initialize, select the USER group Rhythm Set number whose data you wish to bring back.

2. Press [UTILITY] to make the indicator light.

3. Press [F3] (Init).

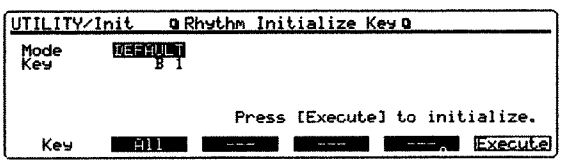
4.

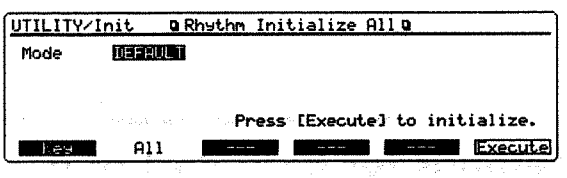
For a single percussion instrument sound (Key)

Press [F1] (Key). The Rhythm Initialize Key page will appear.

For the entire Rhythm Set (All)

Press [F2] (All). The Rhythm Initialize All page will appear.





5. Either rotate the VALUE dial or press [INC][DEC] to set Mode to "DEFAULT" or "PRESET."

   If you have selected Key, you will also need to select the percussion instrument sound (key) that will be initialized.

   Use [▲][▼] to move the cursor to the item you wish to set, and either rotate the VALUE dial or press [INC][DEC] to select the key.

You can also select the key by pressing [E]—[H].

[E] : Select the key 1 octave below the currently selected key.
[F] : Select the key a semitone below the currently selected key.
[G] : Select the key a semitone above the currently selected key.
[H] : Select the key 1 octave above the currently selected key.

** When the cursor is located at Key, you can also select the percussion instrument (key) to be initialized by pressing a key on a connected MIDI keyboard. In this case, the Rhythm Edit Key (Setup page [SYSTEM]→[F1] (Setup)) must be set to PNL&MIDI. With the factory settings, it is set to PNL&MIDI. (→p. 90)*

6. Press [F6] (Execute) to execute the Initialize operation.

You will return to the RHYTHM Play page.

If you initialized All with a setting of DEFAULT, the name will be "INIT SET."

An "*" symbol will appear at the left of the group to indicate that the settings have been modified. If you wish to keep the modified settings, perform the Save operation. (→p. 56)

** If you select data from PR-A—C, E, PR-D (GM (General MIDI)) and use "PRESET" to initialize, the USER group data of the corresponding number will be brought back.*

Restoring All Settings to Their Defaults (Factory Preset)

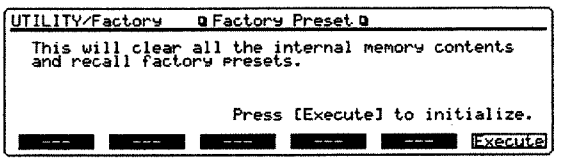
This operation will restore all the data in the JV-2080 to the factory settings.

** If the JV-2080 internal memory already contains important data that you have created, this operation will cause all of this data to be lost. If you wish to keep the data, you must save it on an optional DATA card (→p. 58) or on an external MIDI sequencer. (→p. 129)*

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

2. Press [F6] (Menu) two times to select Menu 3.

3. Press [F1] (Factory). The Factory Preset page will appear.



4. Press [F6] (Execute) to execute the Factory Preset operation.

To leave the Factory Preset page without executing, press [EXIT].

After the Factory Preset operation has been executed, the PATCH Play page will appear.

** In some cases, the display may indicate "Write Protect ON." If this occurs, press [DEC] to set "Write Protect OFF," and press [F6] (OK) to cancel the message. Then press [F6] (Execute) once again to execute the Factory Preset operation. (Write Protect →p. 61)*

Chapter 3.

Topical Guide to Advanced Operation

Using MIDI Controllers to Create Realtime Changes in the Sound

External MIDI controllers (modulation lever, foot switch, expression pedal etc.) can be used to modify EFX settings or Tone settings in realtime.
MIDI messages are transmitted when a MIDI controller is operated. If these MIDI messages are used to control EFX settings or Tone settings, your playing can become more expressive.

Modifying the EFX Settings

The parameters which can be controls are fixed for each EFX Type, and are the parameters marked by a "#" symbol in the EFX Type explanations on p. 33—53. (Two setting items will change simultaneously for "#1" and "#2."→p. 46) Settings can be made for each Patch, Performance, Rhythm Set, and the GM System.

1. Select the EFX Type.

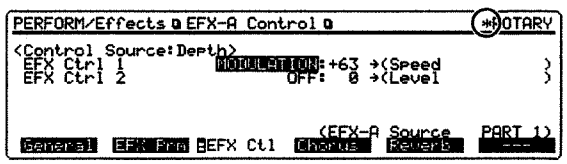
   Make settings in the General page of Effects. (Specifying the Effect Structure →p. 25, 28)

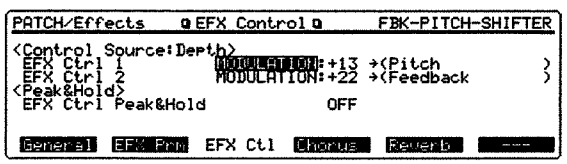
2. From the various Play pages, press buttons in the following order to access the EFX Control page.

Performance or GM System
[F5] (Effects)→[F3] (EFX Ctl)

Patch or Rhythm Set
[F6] (Effects)→[F3] (EFX Ctl)

Three EFX can be used in a Performance. Press [F3] (EFX Ctl) several times to access either the EFX-A Control page, the EFX-B Control page, or the EFX-C Control page.





** When the Performance EFX-A—C Source is set to a value of Part 1—9 or 11—16, a * symbol will appear in the upper right of the display when the cursor is placed at an EFX setting. This indicates that the EFX Control setting item is a Patch setting.*

3. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
4. Either rotate the VALUE dial or press [INC][DEC] to specify the setting.

** If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

5. Press [EXIT] to return to the Play page.

   An "*" symbol will appear at the left of the group to indicate that the settings have been modified. If you wish to keep the modified data, perform the Save operation. (→p. 56)

<Control Source:Depth>

(EFX contoroller 1, 2 control source: Depth)
Specify the MIDI messages (Source) assigned to EFX Ctrl 1 and 2 that will modify EFX settings and the amount of the change that will occur (Depth).

The parameters which can be controlled will be displayed in the parentheses ( ) at the right. This will depend on the EFX Type that is selected in step 1. If the selected EFX Type allows only one parameter to be controlled, EFX Ctrl 2 will be displayed as (----------).

<Depth>

If you wish to modify the selected parameter in the positive (+) direction (i.e., higher value, toward the right, or faster etc.) from the current setting, set a positive (+) value. If you wish to modify the selected parameter in the negative (-) direction (i.e., lower value, toward the left, or slower etc.) from the current setting, set a negative (-) value. With either positive or negative values, higher settings will produce greater change. The values of the parameters themselves are set in the EFX Param page ([F2] (EFX Prm)). (→p. 33)

<Source>

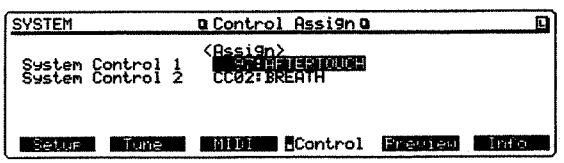
OFF	: Not controlled
SYS-CTRL1	: System controller 1 *
SYS-CTRL2	: System controller 2 *
MODULATION	: Modulation (Controller number 1)
BREATH	: Breath (Controller number 2)
FOOT	: Foot (Controller number 4)
VOLUME	: Volume (Controller number 7)
PAN	: Pan (Controller number 10)
EXPRESSION	: Expression (Controller number 11)
PITCH BEND	: Pitch bend
AFTERTOUCH	: Aftertouch

** If you do not need to specify different MIDI messages for each Patch, Performance, Rhythm Set, and GM System, or if you wish to use MIDI messages which are not available here, select "SYS-CTRL1" or "SYS-CTRL2." When these are selected, the MIDI messages that are specified for SYS-CTRL1 and 2 will be displayed at the bottom of the screen.*

SYS-CTRL1 and 2 are settings which specify the MIDI messages common to the entire JV-2080, and can be set using the following procedure.

1. Press [SYSTEM] to make the indicator light.
2. Press [F4] (Control). The Control Assign page will appear.

   If the Control Source page appears, press [F4] (Control) once again.



3. Use [▲][▼] to move the cursor to the "System Control 1" or "System Control 2" setting.
4. Either rotate the VALUE dial or press [INC][DEC] to specify the MIDI message.
   CC01—95 : Controller numbers 1—95 (except for 6, 32—63)
   PITCH BEND : Pitch bend
   AFTERTOUCH : Aftertouch

* You can also press the VALUE dial (SOUND LIST) and select from a list of MIDI messages. Pressing [F5] (Prev) or [F6] (Next) will switch the display in units of 10.

5. Press [EXIT] several times to return to the Play page.

** If you have selected one of the following MIDI messages, turn the corresponding receive switch OFF. If this is ON, the usual function of the message will be performed in addition to the special control function that you are specifying here.*

For a Performance
VOLUME, HOLD-1 (→p. 68)
For a Patch
VOLUME, PAN, PITCH BEND, HOLD-1 (→p. 88)
For a Rhythm Set
VOLUME, PAN, HOLD-1 (→p. 96)

Note when setting EFX Control Source

With the factory settings, "SYS-CTRL1" or "SYS-CTRL2" are specified by most Patches as the MIDI messages used to control Tone settings. Be aware that in this case, if you specify "SYS-CTRL1" or "SYS-CTRL2" as the MIDI messages that will control EFX settings, and operate the corresponding control, both settings (Tone and EFX) will change.

Using an external MIDI controller (foot switch) to switch the Rotary speed

The Quick Start manual described how the modulation lever could be used to switch the speed of the Rotary effect.

Here we will explain how to use a foot switch to switch the rotary speed. It is more convenient to use a foot switch to switch the rotary speed, since you will have both hands free to play the keyboard (unlike when the modulation lever is used to switch the speed). We will use the Patch PR-A:54 Rocker Spin as our example.

1. Connect an optional foot switch (FS-5L) to your external device (MIDI keyboard, etc.).
2. Make settings so that pressing the foot switch will transmit Foot controller messages (Controller number 4).

   For details refer to the owner's manual of your external device.
3. Select Patch PR-A:54 Rocker Spin, and access the PATCH Play page. (→p. 17)

   This Patches uses the 8:ROTARY EFX.
4. Access the EFX Control page ([F6] (Effects)→[F3] (EFX Ctl)).
5. Set the EFX Ctrl 1 Control Source parameter to "FOOT," and the Depth parameter to "+63."

   While playing the keyboard to make sound, press the foot switch.

   Each time you press the foot switch, the rotary speed will switch (high/low).

   Try out other Patches which uses the 8: ROTARY EFX.

<Peak&Hold>

(EFX contoroller peak & hold)(Patch only)

When you have modified EFX settings, pedal messages (the control change messages Hold 1 and 2, Sostenuto, and Soft) can be used to hold (freeze) the changes in EFX settings that were produced via MIDI controllers.

EFX Ctrl Peak&Hold specifies what will happen when pedal messages are received.

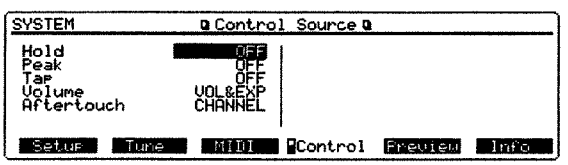
OFF : The modified condition will not be held even if pedal messages are received.
HOLD : When pedal messages are received, the current settings will be held.
PEAK : When pedal messages are received, the current settings will be held. If higher values are subsequently received, those values will be held.

If this is set to HOLD or PEAK, the pedal messages specified as the Hold Control Source or Peak Control Source will be indicated at the bottom of the screen.

** In order to use this function, the Hold Control Source or Peak Control Source settings must be set to a pedal message.*

1. Press [SYSTEM] to make the indicator light.
2. Press [F4] (Control). The Control Source page will appear.

   If the Control Assign page appears, press [F4] (Control) once again.



3. Use [▲][▼][◄][►] to move the cursor to the "Hold" or "Peak" setting.

   If EFX Ctrl Peak&Hold was set to HOLD, set the "Hold" parameter. If it was set to PEAK set the "Peak" parameter.
4. Either rotate the VALUE dial or press [INC][DEC] to specify the pedal message.

   OFF : Not controlled
   HOLD-1 : Hold 1 (controller number 64)
   SOSTENUTO : Sostenuto (controller number 66)
   SOFT : Soft pedal (controller number 67)
   HOLD-2 : Hold 2 (controller number 69)
5. Press [EXIT] several times to return to the PATCH Play page.

** Be aware that the pedal message you select here will not have its normal function as defined by the MIDI specification.*

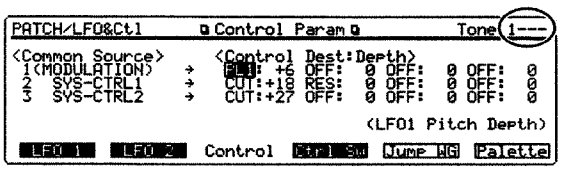
Modifying Tone Settings

● Selecting the MIDI message and the parameter which will be modified

First you must specify which MIDI message will modify which parameter, and how greatly.

1. Select the Patch you wish to use, and access the PATCH Play page. (→p. 17)
2. Press [F5] (LFO&Ctl).
3. Press [F3] (Control). The Control Param page will appear.
4. Use TONE SELECT [1]—[4] to select the Tone for which you wish to make settings.

   The indicator will blink, and the Tone number will appear in the upper right of the display.



5. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
6. Either rotate the VALUE dial or press [INC][DEC] to set the value.

** If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

7. Press [EXIT] to return to the PATCH Play page.

   An "*" symbol will appear at the left of the Patch group to indicate that the settings have been modified.

** If you turn off the power or select another Patch while the "*" symbol is displayed, the modified Patch settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

** After step 3, you can press [F6] (Palette) to view the settings for all four Tones together in a single display. This allows you to compare the settings of each Tone as you make settings. (→p. 78)*

<Common Source>

(Patch contoroller 1—3 control sources)

Up to three MIDI messages (Ctrl 1—3(controller 1—3)) can be selected to control changes in the Tone. However, the MIDI message for Ctrl 1 is fixed at MODULATION.

Since these settings are common to all four Tones, step 4 is not necessary.

OFF	: No control
SYS-CTRL1	: System controller 1 *
SYS-CTRL2	: System controller 2 *
MODULATION	: Modulation (controller number 1)
BREATH	: Breath (controller number 2)
FOOT	: Foot (controller number 4)
VOLUME	: Volume (controller number 7)
PAN	: Pan (controller number 10)
EXPRESSION	: Expression (controller number 11)
PITCH BEND	: Pitch bend
AFTERTOUCH	: Aftertouch
LFO1	: LFO 1
LFO2	: LFO 2
VELOCITY	: Velocity
KEYFOLLOW	: Key follow (keyboard position with C4 as 0)
PLAYMATE	: Playmate (interval between note-on messages)

** LFO1, 2, VELOCITY, KEYFOLLOW and PLAYMATE are not MIDI messages, but can also be used to control changes in the Tone.*

** These settings are linked with the Control Source settings (Common Control page [PATCH]→[F1] (Common)→[F2] (Control)). (→p. 109)*

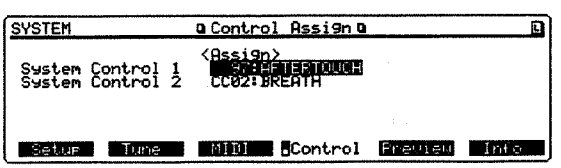
** If you do not need to specify different MIDI messages for each Patch, or if you wish to use MIDI messages which are not available here, select "SYS-CTRL1" or "SYS-CTRL2." When these are selected, the MIDI messages that are specified for SYS-CTRL1 and 2 will be displayed at the bottom of the screen.*

SYS-CTRL1 and 2 are settings which specify the MIDI messages common to the entire JV-2080, and can be set using the following procedure.

1. Press [SYSTEM] to make the indicator light.

2. Press [F4] (Control). The Control Assign page will appear.

If the Control Source page appears, press [F4] (Control) once again.



3. Use [▲][▼] to move the cursor to the "System Control 1" or "System Control 2" setting.

4. Either rotate the VALUE dial or press [INC][DEC] to specify the MIDI message.

CC01—95	: Controller numbers 1—95 (except for 6, 32—63)
PITCH BEND	: Pitch bend
AFTERTOUCH	: Aftertouch

** You can also press the VALUE dial (SOUND LIST) and select from a list of MIDI messages. Pressing [F5] (Prev) or [F6] (Next) will switch the display in units of 10.*

5. Press [EXIT] several times to return to the Play page.

** If you have selected VOLUME, PAN, PITCH BEND or HOLD-1, turn the corresponding receive switch OFF. If this is ON, the usual function of the message will be performed in addition to the special control function that you are specifying here. (→p. 88)*

<Control Dest:Depth>

(Patch contoroller 1—3 control destination: Depth)

Ctrl 1—3 allow you to simultaneously control up to four parameters for each Tone.

For each of Ctrl 1—3, specify the Tone parameter that will be controlled (Dest) and the amount of change (Depth).

<Dest>

OFF : No control

PCH : Pitch

TVF parameters

[PATCH]→[F3] (TVF)→[F1] (TVF Prm) (→p. 83, 84)

CUT : Cutoff Frequency

RES : Resonance

TVA parameters

[PATCH]→[F4] (TVA)→[F1] (TVA Prm) (→p. 85)

LEV : Tone Level

PAN : Tone Pan

Effects parameters

[PATCH]→[F6] (Effects)→[F1] (General) (→p. 26, 27)

MIX : MIX/EFX Send Level

CHO : Chorus Send Level

REV : Reverb Send Level

LFO parameters

[PATCH]→[F5] (LFO&Ctl)→[F1] (LFO1) or [F2] (LFO2) (→p. 87, 88)

PL1 : LFO1 Pitch Depth

PL2 : LFO2 Pitch Depth

FL1 : LFO1 Filter Depth

FL2 : LFO2 Filter Depth

AL1 : LFO1 Level Depth

AL2 : LFO2 Level Depth

pL1 : LFO1 Pan Depth

pL2 : LFO2 Pan Depth

L1R : LFO1 Rate

L2R : LFO2 Rate

** If the Structure Type 1&2 and 3&4 settings (Structure page [PATCH]→[F1] (Common)→[F3] (Struct)) are set to a value of Type 2—10, the output of Tones 1 and 2 will be combined into Tone 2, and the output of Tones 3 and 4 will be combined into Tone 4. This means that for PAN, MIX, CHO, REV, pL1 and pL2, the setting for Tone 1 will follow the setting of Tone 2, and the setting of Tone 3 will follow the setting of Tone 4. (→p. 74)*

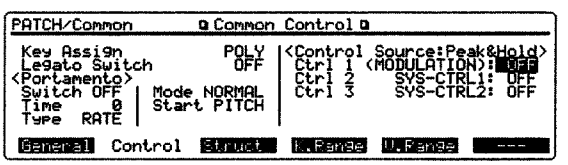
<Depth>

If you wish to modify the selected parameter in the positive (+) direction (i.e., higher value, toward the right, or faster etc.) from the current setting, set a positive (+) value. If you wish to modify the selected parameter in the negative (-) direction (i.e., lower value, toward the left, or slower etc.) from the current setting, set a negative (-) value. With either positive or negative values, higher settings will produce greater change. For details on setting the parameters themselves, see the reference page given in <Dest>.

● Holding the modified settings

When you have modified Tone settings, pedal messages (the control change messages Hold 1, 2, Sostenuto, and Soft) can be used to hold (freeze) the changes in Tone settings that were produced via MIDI controllers.

1. Select the Patch you wish to use, and access the PATCH Play page. (→p. 17)
2. Press [F1] (Common).
3. Press [F2] (Control). The Common Control page will appear.



4. Use [▲][▼][◄][►] to move the cursor to the setting at the right of Ctrl 1—3.
5. Either rotate the VALUE dial or press [INC][DEC] to set the value.
6. Press [EXIT] to return to the PATCH Play page.

   An "*" symbol will appear at the left of the Patch group to indicate that the settings have been modified. If you wish to keep the modified settings, perform the Save operation. (→p. 56)

<Control Source:Peak&Hold>

(Patch contoroller 1—3 control source:peak&hold)

<Peak&Hold>

Specify for Ctrl 1—3 what will happen when pedal messages are received.

OFF : The modified condition will not be held even if pedal messages are received.

HOLD: When pedal messages are received, the current settings will be held.

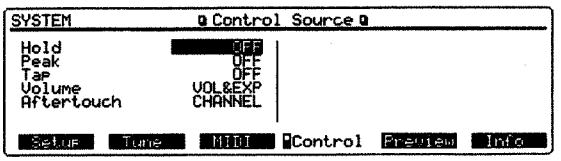
PEAK : When pedal messages are received, the current settings will be held. If higher values are subsequently received, those values will be held.

If this is set to HOLD or PEAK, the pedal messages specified as the Hold Control Source or Peak Control Source will be indicated at the bottom of the screen.

** In order to use this function, the Hold Control Source or Peak Control Source settings must be set to a pedal message.*

1. [SYSTEM] to make the indicator light.
2. Press [F4] (Control). The Control Source page will appear.

   If the Control Assign page appears, press [F4] (Control) once again.



3. Use [▲][▼][◄][►] to move the cursor to the "Hold" or "Peak" setting.

   If EFX Ctrl Peak&Hold was set to HOLD, set the "Hold" parameter. If it was set to PEAK set the "Peak" parameter.
4. Either rotate the VALUE dial or press [INC][DEC] to specify the pedal message.

OFF	: Not controlled
HOLD-1	: Hold 1 (controller number 64)
SOSTENUTO	: Sostenuto (controller number 66)
SOFT	: Soft pedal (controller number 67)
HOLD-2	: Hold 2 (controller number 69)

5. Press [EXIT] several times to return to the PATCH Play page.

** Be aware that the pedal message you select here will not have its normal function as defined by the MIDI specification.*

<Control Source>

Up to three MIDI messages (Ctrl 1—3 (controller 1—3)) can be selected to control changes in the Tone. However, the MIDI message for Ctrl 1 is fixed at MODULATION.

** This setting is linked with the Common Source settings (Control Param page [PATCH]→[F5] (LFO&Ctl)→[F3] (Control)). For details refer to →p. 107.*

Playing a Patch in Sync With the Clock (Tempo)

Syncing LFO Frequency to the Clock (Tempo)

The LFO frequency can be synchronized to "internal clock," "external clock", or "the interval at which a pedal is pressed."

** Patches PR-B:47, 49, 51—56, 69, and PR-C:34, 93, 97, 99, 123 use the LFO. Let's select one of these and try synchronizing the LFO frequency to the clock.*

● Synchronizing to the internal clock (LFO)

You can specify whether the LFO will synchronize to the clock of each Patch or Performance, or to the common clock of the entire JV-2080.
In step 5, read the portion that applies to your situation.

1. Select a Patch or Performance. (→p. 17)

2. Access the LFO 1 Param page or the LFO 2 Param page.

For a Patch

[PATCH]→[F5] (LFO&Ctl)→[F1] (LFO 1) or [F2] (LFO 2)

For a Performance

[PERFORM]+[PATCH]→[F5] (LFO&Ctl)→ [F1] (LFO 1) or [F2] (LFO 2)

** When the Play page is displayed, you can use [◄][►] to select the Part of the Performance to which your settings will apply.*

** Press TONE SELECT [1]—[4] to select the Tone to which the settings will apply.*

3. Set EXT Sync to "CLK."

The currently specified clock (tempo) will be displayed in the lower part of the screen.

4. Specify the Rate.

The LFO frequency period is set in terms of note length of the synchronization tempo.

Example : For a tempo of 120 (120 quarter notes occur in 1 minute (60 seconds))

Setting	LFO frequency period
192= 𝅗𝅥 (half note)	1 second (60 / 60 =1 (second))
96= ♩ (quarter note)	0.5 seconds (60 / 120= 0.5 (seconds))
48= ♪ (eighth note)	0.25 seconds (60 / 240= 0.25 (seconds))

The depth at which the sound will be modulated can be set by adjusting the various <Depth> parameters.

For details on LFO parameters, refer to →p. 86.

5.

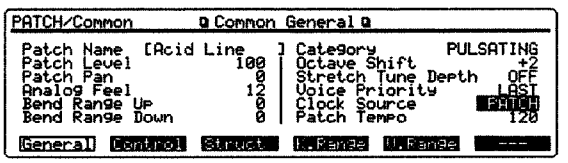
When synchronizing to the individual clock of a Patch or Performance

For a Patch

A. Access the Common General page. ([PATCH]→[F1] (Common)→[F1] (General))

B. Set Clock Source to "PATCH."

C. The LFO will synchronize to the Patch Tempo value. Try out various settings.



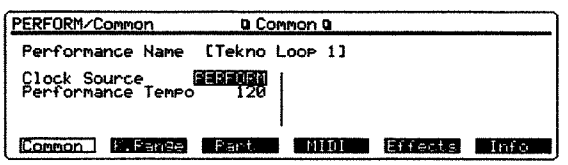
For a Performance

A. Access the Common page. ([PERFORM]→[F1] (Common))

B. Set Clock Source to "PERFORM."

C. The LFO will synchronize to the Performance Tempo value. Try out various settings.

** In the case of a Performance, the Clock Source and Patch Tempo settings of each Patch will be ignored.*



When synchronizing to the common clock of the entire JV-2080

For a Patch

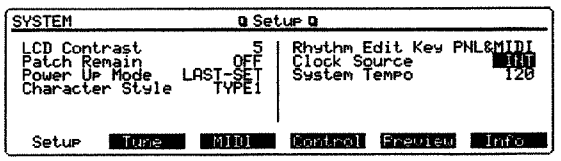
A. Access the Common General page.
([PATCH]→[F1] (Common)→[F1] (General))

B. Set Clock Source to "SYSTEM."

C. Access the Setup page.
([SYSTEM]→[F1] (Setup))

D. Set Clock Source to "INT."

E. The LFO will synchronize to the System Tempo value. Try out various settings.



For a Performance

A. Access the Common page.
([PERFORM]→[F1] (Common))

B. Set Clock Source to "SYSTEM."

C. Access the Setup page.
([SYSTEM]→[F1] (Setup))

D. Set Clock Source to "INT."

E. The LFO will synchronize to the System Tempo value. Try out various settings.

6. Press [EXIT] several times to return to the applicable Play page.

An (*) symbol will appear at the left of the group to indicate that the settings have been changed.

***** *If you turn off the power or select another Patch or Performance while the "*" symbol is displayed, the modified settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

***** *In the case of a Performance, you must first save the modified Patch and then save the Performance. If you save the Performance without saving the Patch, the modified Patch settings will not be saved. (Column* ***When you have modified the settings of the Patch assigned to a Part of the Performance*** *→p. 57)*

***** *Patch Tempo, Performance Tempo, and System Tempo will not transmit clock messages from the MIDI OUT connector.*

● Synchronizing to an external clock (LFO)

1. Connect an external device (MIDI sequencer etc.).

Refer to the owner's manual for your external device, and make settings so that it will transmit MIDI Clock messages.

2. Select a Patch or Performance. (→p. 17)

3. Access the LFO 1 Param page or the LFO 2 Param page.

For a Patch

[PATCH]→[F5] (LFO&Ctl) → [F1] (LFO 1) or [F2] (LFO 2)

For a Performance

[PERFORM] + [PATCH] → [F5] (LFO&Ctl)→ [F1] (LFO 1) or [F2] (LFO 2)

***** *When the Play page is displayed, you can use [◄][►] to select the Part of the Performance to which your settings will apply.*

***** *Press TONE SELECT [1]—[4] to select the Tone to which the settings will apply.*

4. Set EXT Sync to "CLK."

The currently specified clock (tempo) will be displayed at the bottom of the screen.

5. Specify the Rate.

The LFO frequency period is set in terms of note length of the synchronization tempo.

Example: For a tempo of 120 (120 quarter notes occur in 1 minute (60 seconds))

Setting	LFO frequency period
192= 𝅗𝅥 (half note)	1 second (60 / 60 =1 (second))
96= ♩ (quarter note)	0.5 seconds (60 / 120= 0.5 (seconds))
48= ♪ (eighth note)	0.25 seconds (60 / 240= 0.25 (seconds))

The depth at which the sound will be modulated can be set by adjusting the various <Depth> parameters.

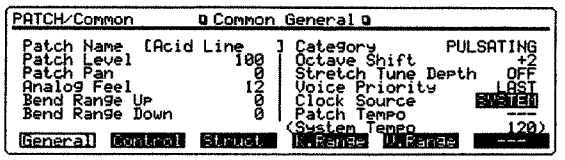
For details on LFO parameters, refer to →p. 86.

6.

For a Patch

A. Access the Common General page. ([PATCH]→[F1] (Common) →[F1] (General))

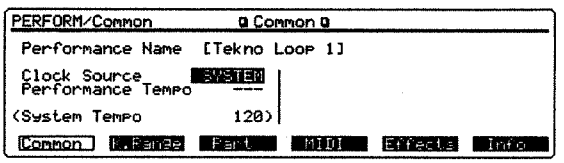
B. Set Clock Source to "SYSTEM."



For a Performance

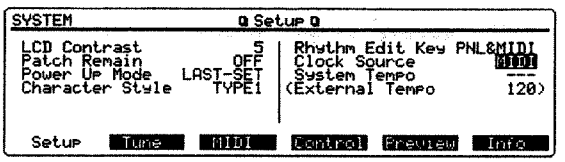
A. Access the Common page. ([PERFORM]→[F1] (Common))

B. Set Clock Source to "SYSTEM."



7. Access the Setup page. ([SYSTEM]→[F1] (Setup))

8. Set Clock Source to "MIDI."



The clock of the external device will be displayed in External Tempo, and the LFO will synchronize to this setting.

Try various clock settings on the external device.

9. Press [EXIT] several times to return to the Play page.

An (*) symbol will appear at the left of the group to indicate that the settings have been changed.

**If you turn off the power or select another Patch or Performance while the "*" symbol is displayed, the modified settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

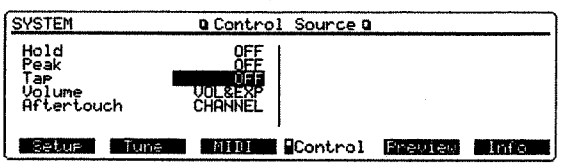
In the case of a Performance, you must first save the modified Patch and then save the Performance. If you save the Performance without saving the Patch, the modified Patch settings will not be saved. (Column **When you have modified the settings of the Patch assigned to a Part of the Performance →p. 57)*

● Synchronizing to the interval at which a pedal is pressed (LFO)

1. Connect a pedal to your external device (MIDI keyboard etc.).

2. Access the Control Source page. ([SYSTEM]→[F4] (Control))

If the Control Assign page is displayed, press [F4] (Control) once again.



3. Set Tap to the MIDI message that you will use to specify the clock tempo.

You should select a type of MIDI message which is transmitted by pressing a pedal.

Tap (Tap control source)

OFF	: No control
HOLD-1	: Hold 1(controller number 64)
SOSTENUTO	: Sostenuto (controller number 66)
SOFT	: Soft pedal (controller number 67)
HOLD-2	: Hold 2 (controller number 69)

4. Select a Patch or Performance. (→p. 17)

5. Access the LFO 1 Param page or the LFO 2 Param page.

For a Patch

[PATCH]→[F5] (LFO&Ctl)→[F1] (LFO 1) or [F2] (LFO 2)

For a Performance

[PERFORM] + [PATCH] → [F5] (LFO&Ctl)→ [F1] (LFO 1) or [F2] (LFO 2)

** When the Play page is displayed, you can use [◄][►] to select the Part of the Performance to which your settings will apply.*

** Press TONE SELECT [1]—[4] to select the Tone to which the settings will apply.*

6. Set EXT Sync to "CLK."

The currently specified clock (tempo) will be displayed in the lower part of the screen.

7. Specify the Rate.

The LFO frequency (period) is set in terms of note length of the synchronization tempo.

Example: For a tempo of 120 (120 quarter notes occur in 1 minute (60 seconds))

Setting	LFO frequency period
192= 𝅗𝅥 (half note)	1 second (60 / 60 =1 (second))
96= ♩ (quarter note)	0.5 seconds (60 / 120= 0.5 (seconds))
48= ♪ (eighth note)	0.25 seconds (60 / 240= 0.25 (seconds))

The depth at which the sound will be modulated can be set by adjusting the various <Depth> parameters.

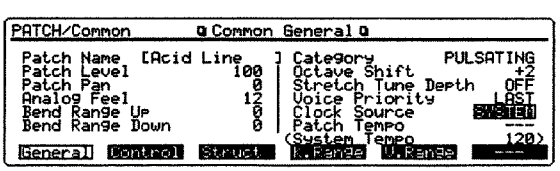
For details on LFO parameters, refer to →p. 86.

8.

For a Patch

A. Access the Common General page. ([PATCH]→[F1] (Common)→[F1] (General))

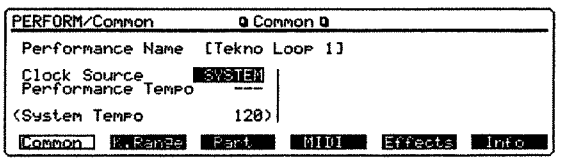
B. Set Clock Source to "SYSTEM."



For a Performance

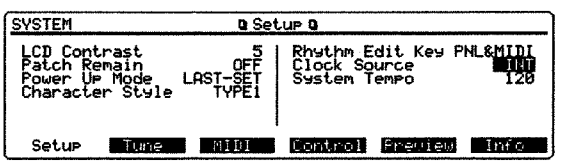
A. Access the Common page. ([PERFORM]→[F1] (Common))

B. Set Clock Source to "SYSTEM."



9. Access the Setup page. ([SYSTEM] →[F1] (Setup))

10. Set Clock Source to "INT."



The interval at which you press the pedal will be displayed as System Tempo, and the LFO will synchronize to this value.

Try pressing the pedal at various timing intervals.

11. Press [EXIT] several times to return to the Play page.

An (*) symbol will appear at the left of the group to indicate that the settings have been changed.

** If you turn off the power or select another Patch or Performance while the "*" symbol is displayed, the modified settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

** In the case of a Performance, you must first save the modified Patch and then save the Performance. If you save the Performance without saving the Patch, the modified Patch settings will not be saved. (Column **When you have modified the settings of the Patch assigned to a Part of the Performance** →p. 57)*

Syncing EFX Changes to the Clock (Tempo)

The parameters listed below for each of the following three EFX Types can be synchronized to "internal clock" or "external clock."

EFX Type	Parameter synchronized to the clock
16: STEP-FLANGER	Step Rate
19: TRIPLE-TAP-DELAY	Delay Center, Left, Right
20: QUADRUPLE-TAP-DELAY	Delay 1—4

This can be set for a Patch, Performance, or GM System.

**Patches PR-C:94, 96, 98 use 16:STEP-FLANGER. Patches PR-B:57 and 68 use 19: TRIPLE-TAP-DELAY, and Patch PR-B:65 uses 20:QUADRUPLE-TAP-DELAY. Let's select one of these and synchronize the corresponding parameter to the clock.*

● Synchronizing to the internal clock (EFX)

You can specify whether the EFX parameter will synchronize to the clock of the individual Patch, to the clock of the individual Performance, or to the common clock of the entire JV-2080. For GM System, only the common clock of the entire JV-2080 can be used for synchronization.

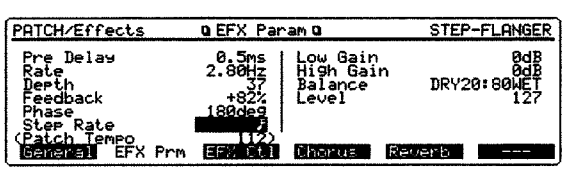
In step 4, read the portion that applies to your situation.

1. Select a Patch, Performance, or GM System, and specify an EFX Type of either 16:STEP-FLANGER, 19:TRIPLE-TAP-DELAY, or 20:QUADRUPLE-TAP-DELAY. (→p. 26, 29)

2.

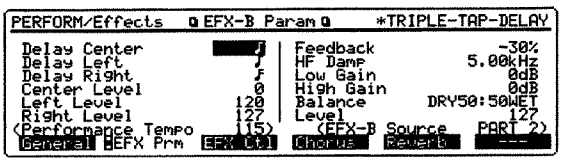
For a Patch

Access the EFX Param page.
([PATCH]→[F6] (Effects)→[F2] (EFX Prm))



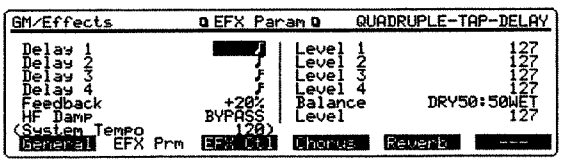
For a Performance

Access the EFX-A—C Param page.
[PERFORM]→[F5] (Effects)→[F2] (EFX Prm)



For GM System

Access the EFX Param page.
[SHIFT]+[PERFORM]→[F5] (Effects)→
[F2] (EFX Prm)



3. Specify the setting of the applicable parameter as a note value.

The currently specified clock (tempo) will be displayed at the bottom of the screen.

EFX Type	Parameter synchronized to the clock
16:STEP-FLANGER	Step Rate
19:TRIPLE-TAP-DELAY	Delay Center, Left, Right
20:QUADRUPLE-TAP-DELAY	Delay 1—4

The frequency period or delay time is set in terms of note length of the synchronization tempo.

Example: For a tempo of 120 (120 quarter notes occur in 1 minute (60 seconds))

Setting	Frequency period or delay time
𝅗𝅥 (half note)	1 second (60 / 60 =1 (second))
♩ (quarter note)	0.5 seconds (60 / 120= 0.5 (seconds))
♪ (eighth note)	0.25 seconds (60 / 240= 0.25 (seconds))

For details on the EFX parameters, refer to 16:STEP-FLANGER→p. 41, 19:TRIPLE-TAP-DELAY→p. 43, or 20:QUADRUPLE-TAP-DELAY→p. 44.

4.

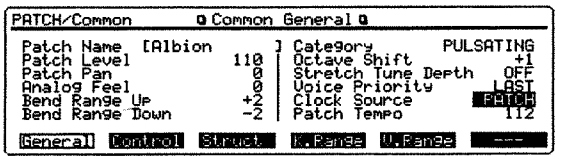
When synchronizing to the individual clock of a Patch or Performance

For a Patch

A. Access the Common General page. ([PATCH]→[F1] (Common)→[F1] (General))

B. Set Clock Source to "PATCH."

C. The parameter will synchronize to the Patch Tempo value. Try out various settings.



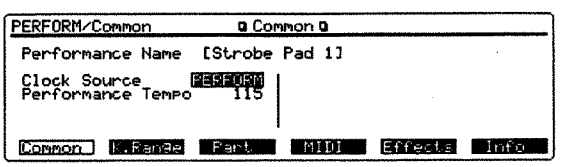
For a Performance

A. Access the Common page. ([PERFORM]→[F1] (Common))

B. Set Clock Source to "PERFORM."

C. The parameter will synchronize to the Performance Tempo value. Try out various settings.

** In the case of a Performance, the Clock Source and Patch Tempo settings of each Patch will be ignored.*



When synchronizing to the common clock of the entire JV-2080

For a Patch

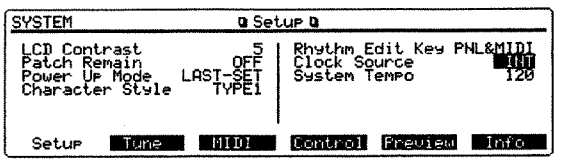
A. Access the Common General page. ([PATCH]→[F1] (Common)→[F1] (General))

B. Set Clock Source to "SYSTEM."

C. Access the Setup page. ([SYSTEM]→[F1] (Setup))

D. Set Clock Source to "INT."

E. The parameter will synchronize to the System Tempo value. Try out various settings.



For a Performance

A. Access the Common page. ([PERFORM]→[F1] (Common))

B. Set Clock Source to "SYSTEM."

C. Access the Setup page. ([SYSTEM]→[F1] (Setup))

D. Set Clock Source to "INT."

E. The parameter will synchronize to the System Tempo value. Try out various settings.

For GM System

A. Access the Setup page. ([SYSTEM]→[F1] (Setup))

B. Set Clock Source to "INT."

C. The parameter will synchronize to the System Tempo value. Try out various settings.

5. Press [EXIT] several times to return to the Play page.

An (*) symbol will appear at the left of the group to indicate that the settings have been changed. (This will not appear in the case of GM System.)

** If you turn off the power or select another Patch or Performance while the "*" symbol is displayed, the modified settings will be lost. If you wish to keep them, use the Write operation. (→p. 56) (For GM System, it is not possible to save the settings.)*

** Patch Tempo, Performance Tempo, and System Tempo will not transmit clock messages from the MIDI OUT connector.*

● Synchronizing to an external clock (EFX)

1. Connect an external device (MIDI sequencer etc.).

Refer to the owner's manual for your external device, and make settings so that it will transmit MIDI Clock messages.

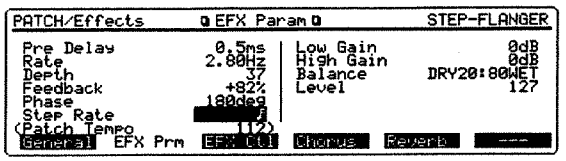
2. Select a Patch, Performance or GM System, and select an EFX Type of 16:STEP-FLANGER, 19:TRIPLE-TAP-DELAY, or 20:QUADRUPLE-TAP-DELAY. (→p. 26, 29)

3.

For a Patch

Access the EFX Param page.

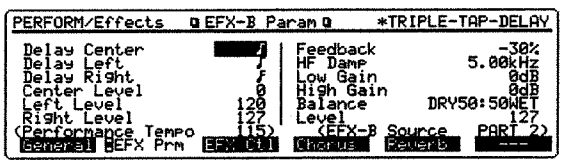
[PATCH]→[F6] (Effects)→[F2] (EFX Prm)



For a Performance

Access the EFX-A—C Param page.

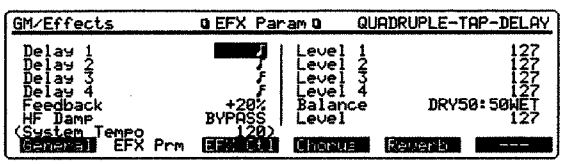
[PERFORM]→[F5] (Effects)→[F2] (EFX Prm)



For GM System

Access the EFX Param page.

[SHIFT]+[PERFORM]→[F5] (Effects)→
[F2] (EFX Prm)



4. Specify the setting of the applicable parameter as a note value.

The currently specified clock (tempo) will be displayed at the bottom of the screen.

EFX Type	Parameter synchronized to the clock
16:STEP-FLANGER	Step Rate
19:TRIPLE-TAP-DELAY	Delay Center, Left, Right
20:QUADRUPLE-TAP-DELAY	Delay 1—4

The frequency period or delay time is set in terms of note length of the synchronization tempo.

Example: For a tempo of 120 (120 quarter notes occur in 1 minute (60 seconds))

Setting	Frequency period or delay time
𝅗𝅥 (half note)	1 second (60 / 60 =1 (second))
♩ (quarter note)	0.5 seconds (60 / 120= 0.5 (seconds))
♪ (eighth note)	0.25 seconds (60 / 240= 0.25 (seconds))

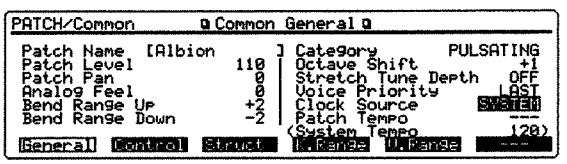
For details on the EFX parameters, refer to 16:STEP-FLANGER→p. 41, 19:TRIPLE-TAP-DELAY→p. 43, or 20:QUADRUPLE-TAP-DELAY→p. 44.

5.

For a Patch

A. Access the Common General page.
([PATCH]→[F1] (Common)→[F1] (General))

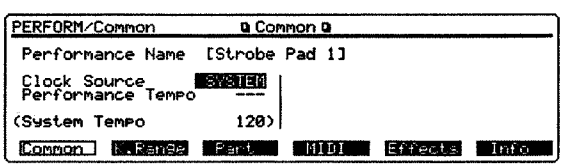
B. Set Clock Source to "SYSTEM."



For a Performance

A. Access the Common page.
([PERFORM]→[F1] (Common))

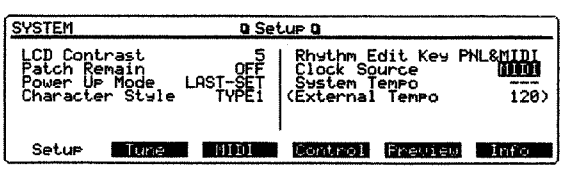
B. Set Clock Source to "SYSTEM."



**For GM System, step 5 will not be necessary.*

6. Access the Setup page. ([SYSTEM]→[F1] (Setup))

7. Set Clock Source to "MIDI."



The clock of the external device will be displayed for External Tempo, and the parameter will synchronize to this value.

Try out various clock settings on the external device.

8. Press [EXIT] several times to return to the Play page.

   An (*) symbol will appear at the left of the group to indicate that the settings have been changed. (This will not appear in the case of GM System.)

** If you turn off the power or select another Patch or Performance while the "*" symbol is displayed, the modified settings will be lost. If you wish to keep them, use the Write operation. (→p. 56) (For GM System, it is not possible to save the settings.)*

Syncing Phrase Loops (Break Beats) to the Clock (Tempo)

The optional wave expansion board "SR-JV80-10:BASS&DRUMS" contains Patches which use waves (phrase loops) that have a tempo (BPM) indication. These phrase loops can be synchronized to "internal clock" or "external clock."

** Patches 119—128 of the "SR-JV80-10:BASS& DRUMS" wave expansion board use phrase loops. Let's select one of these Patches, and synchronize the phrase loop to the clock.*

** The JV-2080 itself does not contain waves (phrase loops) that have a tempo (BPM) indication.*

** When phrase loops (break beats) are synchronized to a clock (tempo), pitch-related settings (→p. 82) and FXM-related settings (→p. 80) will be ignored.*

** If the Structure Type 1&2 and 3&4 settings (Structure page [PATCH]→[F1] (Common)→[F3] (Struct)) are set to a value of Type 2—10, the output of Tones 1 and 2 will be combined into Tone 2, and the output of Tones 3 and 4 will be combined into Tone 4. This means that the setting of Tone 1 will follow the setting of Tone 2, and the setting of Tone 3 will follow the setting of Tone 4. (→p. 74)*

● Synchronizing to an internal clock (phrase loop)

You can specify whether the phrase loop will synchronize to the clock of each Patch or Performance, or to the common clock of the entire JV-2080.

In step 6, read the portion that applies to your situation.

1. Select a Patch or Performance. (→p. 17)
2. Access the Wave Param page.

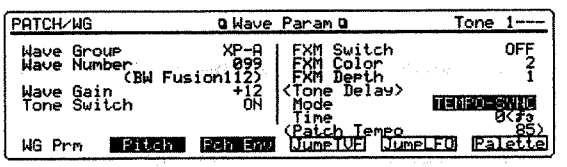
For a Patch

[PATCH]→[F2] (WG)→[F1] (WG Prm)

For a Performance

[PERFORM]+[PATCH]→[F2] (WG)→ [F1] (WG Prm)

** When the Play page is displayed, you can use [◄][►] to select the Part of the Performance to which your settings will apply.*



3. Use TONE SELECT [1]—[4] to select a Tone which uses a wave (phrase loop) that has a tempo (BPM) display.

   The wave name and tempo (BPM) will be displayed together in the parentheses under the wave number.

4. Set the <Tone Delay> Mode to "TEMPO-SYNC."

   The currently specified clock (tempo) will be displayed at the bottom of the screen.

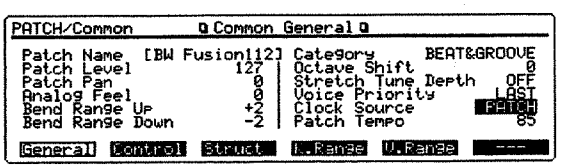
5. Set the <Tone Delay> Time to "0< ♪3 "

** If you set a value other than 0, a delay effect will be applied, and you will not be able to play as you intend.*

6. **When synchronizing to the clock of each Patch or Performance**

For a Patch

A. Access the Common General page. ([PATCH]→[F1] (Common)→[F1] (General))
B. Set Clock Source to "PATCH."
C. The phrase loop will synchronize to the Patch Tempo value. Try out various different val ues.



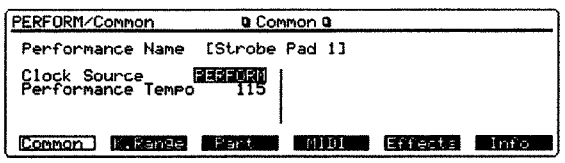
For a Performance

A. Access the Common page.
([PERFORM]→[F1] (Common))

B. Set Clock Source to "PERFORM."

C. The phrase loop will synchronize to the Performance Tempo value. Try out various different values.

** In the case of a Performance, the Clock Source and Patch Tempo settings of each Patch will be ignored.*



Synchronizing to the clock common to the entire JV-2080

For a Patch

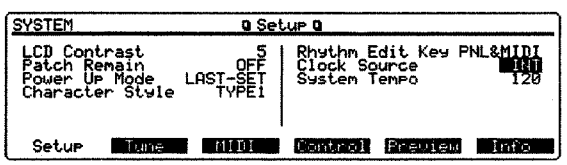
A. Access the Common General page.
([PATCH]→[F1] (Common)→[F1] (General))

B. Set Clock Source to "SYSTEM."

C. Access the Setup page.
([SYSTEM]→[F1] (Setup))

D. Set Clock Source to "INT."

E. The phrase loop will synchronize to the System Tempo value. Try out various differ ent values.



For a Performance

A. Access the Common page.
([PERFORM]→[F1] (Common))

B. Set Clock Source to "SYSTEM."

C. Access the Setup page.
([SYSTEM]→[F1] (Setup))

D. Set Clock Source to "INT."

E. The phrase loop will synchronize to the System Tempo value. Try out various differ ent values.

7. Press [EXIT] several times to return to the Play page.

An (*) symbol will appear at the left of the group to indicate that the settings have been changed.

** If you turn off the power or select another Patch or Performance while the "*" symbol is displayed, the modified settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

** In the case of a Performance, you must first save the modified Patch and then save the Performance. If you save the Performance without saving the Patch, the modified Patch settings will not be saved. (Column* ***When you have modified the settings of the Patch assigned to a Part of the Performance*** *→p. 57)*

** Patch Tempo, Performance Tempo, and System Tempo will not transmit clock messages from the MIDI OUT connector.*

● Synchronizing to an external clock (phrase loop)

1. Connect an external device (MIDI sequencer etc.).

Refer to the owner's manual for your external device, and make settings so that it will transmit MIDI Clock messages.

2. Select a Patch or Performance. (→p. 17)

3. Access the Wave Param page.

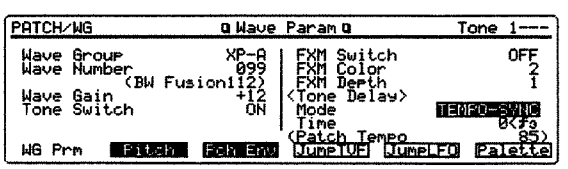
For a Patch

[PATCH]→[F2] (WG)→[F1] (WG Prm)

For a Performance

[PERFORM]+[PATCH]→[F2] (WG)→ [F1] (WG Prm)

** When the Play page is displayed, you can use [◄][►] to select the Part of the Performance to which your settings will apply.*



4. Use TONE SELECT [1]—[4] to select a Tone which uses a wave (phrase loop) that has a tempo (BPM) display.

The wave name and tempo (BPM) will be displayed together in the parentheses under the wave number.

5. Set the <Tone Delay> Mode to "TEMPO-SYNC."

The currently specified clock (tempo) will be displayed at the bottom of the screen.

6. Set the <Tone Delay> Time to "0< ♪3 "

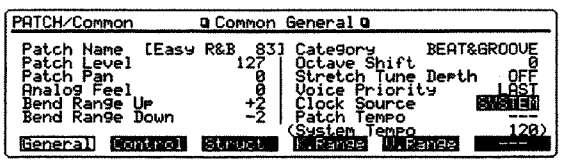
**If you set a value other than 0, a delay effect will be applied, and you will not be able to play as you intend.*

7.

For a Patch

A. Access the Common General page. ([PATCH] →[F1] (Common)→[F1] (General))

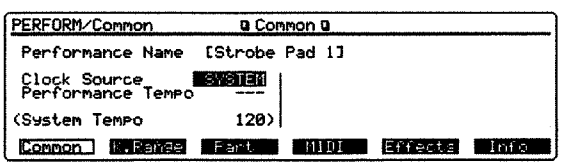
B. Set Clock Source to "SYSTEM."



For a Performance

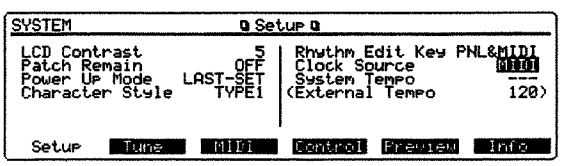
A. Access the Common page. ([PERFORM]→[F1] (Common))

B. Set Clock Source to "SYSTEM."



8. Access the Setup page. ([SYSTEM]→[F1] (Setup))

9. Set Clock Source to "MIDI."



The clock of the external device will be displayed as the External Tempo value, and the phrase loop will synchronize to this value.

Try setting the external device clock to different values.

10. Press [EXIT] several times to return to the Play page.

An (*) symbol will appear at the left of the group to indicate that the settings have been changed.

**If you turn off the power or select another Patch or Performance while the "*" symbol is displayed, the modified settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

In the case of a Performance, you must first save the modified Patch and then save the Performance. If you save the Performance without saving the Patch, the modified Patch settings will not be saved. (Column **When you have modified the settings of the Patch assigned to a Part of the Performance →p. 57)*

Syncing Delay Time to the Clock (Tempo)

Tone Delay time can be synchronized to "internal clock," to "external clock," or to "the interval at which a pedal is pressed."

**Patch PR-E 73 uses Tone Delay.*

**If the Structure Type 1&2 and 3&4 settings (Structure page [PATCH]→[F1] (Common)→[F3] (Struct)) are set to a value of Type 2—10, the output of Tones 1 and 2 will be combined into Tone 2, and the output of Tones 3 and 4 will be combined into Tone 4. This means that the setting of Tone 1 will follow the setting of Tone 2, and the setting of Tone 3 will follow the setting of Tone 4. (→p. 74)*

● Synchronizing to an internal clock (Delay)

You can synchronize the delay to the clock of the individual Patch, to the clock of the individual Performance, or to the common clock of the entire JV-2080.

In step 5, read the portion that applies to your situation.

1. Select a Patch or Performance. (→p. 17)

2. Access the Wave Param page.

For a Patch

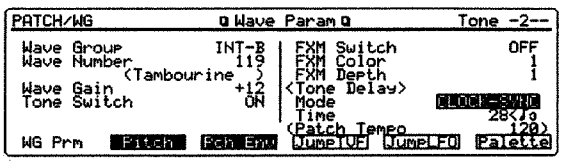
[PATCH]→[F2] (WG)→[F1] (WG Prm)

For a Performance

[PERFORM]+[PATCH]→[F2] (WG)→ [F1] (WG Prm)

** When the Play page is displayed, you can use [◄][►] to select the Part of the Performance to which your settings will apply.*

** Press TONE SELECT [1]—[4] to select the Tone to which the settings will apply.*



3. Set <Tone Delay> Mode to "CLOCK-SYNC."

The currently selected clock (tempo) will be displayed at the bottom of the screen.

4. Specify the <Tone Delay> Time.

The delay time is set in terms of note length of the synchronization tempo.

Example : For a tempo of 120 (120 quarter notes occur in 1 minute (60 seconds))

Setting	Delay time
192= 𝅗𝅥 (half note)	1 second (60 / 60 =1 (second))
96= ♩ (quarter note)	0.5 seconds (60 / 120= 0.5 (seconds))
48= ♪ (eighth note)	0.25 seconds (60 / 240= 0.25 (seconds))

5.

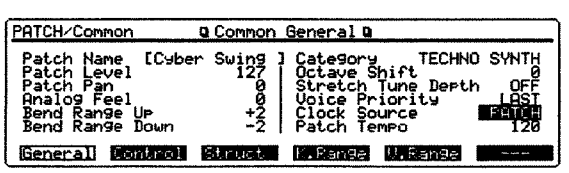
When synchronizing the delay time to the clock of an individual Patch or Performance

For a Patch

A. Access the Common General page. ([PATCH]→[F1] (Common)→[F1] (General))

B. Set Clock Source to "PATCH."

C. The delay time will synchronize to the Patch Tempo value. Try out various settings.



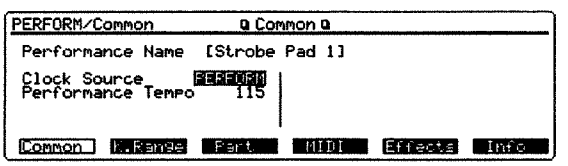
For a Performance

A. Access the Common page. ([PERFORM]→[F1] (Common))

B. Set Clock Source to "PERFORM."

C. The delay time will synchronize to the Performance Tempo value. Try out various settings.

** In the case of a Performance, the Clock Source and Patch Tempo settings of each Patch will be ignored.*



When synchronizing the delay time to the common clock of the entire JV-2080

For a Patch

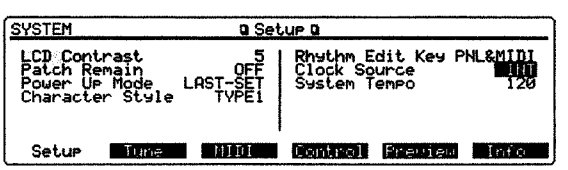
A. Access the Common General page. ([PATCH]→[F1] (Common)→[F1] (General))

B. Set Clock Source to "SYSTEM."

C. Access the Setup page. ([SYSTEM]→[F1] (Setup))

D. Set Clock Source to "INT."

E. The delay time will synchronize to the System Tempo value. Try out various settings.



For a Performance

A. Access the Common page. ([PERFORM]→[F1] (Common))

B. Set Clock Source to "SYSTEM."

C. Access the Setup page. ([SYSTEM]→[F1] (Setup))

D. Set Clock Source to "INT."

E. The delay time will synchronize to the System Tempo value. Try out various settings.

6. Press [EXIT] several times to return to the Play page.

An (*) symbol will appear at the left of the group to indicate that the settings have been changed.

***** *If you turn off the power or select another Patch or Performance while the "*" symbol is displayed, the modified settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

***** *In the case of a Performance, you must first save the modified Patch and then save the Performance. If you save the Performance without saving the Patch, the modified Patch settings will not be saved. (Column* ***When you have modified the settings of the Patch assigned to a Part of the Performance*** *→p. 57)*

***** *Patch Tempo, Performance Tempo, and System Tempo will not transmit clock messages from the MIDI OUT connector.*

● Synchronizing to an external clock (Delay)

1. Connect an external device (MIDI sequencer etc.).

Refer to the owner's manual for your external device, and make settings so that it will transmit MIDI Clock messages.

2. Select a Patch or Performance. (→p. 17)

3. Access the Wave Param page.

For a Patch

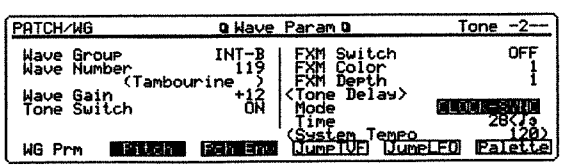
[PATCH]→[F2] (WG)→[F1] (WG Prm)

For a Performance

[PERFORM]+[PATCH]→[F2] (WG)→[F1] (WG Prm)

***** *When the Play page is displayed, you can use [◄][►] to select the Part of the Performance to which your settings will apply.*

***** *Press TONE SELECT [1]—[4] to select the Tone to which the settings will apply.*



4. Set the <Tone Delay> Mode to "CLOCK-SYNC."

The currently specified clock (tempo) will be displayed at the bottom of the screen.

5. Specify the <Tone Delay> Time.

The delay time is set in terms of note length of the synchronization tempo.

Example: For a tempo of 120 (120 quarter notes occur in 1 minute (60 seconds))

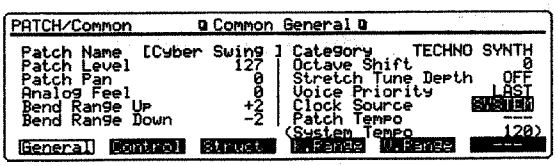
Setting	Delay time
192= 𝅗𝅥 (half note)	1 second (60 / 60 =1 (second))
96= ♩ (quarter note)	0.5 seconds (60 / 120= 0.5 (seconds))
48= ♪ (eighth note)	0.25 seconds (60 / 240= 0.25 (seconds))

6.

For a Patch

A. Access the Common General page. ([PATCH]→[F1] (Common)→[F1] (General))

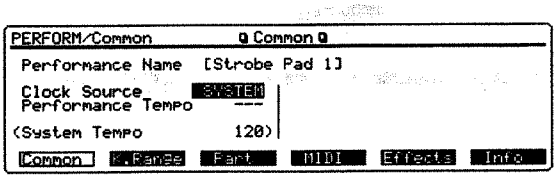
B. Set the Clock Source to "SYSTEM."



For a Performance

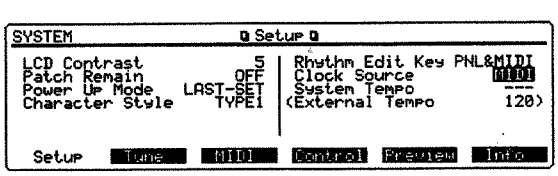
A. Access the Common page. ([PERFORM]→[F1] (Common))

B. Set the Clock Source to "SYSTEM."



7. Access the Setup page. ([SYSTEM]→[F1] (Setup))

8. Set the Clock Source to "MIDI."



The clock of the external device will be displayed for External Tempo, and the delay time will synchronize to this value.

Try various clock values on the external device.

9. Press [EXIT] several times to return to the Play page.

An (*) symbol will appear at the left of the group to indicate that the settings have been changed.

***** *If you turn off the power or select another Patch or Performance while the "*" symbol is displayed, the modified settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

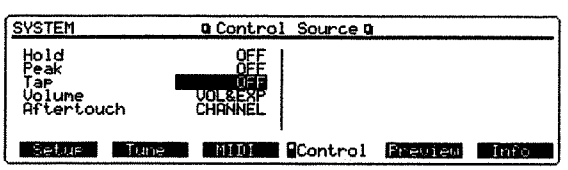
***** *In the case of a Performance, you must first save the modified Patch and then save the Performance. If you save the Performance without saving the Patch, the modified Patch settings will not be saved. (Column* ***When you have modified the settings of the Patch assigned to a Part of the Performance*** *→p. 57)*

● Synchronizing to the interval at which a pedal is pressed (Delay)

1. Connect a pedal to your external device (MIDI keyboard etc.).

2. Access the Control Source page. ([SYSTEM]→[F4] (Control))

If the Control Assign page is displayed, press [F4] (Control) once again.



3. Set Tap to the MIDI message that you will use to specify the clock tempo.

You should select a type of MIDI message which is transmitted by pressing a pedal.

Tap (Tap control source)

OFF	: No control
HOLD-1	: Hold 1(controller number 64)
SOSTENUTO	: Sostenuto (controller number 66)
SOFT	: Soft pedal (controller number 67)
HOLD-2	: Hold 2 (controller number 69)

4. Select a Patch or Performance. (→p. 17)

5. Access the Wave Param page.

For a Patch

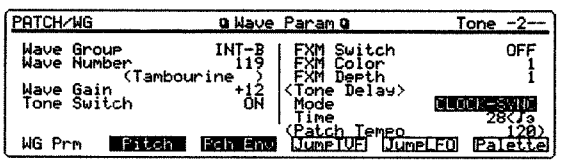
[PATCH] →[F2] (WG) →[F1] (WG Prm)

For a Performance

[PERFORM]+[PATCH]→[F2] (WG)→[F1] (WG Prm)

***** *When the Play page is displayed, you can use [◄][►] to select the Part of the Performance to which your settings will apply.*

***** *Press TONE SELECT [1]—[4] to select the Tone to which the settings will apply.*



6. Set the <Tone Delay> Mode to "CLOCK-SYNC."

The currently specified clock (tempo) will be displayed in the lower part of the screen.

7. Specify the <Tone Delay> Time.

The delay time is set in terms of note length of the synchronization tempo.

Example: For a tempo of 120 (120 quarter notes occur in 1 minute (60 seconds))

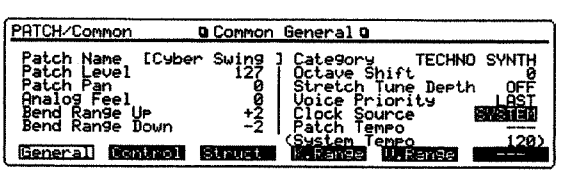
Setting	Delay time
192= 𝅗𝅥 (half note)	1 second (60 / 60 =1 (second))
96= ♩ (quarter note)	0.5 seconds (60 / 120= 0.5 (seconds))
48= ♪ (eighth note)	0.25 seconds (60 / 240= 0.25 (seconds))

8.

For a Patch

A. Access the Common General page. ([PATCH]→[F1] (Common)→[F1] (General))

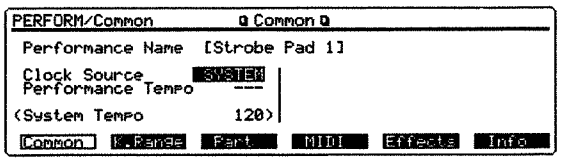
B. Set the Clock Source to "SYSTEM."



For a Performance

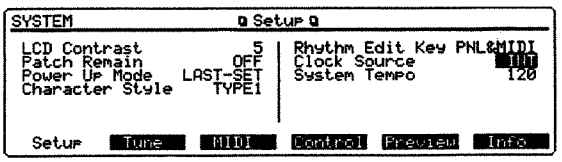
A. Access the Common page.
([PERFORM]→[F1] (Common))

B. Set the Clock Source to "SYSTEM."



9. Access the Setup page. ([SYSTEM]→[F1] (Setup))

10. Set the Clock Source to "INT."



The interval at which you press the pedal will be displayed as System Tempo, and the delay time will synchronize to this value.

Try pressing the pedal at various timing intervals.

11. Press [EXIT] several times to return to the Play page.

An (*) symbol will appear at the left of the group to indicate that the settings have been changed.

***** *If you turn off the power or select another Patch or Performance while the "*" symbol is displayed, the modified settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

***** *In the case of a Performance, you must first save the modified Patch and then save the Performance. If you save the Performance without saving the Patch, the modified Patch settings will not be saved. (Column* ***When you have modified the settings of the Patch assigned to a Part of the Performance*** *→p. 57)*

Using the JV-2080 as a GM Sound Module

The JV-2080 can be used as a GM sound module. This allows you to play back or create GM scores (music data created for GM sound modules).

Switching to a GM Sound Module

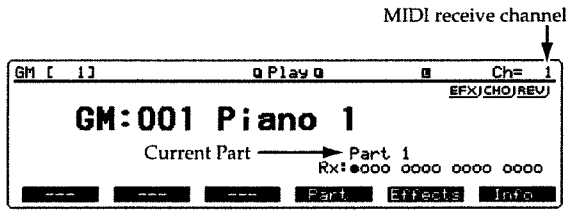
GM System is similar to a Performance in which Part 10 is assigned a GM system Rhythm Set, and other Parts are assigned GM system Patches.

When GM System mode is selected, Part 10 will be assigned GM:001 GM Drum Set, and all other Parts will be assigned GM:001 Piano 1, but you can select other GM Patches or GM Drum Sets as desired.

1. Hold down [SHIFT] and press [PERFORM]. The GM Play page will appear.

   GM Play page displays the Patch or Rhythm Set which is assigned to each Part.

   When you switch the JV-2080 to GM mode, it will automatically be given the basic GM sound module settings.



**In GM System mode, the receive channels will be fixed as follows: Part 1= Ch.1, Part 2= Ch.2, Part 3= Ch.3 ... Part 16= Ch.16.*

● Other ways to select the basic GM system settings

In order for a GM score to be played back correctly, the sound source must first be given the basic GM system settings. In addition to the procedure described above, the JV-2080 will select the basic GM system settings in the following cases.

- When a GM System On message is received from an external device
- When the music data being played back on an external device contains a GM System On message
- When the JV-2080 is initialized (→p. 128)

**Since effect settings are not defined by the GM system, even when the basic GM system settings are made, effect settings will not change except for the parameters of each Part (Output Assign, Reverb Send Level, Chorus Send Level, Mix/EFX Send Level).*

If you wish to select the basic GM system settings and in addition recall the factory effect settings, you will need to perform the Initialize operation with a setting of "DEFAULT" (→p. 128), or perform the Factory Preset operation and then switch to GM mode. (→p. 101)

**If Rx GM-ON Message (MIDI Parm 1 page [SYSTEM]→[F3] (MIDI)) is turned OFF, GM System On messages will not be received.*

GM System On message

This is a message which switches a device to an operating mode that is compatible with the GM system, or to initialize a sound source so that it will be compatible with the GM system.

Playing Back a GM Score

If the JV-2080 is switched to GM mode, it will be able to correctly play back a GM score. However, the JV-2080 has many extended functions which are not defined by the GM system, and if you create music data which relies on these functions, this music data may not play back correctly on other GM sound sources.

**The JV-2080 is not compatible with the GS Format (a set of common specifications proposed by Roland to standardize multitimbral sound sources). Music data bearing the GS logo (GS music data) may not play back correctly on the JV-2080.*

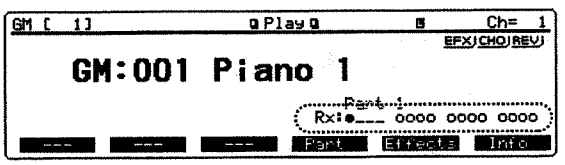
**GM System On messages are normally placed at the beginning of a GM score. This means that if a GM score is played back from the middle of the song, the JV-2080 will not switch to a GM sound source, and playback may not be correct. Before playing back a GM score, we recommend that you switch to GM mode manually (using the panel buttons).*

■ Muting a Specific Musical Part (Part On/Off)

When the JV-2080 is switched to be a GM sound source, all Parts will be set to receive MIDI messages. If you wish to silence a specific Part during playback of a GM score, turn that Part off.

1. Make sure that you have selected GM sound source mode.
2. Press [RX] to make the indicator light.
3. Use PART SELECT [1/9]—[8/16] to switch each Part on (indicator lit) or off (indicator dark).

   To switch Parts 9—16 on/off, make the [1-8/9-16] indicator light, and press PART SELECT [1/9]—[8/16].



   In the GM Play page, Parts which are on will be indicated as "O" or "●," and Parts which are off as "_."

4. Press [RX] to make the indicator go dark.

** If the [RX] indicator is lit, when a Part which is turned on receives a MIDI message, the indicator for that part will blink. (However only in the case of the Part Information page, the indicator of a Part which receives a MIDI message will blink regardless of [RX] or the Part on/off setting.)*

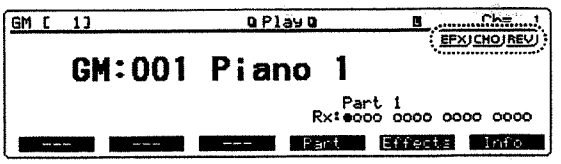
Turning Effects On/Off ([EFX][CHORUS][REVERB])

You can specify whether the JV-2080's built-in effect units (EFX, chorus, reverb) will be used (ON) or not (OFF).

1. Press [EFX][CHORUS][REVERB] to turn the corresponding effect unit on (indicator lit) or off (indicator dark).

When each effect unit is on, the upper right of the GM Play page will indicate "EFX""CHO""REV."

When an effect unit is off, it will be displayed as a gray letter.



Settings for Individual Parts

In the GM Play page, the parameters which can be set for each Part of GM System are assigned to the function buttons as follows.

General MIDI

* The * symbol indicates GM System settings.
Unmarked items are settings for each Part.

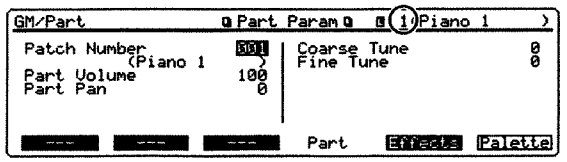
- [F4] (Part)
  Patch select / Volume / Pan / Pitch (p. 127)
- [F5] (Effects)
  - [F1] (General) — Effect unit structure (p. 32)
  - [F2] (EFX Prm) — * EFX Type (p. 33)
  - [F3] (EFX Ctl) — * Use MIDI controllers to modify EFX settings (p. 104)
  - [F4] (Chorus) — * Chorus (p. 53)
  - [F5] (Reverb) — * Reverb (p. 54)

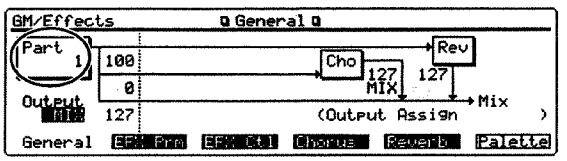
Use the following procedure to make settings for each Part. For details on each of the parameters, see the reference page given in the diagram.

1. Hold down [SHIFT] and press [PERFORM]. The GM Play page will appear.
2. Press [F4] (Part) or [F5] (Effects). The desired page will appear.
3. If you selected Effects, you will also need to press [F1] (General)—[F5] (Reverb) to access the desired page.
4. Use PART SELECT [1/9]—[8/16] to select the Part for which you wish to make settings.

   To select a Part 9—16, make the [1-8/9-16] indicator light, and then press PART SELECT [1/9]—[8/16].

   The indicator will blink, and the Part number will appear in the upper right of the display (left, in the case of the General page of Effects).





**Since the Effect parameters [F2] (EFX Prm)—[F5] (Reverb) are common to all Parts, it is not possible to select the Part to which the settings will apply.*

5. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.

6. Either rotate the VALUE dial or press [INC][DEC] to set the value.

**If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

7. Repeat steps 1—6 to finish making the desired GM system settings.

8. Press [EXIT] to return to the GM Play page.

**It is not possible to save GM system settings.*

To change a value in large steps

On the JV-2080, data values can be modified using either the VALUE dial or [INC][DEC]. When using these methods, the data values will change more quickly if the following procedures are used.

VALUE dial

Rotate the VALUE dial while pressing it. Alternatively, rotate the VALUE dial while pressing [SHIFT].

[INC] [DEC]

To increase a value quickly

Hold down [INC] and press [DEC]. Alternatively, hold down [SHIFT] and press [INC].

To decrease a value quickly

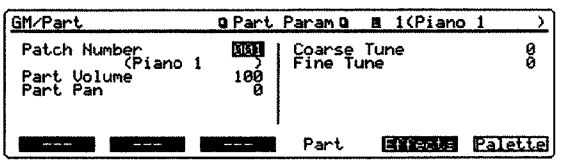
Hold down [DEC] and press [INC]. Alternatively, hold down [SHIFT] and press [DEC].

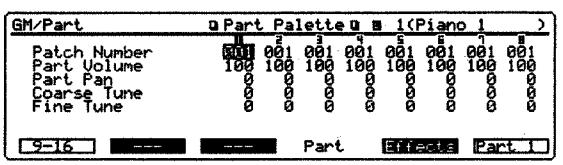
● To view the settings of each Part as you make settings

Settings for eight Parts (Parts 1—8 or Parts 9—16) can be displayed simultaneously in a single page.

1. When you are making settings for an individual Part, press [F6] (Palette) to access the Part Palette page.

**[F6] (Palette) will be displayed only when it is possible to switch to the Part Palette page.*





2. Use PART SELECT [1/9]—[8/16] to select the Part for which you wish to make settings.

To select a Part 9—16, make the [1-8/9-16] indicator light, and then press PART SELECT [1/9]—[8/16].

You can also use [◄][►] to select the Part for which to make settings.

Each time you press [F1], the Part Palette pages for Part 1—8 and Part 9—16 will alternate.

3. Press [▲][▼] to move the cursor to the item you wish to set.

If you hold down [SHIFT] and press [▲], the cursor will move to the top item. If you hold down [SHIFT] and press [▼], the cursor will move to the bottom item.

4. Either rotate the VALUE dial or press [INC][DEC] to set the value.

**If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

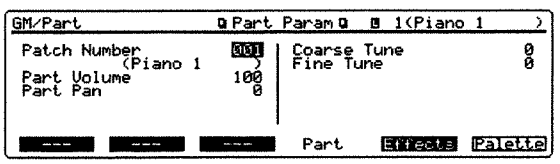
5. Repeat steps 1—4 to finish making GM system settings.

6. To leave the Part Palette page, press [F6].

[F6] will indicate the Part number to which you will return.

■ Patch Selection / Volume / Pan / Pitch ([SHIFT]+[PERFORM]→[F4] (Part))

Here you can select the Patch which is assigned to each Part, and specify the volume, panning, and pitch of each Part.



Patch Number (GM Patch number)

Specify the number of the GM Patch (or GM Rhythm Set for Part 10) that is assigned to each Part. The name will be displayed in parentheses ( ).

** You can also press the VALUE dial (SOUND LIST) and select from the Patch list.*

** It is not possible to select Patches or Rhythm Sets from the USER, PRESET A—C, E, XP-A—H, or CARD group.*

Part Volume

Specify the volume for each Part. This is used mainly to adjust the volume balance between Parts.

Part Pan

Specify the panning of each Part. A setting of L64 is far left, 0 is center, and 63R is far right.

** When you modify the Part Volume and Part Pan settings, the values will be reflected by the Volume and Pan settings of the Part Information page. (→p. 143)*

Coarse Tune (Part coarse tune)

The basic pitch of each Part can be adjusted in semitone steps over a range of +/-4 octaves. This is a relative change, and a setting of 0 will produce the pitch of the GM Patch.

Fine Tune (Part fine tune)

Make fine adjustments to the pitch specified by Coarse Tune, in 1-cent steps over a range of 1/2 semitone (1/100th of a semitone) upward or downward.

Another way to select the Patch (or Rhythm Set, for Part 10) assigned to each Part

1. In the GM Play page, use [◄][►] to select the Part for which you wish to make settings. (The display will indicate the Part number.)
2. Either rotate the VALUE dial or press [INC][DEC] to select the Patch or Rhythm Set.

■ Effects ([SHIFT]+[PERFORM]→ [F5] (Effects)→[F1]—[F5])

For effect settings, refer to ([F1] (General)→p. 32, [F2] (EFX Prm)→p. 33, [F3] (EFX Ctl)→p. 104, [F4] (Chorus)→p. 53, [F5] (Reverb)→p. 54).

Initializing

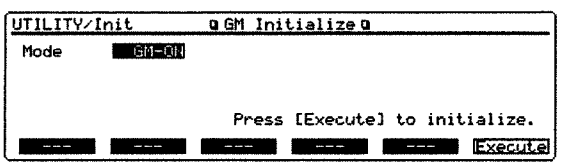
There are two ways to initialize: "GM-ON" and "DEFAULT."

Mode (Initialize mode)

GM-ON : Make the basic GM system settings, as when a GM System On message is received.

DEFAULT : Make the basic GM system settings, and also select the factory values for the effect settings.

1. Hold down [SHIFT] and press [PERFORM]. The GM Play page will appear.
2. Press [UTILITY] to make the indicator light.
3. Press [F6] (Menu) several times to select Menu 1.
4. Press [F3] (Init). The GM Initialize page will appear.

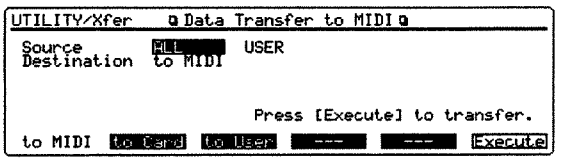


5. Either rotate the VALUE dial or press [INC][DEC] to select "GM-ON" or "DEFAULT."
6. Press [F6] (Execute) to execute the initialize operation.

   You will return to the GM Play page.

Transmitting to an External MIDI Device

Via MIDI, the contents of internal memory or of a DATA card can be transmitted to an external device (MIDI sequencer etc.) for saving, or to another JV-2080 to set it to the identical settings. In this case, both the transmitting and receiving devices must be set to the same device ID number.



Source

Select the data that is to be transmitted.

For example, if you wish to transmit the USER group Patches 001—020, you would specify "PATCH USER:001-020."

ALL	USER		
	TEMP		
	CARD		
PERFORM	USER	01-32	
	TEMP	-PATCH	Note 1
		+PATCH	Note 2
	CARD	01-16, 32	
PATCH	USER	001-128	
	TEMP		
	CARD	001-064, 128	
RHYTHM	USER	001-002	
	TEMP		
	CARD	001-001, 002	
SYSTEM			Note 3

** ALL indicates all of the Performances, Patches, and Rhythm Sets in the following settings (USER, TEMP or CARD).*

** TEMP is the data in the temporary area (the currently selected data).*

** CARD sounds cannot be selected unless a DATA card is inserted into the CARD slot. (→p. 11)*

** It is not possible to transmit GM system settings.*

Note 1 : The Performance in the temporary area (i.e., the currently selected one).

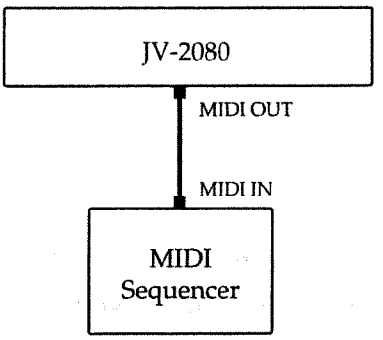
Note 2 : The Performance in the temporary area (i.e., the currently selected one), and the data of the Patches and Rhythm Sets that are assigned to its Parts.

Note 3 : System settings. Specifically, this consists of the items listed in "Parameter address map 1-1-1. System Common" in the MIDI implementation (→p. 188).

Destination

"to MIDI" indicates that the data will be transmitted to an external MIDI device.

As shown in the diagram, connect the JV-2080 to the external MIDI device before performing the procedure.



1. Press [UTILITY] to make the indicator light.
2. Press [F4] (Xfer).
3. Press [F1] (to MIDI). The Data Transfer to MIDI page will appear.
4. Use [◄][►] to move the cursor to the item you wish to set.
5. Either rotate the VALUE dial or press [INC][DEC] to set the value.
6. Press [F6] (Execute) to execute data transmission.

   If you wish to save the data, put the external MIDI device in a condition where it can record the data before you execute the transmission command.

   While the data is being transmitted, the display will indicate "Transmitting..."

** To halt during transmission, press [EXIT].*

7. Press [EXIT] several times to return to the Play page.

Device ID Number and Rx Sys.Excl settings

When transmitting data to another JV-2080 unit, the Device ID Number (MIDI Param 1 page [SYSTEM]→[F3] (MIDI)) of both units must be set to match, and the receiving device's Rx Sys.Excl setting (MIDI Param 1 page [SYSTEM]→[F3] (MIDI)) must be turned ON.

Also, when data is returned from the external device back to the JV-2080, the Device ID Number settings must be set to the values that were in effect during transmission, and the Rx Sys.Excl setting must be turned ON.

With the factory settings, the Device ID Number is 17, and Rx Sys.Excl is ON. (→p. 136)

Transmitting to a Data Card

Internal memory data can be transmitted to an optional DATA card (MEMORY CARD M-512E, M-256E).

It is also possible to transmit data within a DATA card (for example, transmitting CARD Patches 005—007 to CARD Patches 001—003).

This function is a convenient way to rearrange sound data into a desired order.

DATA cards must be formatted before they can be used. (Formatting a Memory Card →p. 10)

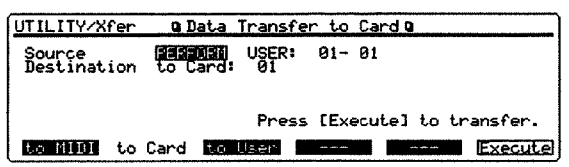
The number of Performances, Patches and Rhythm Set which can be stored on a DATA card is as follows.

M-512E

32 Performances, 128 Patches, 2 Rhythm Sets

M-256E

16 Performances, 64 Patches, 1 Rhythm Set



Source

Specify the data that is to be transmitted.

For example if you wish to transmit USER group Patches 001—020, specify "PATCH USER:001-020."

PERFORM	USER	01—32
	CARD	01—16, 32
	PR-A, B	01—32
PATCH	USER	001—128
	CARD	001—064, 128
	PR-A—C, GM, PR-E	001—128
	XP-A—H	001—255
RHYTHM	USER	001—002
	CARD	001—001, 002
	PR-A—C, GM, PR-E	001—002
	XP-A—H	001—255

**CARD sounds can be selected only if a DATA card is inserted into the CARD slot. (→p. 11)*

**XP-A—H sounds can be selected only if a wave expansion board is installed in the corresponding slot. (→p. 9)*

Destination

Specify the first number of the transmission destination.

"to CARD" means that the data will be transmitted to a DATA card.

1. Insert a formatted DATA card into the card slot.
2. Press [UTILITY] to make the indicator light.
3. Press [F4] (Xfer).
4. Press [F2] (to Card). The Data Transfer to Card page will appear.
5. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
6. Either rotate the VALUE dial or press [INC][DEC] to set the value.
7. Press [F6] (Execute) to execute data transmission.
8. Press [EXIT] several times to return to the Play page.

**If the specified data will not fit completely into the transmission destination, as much of the data as will fit will be transmitted, starting at the first number of the specified transmission destination.*

Example : When using an M-256E DATA card

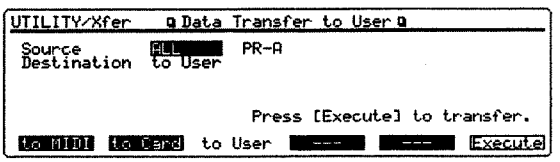
Source PATCH USER:001—005

Destination to Card:063

If the above settings are made and transmission is executed, only the two USER group Patches 01 and 02 will be transmitted to Patches 63 and 64 of the DATA card.

Transmitting to Internal Memory

Sound data from internal memory or a DATA card can be transmitted to the USER group of internal memory.
As when using a DATA card, this is a convenient way to rearrange sound data in the desired order.



Source

Specify the data to be transmitted.

For example if you wish to transmit only the PR-A group Patch 001, specify "PATCH PR-A:001-001"

ALL	PR-A, B	
PERFORM	USER	01—32
	CARD	01—16, 32
	PR-A, B	01—32
PATCH	USER	001—128
	CARD	001—064, 128
	PR-A—C, GM, PR-E	001—128
	XP-A—H	001—255
RHYTHM	USER	001—002
	CARD	001—001, 002
	PR-A—C, GM, PR-E	001—002
	XP-A—H	001—255

** ALL indicates all of the Performances, Patches, and Rhythm Sets in the following settings (PR-A or PR-B).*

** CARD sounds can be selected only if a DATA card is inserted into the CARD slot. (→p. 11)*

** XP-A—H sounds can be selected only if a wave expansion board is installed in the corresponding slot. (→p. 9)*

Destination

Specify the first number of the transmission destination.

"to USER" means that the data will be transmitted to the USER group.

1. Press [UTILITY] to make the indicator light.
2. Press [F4] (Xfer).
3. Press [F3] (to User). The Data Transfer to User page will appear.
4. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
5. Either rotate the VALUE dial or press [INC][DEC] to specify the value.
6. Press [F6] (Execute) to execute data transmission.
7. Press [EXIT] several times to return to the Play page.

** If the specified data will not fit completely into the transmission destination, as much of the data as will fit will be transmitted, starting at the first number of the specified transmission destination.*

Example:

Source	PATCH PR-A:001—005
Destination	to User:127

If the above settings are made and transmission is executed, only the two PR-A group Patches 01 and 02 will be transmitted to USER group Patches 127 and 128.

Transmitting Data as a Group

Data can be copied (Copy) or exchanged (Swap) between an optional DATA card (MEMORY CARD M-512E, M-256E) and the USER group of internal memory.

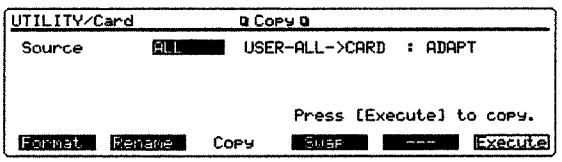
Data can be transmitted in units of the entire USER group or half of it, or the entire DATA card. This function provides a convenient way to copy or exchange groups of data.

The JV-2080 can store 32 Performances, 128 Patches, and 2 Rhythm Sets in the USER group. However, the M-256E DATA card can accommodate only half of this data: 16 Performances, 64 Patches, and 1 Rhythm Set. This means that when transferring data between an M-256E DATA card and internal memory, the data of the USER group must be divided into first (USER-HALF1) and second (USER-HALF2) halves.

■ Data Transmission between a Data Card and Internal Memory

Data of the internal USER group can be copied to an optional DATA card (MEMORY CARD M-512E, M-256E). Conversely, data from a DATA card can also be copied to the internal USER group.

Specify the data that is to be transmitted.



Data

ALL : All three types of data: Performance, Patch and Rhythm Set
PERFORM : Performance
PATCH : Patch
RHYTHM : Rhythm Set

Copy source → Copy destination

For an M-512E MEMORY CARD

USER-ALL→CARD : the entire USER group → card
CARD→USER-ALL : card → the entire USER group

For an M-256E MEMORY CARD

USER-HALF1→CARD : the first half of the USER group → card
USER-HALF2→CARD : the second half of the USER group → card
CARD→USER-HALF1 : card → the first half of the USER group
CARD→USER-HALF2 : card → the second half of the USER group

Copy procedure

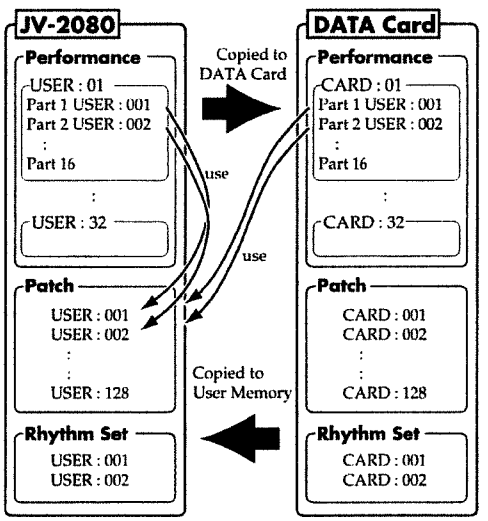
(Only when ALL is selected as the type of data)

In a Performance, the Patch group that will be used (referred to) by each Part can be specified separately for each Part. You can specify how this data (the Patch group) will be handled during transmission.

This affects only Performances which use USER group Patches.

DIRECT : The Patch for each Part of the Performance will be copied with the Patch group unchanged. In other words, the Patch of the same Patch group will be used as before the copy operation.

You will probably want to use the DIRECT setting to copy data if you are temporarily keeping data on a DATA card, and will later transfer it back into the JV-2080 for use.

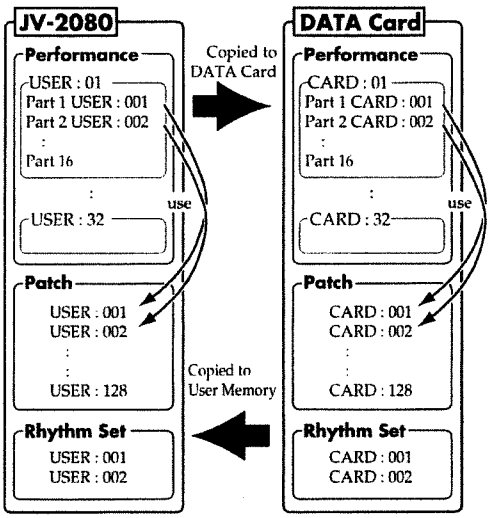


** Be aware that if Performances which use USER group Patches are copied onto a DATA card using the DIRECT setting, these Performances will not sound correctly if the Patches of the USER group are rewritten, or if these Performances are used on another JV-2080.*

ADAPT : When USER group Patch selections are copied to a DATA card the Patch group will be changed to CARD, and when they are copied to internal memory it will be changed to USER.

In other words, Performances which are copied to a DATA card will use DATA card Patches (the Patches which were copied at the same time as the Performances), and Performances which are copied to internal memory will use USER group Patches (the Patches which were copied at the same time as the Performances).

You will probably want to copy data using the ADAPT setting if you will be using the DATA card on a different JV-2080.



** If Performances in the first half of the USER group (No. 1—16) use Patches in the second half of USER group (No. 65—128), be aware that copying data to an M-256E DATA card with a setting of USER-HALF1→CARD: ADAPT will not cause the Patches in the second half of the USER group (No. 65—128) to be copied. Parts which use Patches in the second half (No. 65—128) will be played using a piano sound.*

In the same way, if Performances in the second half of USER (No. 17—32) use Patches in the first half of USER (No. 1—64), copying data to an M-256E DATA card with a setting of USER-HALF2→CARD: ADAPT will not cause the Patches in the first half of USER (No. 1—64) to be copied. Parts which use Patches in the first half (No. 1—64) will be played using a piano sound as a substitute.

1. Insert a DATA card into the card slot.
2. Press [UTILITY] to make the indicator light.
3. Press [F6] (Menu) to select Menu 2.
4. Press [F1] (Card).
5. Press [F3] (Copy). The Copy page will appear.
6. Use [◄][►] to move the cursor to the item you wish to set.
7. Either rotate the VALUE dial or press [INC][DEC] to specify the value.
8. Press [F6] (Execute) to execute data transmission.
9. Press [EXIT] several times to return to the Play page.

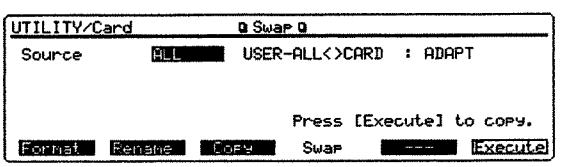
** If ALL data is copied, be aware that Performances whose Parts use both USER group and DATA card Patches will not play back correctly after they are copied.*

** When PERFORM data is copied, a setting of DIRECT is used. This means that Performances copied to the DATA card which use USER group Patches will not play back correctly if you later rewrite the contents of the USER group Patches, or if the Performances are used on a different JV-2080.*

■ Data Exchange between a Data Card and Internal Memory

Data of the internal USER group can be exchanged with data of an optional DATA card (MEMORY CARD M-512E, M-256E).

Specify the data that is to be exchanged.



Data

ALL : All three types of data: Performance, Patch and Rhythm Set
PERFORM : Performance
PATCH : Patch
RHYTHM : Rhythm Set

Data to be exchanged

For an M-512E MEMORY CARD

USER-ALL↔CARD : the entire USER group and the card

For an M-256E MEMORY CARD

USER-HALF1↔CARD : the first half of the USER group and the card
USER-HALF2↔CARD : the second half of the USER group and the card

Exchange procedure

(only when the type of data is set to ALL)

In a Performance, the Patch group that will be used (referred to) by each Part can be specified separately for each Part. You can specify how this data (the Patch group) will be handled during exchange.

This affects only Performances which use USER group Patches.

DIRECT : The Patch for each Part of the Performance will be exchanged with the Patch group unchanged.

You will probably want to use the DIRECT setting to exchange data if you are temporarily keeping data on a DATA card, and will later transfer it back into the JV-2080 for use.

** Performances which use USER group Patches will not play back correctly if they are exchanged only once using a DIRECT setting.*

ADAPT : When USER group Patch selections are moved to a DATA card the Patch group will be changed to CARD, and when they are moved to internal memory the Patch group will be changed to USER.

In other words, Performances which are moved to a DATA card will use DATA card Patches (the Patches which were copied at the same time as the Performances), and Performances which are moved to internal memory will use USER group Patches (the Patches which were copied at the same time as the Performances).

You will probably want to exchange data using the ADAPT setting if you will be using the DATA card on a different JV-2080.

** If Performances in the first half of the USER group (No. 1—16) use Patches in the second half of USER group (No. 65—128), be aware that exchanging data with an M-256E DATA card with a setting of USER-HALF1↔CARD: ADAPT will not cause the Patches in the second half of the USER group (No. 65—128) to be transferred to the DATA card. Parts which use Patches in the second half (No. 65—128) will be played using a piano sound.*

In the same way, if Performances in the second half of USER (No. 17—32) use Patches in the first half of USER (No. 1—64), exchanging data with an M-256E DATA card with a setting of USER-HALF2↔CARD: ADAPT will not cause the Patches in the first half of USER (No. 1—64) to be transferred to the DATA card. Parts which use Patches in the first half (No. 1—64) will be played using a piano sound as a substitute.

1. Insert the DATA card into the card slot.
2. Press [UTILITY] to make the indicator light.
3. Press [F6] (Menu) to select Menu 2.
4. Press [F1] (Card).
5. Press [F4] (Swap). The Swap page will appear.
6. Use [◄][►] to move the cursor to the item you wish to set.
7. Either rotate the VALUE dial or press [INC][DEC] to set the value.
8. Press [F6] (Execute) to execute the data transfer.
9. Press [EXIT] several times to return to the Play page.

** If the data being handled is ALL, be aware that Performances whose Parts use both USER group and DATA card Patches will not play back correctly after being exchanged.*

** If the data being handled is PERFORM, a setting of DIRECT will be used for the exchange. This means that Performances which use USER group Patches and are exchanged only once will not play back correctly.*

Setting the Receive Channel

The JV-2080 produces sound and changes its internal settings in response to MIDI messages that it receives from other devices. In order for this to happen, the MIDI channels of the transmitting device (MIDI keyboard etc.) and of the JV-2080 must match.

**For details on setting the MIDI transmit channel of the transmitting device, refer to the owner's manual for the transmitting device.*

■ Each Part of a Performance

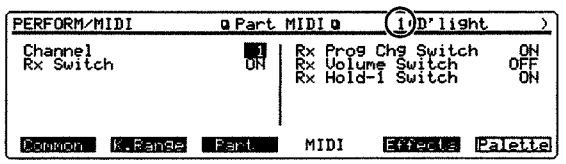
In order to play a Performance or to use MIDI messages from an external device to switch the Patch of each Part, you need to set the MIDI channel of each Part.

To play a Rhythm Set, set the MIDI channel of Performance Part 10. (Column **Internal organization** →p. 18)

1. Select the Performance that you wish to use, and access the PERFORM Play page. (→p. 17)
2. Press [F4] (MIDI). The Part MIDI page will appear.
3. Use PART SELECT [1/9]—[8/16] to select the Part you wish to set.

   To select a Part 9—16, make the [1-8/9-16] indicator light, and press PART SELECT [1/9]—[8/16].

   The indicator will blink, and the Part number will appear in the upper right of the display.



4. Use [▲][▼][◄][►] to move the cursor to the "Channel" setting.
5. Either rotate the VALUE dial or press [INC][DEC] to set the MIDI receive channel.
6. Press [EXIT] to return to the PERFORM Play page.

   An (*) symbol will appear at the left of the Performance group to indicate that the settings have been changed.

**If you turn off the power or select another Performance while the "*" symbol is displayed, the modified Performance settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

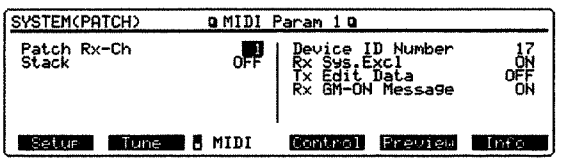
**After step 2, you can press [F6] (Palette) to simultaneously view the settings for eight Parts (Parts 1—8 or Parts 9—16) in the display, allowing you to compare settings between Parts while you make settings. (→p. 65)*

■ Patch Mode

If you wish to play Patches or to use MIDI messages from an external device to select Patches, use the following procedure to set the MIDI channel.

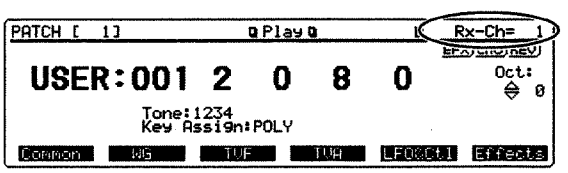
1. Press [PATCH] to make the indicator light.
2. Press [SYSTEM] to make the indicator light.
3. Press [F3] (MIDI). The MIDI Param 1 page will appear.

   If the MIDI Param 2 page is displayed, press [F3] (MIDI) once again.



4. Use [▲][▼][◄][►] to move the cursor to the "Patch Rx-Ch" setting.
5. Either rotate the VALUE dial or press [INC][DEC] to set the MIDI receive channel.
6. Press [EXIT] to return to the PATCH Play page.

   The MIDI receive channel will be displayed in the upper right of the screen.



Directly modifying the MIDI channel in the PATCH Play page

1. Press [RX] to make the indicator light.
2. Use PART SELECT [1/9]—[8/16] to select the MIDI channel.

   To select 9—16, make the [1-8/9-16] indicator light, and then press PART SELECT [1/9]—[8/16].

   The MIDI receive channel in the upper right of the display will change.

   The MIDI Param 1 page Patch Rx-Ch setting will also change, linked with this.
3. Press [RX] to make the indicator go dark.

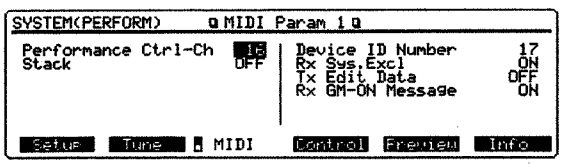
■ Settings for Selecting Performances Via MIDI Messages

If you wish to use MIDI messages from an external device to select Performances on the JV-2080, you must set the transmit channel of the external device to match the Performance Control channel (Performance Ctrl-Ch) of the JV-2080.

When the Factory Preset operation has been executed, the Performance Ctrl-Ch is set to "16." If you wish to change this, use the following procedure.

1. Press [PERFORM] to make the indicator light.
2. Press [SYSTEM] to make the indicator light.
3. Press [F3] (MIDI). The MIDI Param 1 page will appear.

   If the MIDI Param 2 page appears, press [F3] (MIDI) once again.



4. Use [▲][▼][◄][►] to move the cursor to the "Performance Ctrl-Ch" setting.
5. Either rotate the VALUE dial or press [INC][DEC] to set the Performance Control channel.
6. Press [EXIT] to return to the PERFORM Play page.

   The Performance Control channel (Performance Ctrl-Ch) will be displayed in the upper right of the screen.

Setting the Device ID Number and the Overall Transmit/Receive Switches

The device ID number setting and the overall transmit/receive switches for MIDI messages can be set in the MIDI Param 1 page or MIDI Param 2 page of SYSTEM.

● Device ID number

Device ID Number

When transmitting and receiving system exclusive messages, set the device ID numbers of the two devices to match.

● Overall transmit/receive switches

Rx Sys.Excl (Receive system exclusive switch)

Specify whether system exclusive messages will be received (ON) or not (OFF).

** When the MIDI Param 1 page is selected in GM System, this setting will not be available.*

Tx Edit Data (Transmit edit data switch)

When Patch, Performance or Rhythm Set settings are modified, specify whether the modified settings will be transmitted as system exclusive data (ON) or not (OFF).

** When the MIDI Param 1 page is selected in GM System, this setting will not be available.*

Rx GM-ON Message (Receive GM-ON switch)
Specify whether GM-ON (GM System On) messages will be received (ON) or not (OFF).

Rx Program Change
(Receive program change switch)
Specify whether program change messages will be received (ON) or not (OFF).

Rx Bank Select (Receive bank select switch)
Specify whether bank select messages will be received (ON) or not (OFF).

Rx Control Change (Receive control change switch)
Specify whether control change messages will be received (ON) or not (OFF).

Rx Volume (Receive volume switch)
Specify whether volume messages will be received (ON) or not (OFF).

Rx Hold-1 (Receive hold 1 switch)
Specify whether hold 1 messages will be received (ON) or not (OFF).

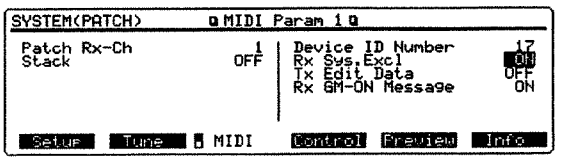
Rx Pitch Bend (Receive pitch bend switch)
Specify whether pitch bend messages will be received (ON) or not (OFF).

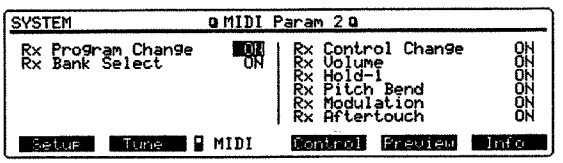
Rx Modulation (Receive modulation switch)
Specify whether modulation messages will be received (ON) or not (OFF).

Rx Aftertouch (Receive aftertouch switch)
Specify whether aftertouch messages will be received (ON) or not (OFF).

1. Press [SYSTEM] to make the indicator light.
2. Press [F3] (MIDI). The MIDI Param 1 page or the MIDI Param 2 page will appear.

   Each time you press [F3] (MIDI), these two pages will alternate.





3. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
4. Either rotate the VALUE dial or press [INC][DEC] to set the value.
5. Press [EXIT] several times to return to the Play page.

Setting the Receive Switches

Here you can set MIDI message receive switch settings for each Part of a Performance, for each Tone of a Patch, and for each percussion instrument sound of a Rhythm Set.

■ For Each Part of a Performance

Rx Prog Chg Switch
(Receive program change switch)
Specify whether each Part will receive MIDI program change messages (ON) or not (OFF).

Rx Volume Switch (Receive volume switch)
Specify whether each Part will receive MIDI volume messages (ON) or not (OFF).

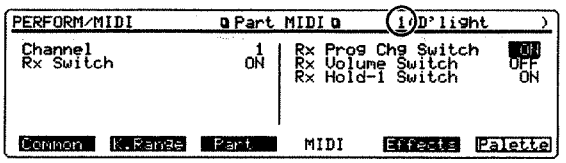
Rx Hold-1 Switch (Receive hold 1 switch)
Specify whether each Part will receive MIDI hold 1 messages (ON) or not (OFF).

1. Select the Performance you wish to use, and access the PERFORM Play page. (→p. 17)
2. Press [F4] (MIDI). The Part MIDI page will appear.

3. Use PART SELECT [1/9]—[8/16] to select the Part for which you wish to make settings.

   If you wish to select a Part 9—16, make the [1-8/9-16] indicator light, and then press PART SELECT [1/9]—[8/16].

   The indicator will blink, and the Part number will appear in the upper right of the display.



4. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
5. Either rotate the VALUE dial or press [INC][DEC] to set the value.
6. Press [EXIT] to return to the PERFORM Play page.

   An (*) symbol will appear at the left of the performance group to indicate that the settings have been changed.

**If you turn off the power or select another Performance while the "*" symbol is displayed, the modified Performance settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

**After step 2, you can press [F6] (Palette) to view the settings for eight Parts (Parts 1—8 or Parts 9—16) together in a single display. This allows you to compare the settings of each Part as you make settings. (→p. 65)*

**For details on the "Rx Switch" of the Part MIDI page, refer to →p. 67.*

■ For Each Tone in a Patch

Volume (Volume control switch)

Specify whether volume messages will be received (ON) or not (OFF).

Pan (Pan control switch)

Specify how pan messages will be received.

OFF : Pan messages will not be received.

CONTINUOUS : Pan messages will be received at any time to change the stereo location of the sound.

KEY-ON : The specified stereo location will take effect when a note is sounded. If a pan message is received while a note is sounding, the panning will not change until the next key is pressed. In this case, the new pan setting will apply only to the subsequently-played note, and the panning of the currently-sounding note will not be affected.

Pitch Bend (Pitch bend control switch)

Specify whether pitch bend messages will be received (ON) or not (OFF).

Hold-1 (Hold 1 control switch)

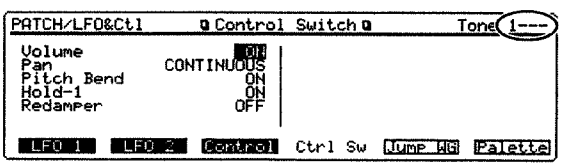
Specify whether hold 1 messages will be received (ON) or not (OFF).

Redamper (Redamper control switch)

When a Hold 1 message is received after a key was released but before the sound has completely decayed, this setting specifies whether or not the sound will be sustained at that level. To cause the sound to be sustained, turn this ON. If you use this function, you must also set Hold-1 ON. It is effective to turn this ON for sounds such as piano, etc.

1. Select the Patch you wish to use, and access the PATCH Play page. (→p. 17)
2. Press [F5] (LFO&Ctl).
3. Press [F4] (Ctrl Sw). The Control Switch page will appear.
4. Use TONE SELECT [1]—[4] to select the Tone for which you wish to make settings.

   The indicator will blink, and the Tone number will appear in the upper right of the display.



5. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
6. Either rotate the VALUE dial or press [INC][DEC] to specify the value.
7. Press [EXIT] to return to the PATCH Play page.

   An (*) symbol will appear at the left of the Patch group to indicate that the settings have been changed.

** If you turn off the power or select another Patch while the "*" symbol is displayed, the modified Patch settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

** After step 3, you can press [F6] (Palette) to view the settings for all four Tones together in a single display. This allows you to compare the settings of each Tone as you make settings. (→p. 78)*

■ For Each Percussion Instrument in a Rhythm Set

Volume (Volume control switch)

Specify whether volume messages will be received (ON) or not (OFF).

Pan (Pan control switch)

Specify how pan messages will be received.

OFF : Pan messages will not be received.

CONTINUOUS : Pan messages will be received at any time to change the stereo location of the sound.

KEY-ON : The specified stereo location will take effect when a note is sounded. If a pan message is received while a note is sounding, the panning will not change until the next key is pressed. In this case, the new pan setting will apply only to the subsequently-played note, and the panning of the currently-sounding note will not be affected.

Hold-1 (Hold 1 control switch)

Specify whether Hold 1 messages will be received (ON) or not (OFF).

** If the Envelope Mode (located in the same page) is set to NO-SUS, this setting is ignored. (→p. 96)*

1. Select the Rhythm Set you wish to use, and access the RHYTHM Play page. (→p. 17)
2. Press [F5] (Key Ctl). The Control Param page will appear.
3. Use [E]—[H] to select the percussion instrument sound (key) for which you wish to make settings.

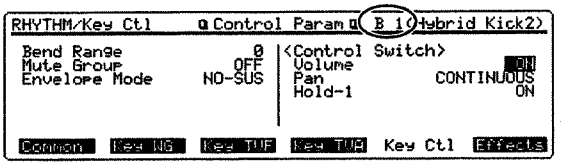
[E] : Select a key 1 octave below the currently selected key.

[F] : Select a key a semitone below the currently selected key.

[G] : Select a key a semitone above the currently selected key.

[H] : Select a key 1 octave above the currently selected key.

The key (note name) will be displayed in the upper right of the screen.



** You can also press a key on a connected MIDI keyboard to select the percussion instrument sound (key). In this case you will need to set Rhythm Edit Key (Setup page [SYSTEM]→[F1] (Setup)) to PNL&MIDI. With the factory settings, this is set to PNL&MIDI. (→p. 90)*

4. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
5. Either rotate the VALUE dial or press [INC][DEC] to specify the value.
6. Press [EXIT] to return to the RHYTHM Play page.

   An (*) symbol will appear at the left of the Rhythm Set group to indicate that the settings have been changed.

** If you turn off the power or select another Rhythm Set while the "*" symbol is displayed, the modified Rhythm Set settings will be lost. If you wish to keep them, use the Write operation. (→p. 56)*

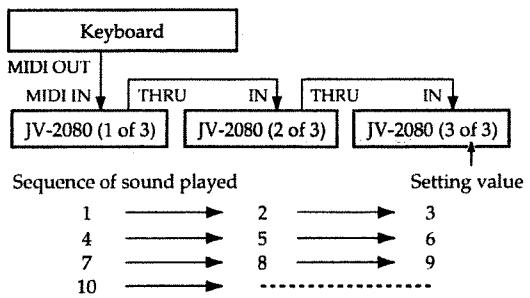
** For details on the Control Param page and the other setting items, refer to →p. 96.*

Connecting Two or More JV-2080s to Increase the Polyphony

Stack

The Stack function allows multiple JV-2080 units to be connected to increase the available polyphony. Up to eight units can be connected.

Usage with Three Connected Units

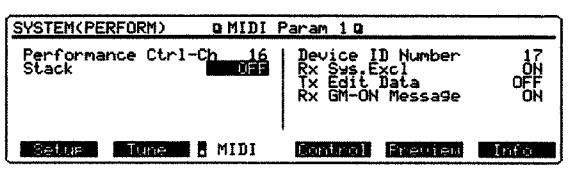


If this is turned OFF, the Stack function will not operate, and each JV-2080 will attempt to sound all of the note messages which it receives.

** The Stack function will not operate for Patches for which the Key Assign is SOLO or whose <Portamento>Switch is ON (Common Control page [PATCH]→[F1] (Common)→[F2] (Control)), or for Rhythm Sets. Patches for which the Key Assign is SOLO or whose <Portamento>Switch is ON will be sounded by the first JV-2080, and Rhythm Sets will be sounded by the second JV-2080.*

1. Press [SYSTEM] to make the indicator light.
2. Press [F3] (MIDI). The MIDI Param 1 page will appear.

   If the MIDI Param 2 page appears, press [F3] (MIDI) once again.



3. Use [▲][▼][◄][►] to move the cursor to the "Stack" setting.
4. Either rotate the VALUE dial or press [INC][DEC] to specify the value.
5. Press [EXIT] several times to return to the Play page.

Selecting MIDI Messages

When MIDI messages are used to control the JV-2080, the following two functions allow you to select the MIDI messages which will be used.

■ Selecting the MIDI Messages That Will Control Volume

Volume (Volume control source)

Specify the MIDI message(s) which will control the Patch volume or Part volume.

VOLUME : Volume (controller number 7)
VOL&EXP : Both volume (controller number 7) and expression (controller number 11)

■ Selecting the MIDI Messages That Will Control Aftertouch

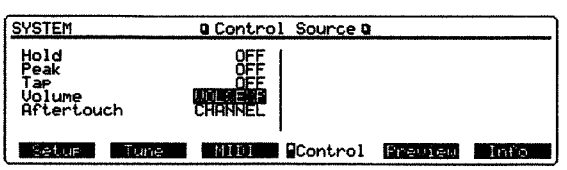
Aftertouch (Aftertouch control source)

Specify the type(s) of aftertouch message which will apply the aftertouch effect.

CHANNEL: Channel aftertouch (aftertouch which applies the same effect to all keys)
POLY : Polyphonic aftertouch (aftertouch which applies independently to each key)
CH&POLY : Both channel aftertouch and polyphonic aftertouch

1. Press [SYSTEM] to make the indicator light.
2. Press [F4] (Control). The Control Source page will appear.

   If the Control Assign page appears, press [F4] (Control) once again.



3. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
4. Either rotate the VALUE dial or press [INC][DEC] to specify the value.
5. Press [EXIT] several times to return to the Play page.

**For details on the other setting items in the Control Source page, refer to "Using MIDI Controllers to Create Realtime Changes in the Sound" →p. 106, 109 (Hold, Peak), and "Syncing LFO frequency to the Clock (Tempo) " →p. 112 and "Syncing Delay Time to the Clock (Tempo) "→p. 122 (Tap).*

Overall Settings and Status Checking

Making Overall Settings

The following four overall settings can be made.

■ LCD Contrast

LCD Contrast

Adjust the contrast (brightness) of the display. Higher settings will make the display darker.

■ Holding Notes Sounding When a Patch or Rhythm Set is Selected

Patch Remain (Patch remain switch)

Specify whether currently-sounding notes will continue sounding when another Patch or Rhythm Set is selected (ON) or not (OFF).

■ Power-On Condition

Power Up Mode

Specify the condition of the JV-2080 when the power is turned on.

LAST-SET : The JV-2080 will be in the condition in which it was when the power was last turned off.

DEFAULT : The USER:001 Patch will be ready to play.

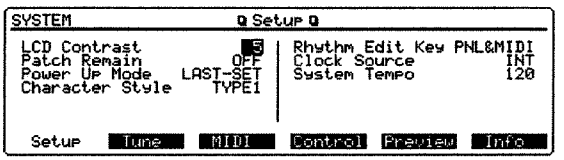
■ Display Character Set

Character Style

Select the style of the large characters that are displayed in the various Play pages (group, number and name display).

TYPE 1: Bold mono-spaced characters
TYPE 2: Light mono-spaced characters
TYPE 3: Bold proportionally-spaced characters
TYPE 4: Light proportionally-spaced characters

1. Press [SYSTEM] to make the indicator light.
2. Press [F1] (Setup). The Setup page will appear.



3. Use [▲][▼][◄][►] to move the cursor to the item you wish to set.
4. Either rotate the VALUE dial or press [INC][DEC] to specify the value.

** If you make a mistake, press [UNDO] and the value that was in effect when the cursor was moved to this item will be restored.*

5. Press [EXIT] several times to return to the Play page.

Status Checking

You can check the wave expansion board installation status, the name of the inserted DATA card, and the condition of the internal and card batteries.

■ Wave Expansion Board Installation Status

<Expansion>A—H
(Wave expansion board name A—H)

The names of the wave expansion boards installed in slots A—H will be displayed. Slots in which no board is installed will indicate "----------".

■ Data Card Name

<Data Card>(Data card name)

The name of the DATA card inserted in the card slot will be displayed. If no card is inserted, this will indicate "----------".

** When one of the following DATA cards is inserted, the parentheses ( ) will indicate the type of the DATA card.*

- A DATA card which has not been formatted
  → (unknown type)
- A DATA card which was formatted by another JV series instrument
  → (JV80 type)
- A sound library card
  → (JV80 type)

■ Battery Status

<Battery Check>Internal (Internal battery)

The JV-2080 contains a battery which backs up the data of internal memory. If this display indicates OK, the battery is in satisfactory condition. If the display indicates LOW, the battery voltage is low, and you should contact a nearby Roland service center to have the battery replaced as soon as possible.

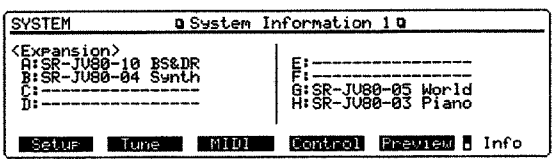
<Battery Check>Data Card (Data card battery)

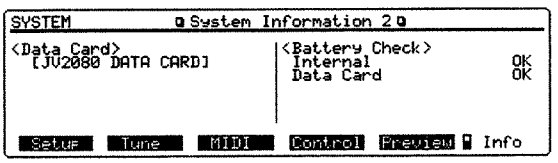
DATA cards (optional) contain a battery which backs up the data of the card. If this display indicates OK, the battery is in satisfactory condition. If the display indicates LOW, the battery voltage is low, and you should replace the battery as soon as possible. For the battery replacement procedure, refer to the owner's manual for your DATA card.

** Since data loss can occur when the DATA card battery is replaced, you should save the data from the card to the USER group of the JV-2080 (→p. 56) or on an external MIDI sequencer (→p. 58) before replacing the card battery, or replace the card battery while the card is inserted into a powered-on JV-2080.*

1. Press [SYSTEM] to make the indicator light.
2. Press [F6] (Info). The System Information 1 page or System Information 2 page will appear.

   Each time you press [F6] (Info), the two pages will alternate.



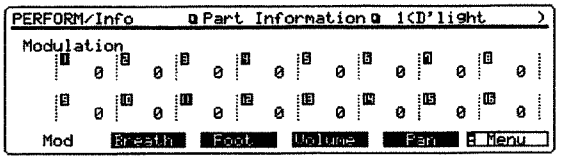


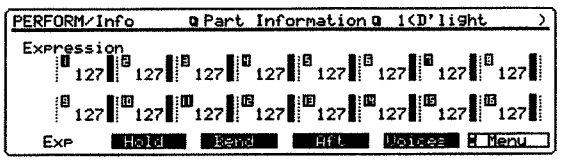
3. Press [EXIT] several times to return to the Play page.

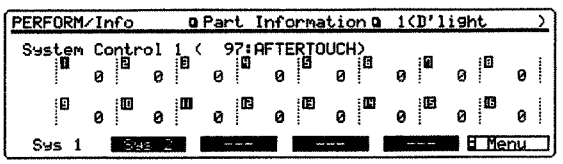
■ MIDI Reception Status for Performance and GM System Parts

You can view the MIDI reception status of each controller for each Part of a Performance or the GM system. This is a convenient way to check whether the sound source is responding correctly to operations from an external MIDI device.

1. Press [PERFORM] to access the PERFORM Play page, or hold down [SHIFT] and press [PERFORM] to access the GM Play page.
2. Press [F6] (Info). The Part Information page will appear.







3. Press [F6] (Menu) several times to switch the menu, and then press [F1]—[F5] to access the pages for the various MIDI messages.

The Part Information page is organized into three menus for Performances, and two menus for GM System.

Modulation	[F1] (Mod)
Breath	[F2] (Breath)
Foot	[F3] (Foot)
Volume	[F4] (Volume)
Pan	[F5] (Pan)

Expression	[F1] (Exp)
Hold-1	[F2] (Hold)
Pitch Bend	[F3] (Bend)
Channel Aftertouch	[F4] (Aft)
Voices (number of voices)	[F5] (Voices)

** Voices (number of voices) will indicate "(rest 0) *" when exactly 64 voices are sounding, and "(rest 0) **" when more than 64 voices are being requested.*

Performance only

System Control 1	[F1] (Sys 1)
The MIDI messages specified for System Control 1 ([SYSTEM]→[F4] (Control))	
System Control 2	[F2] (Sys 2)
The MIDI messages specified for System Control 2 ([SYSTEM]→[F4] (Control))	

4. Press [EXIT] to return to the Play page.

Chapter 4.

Appendices

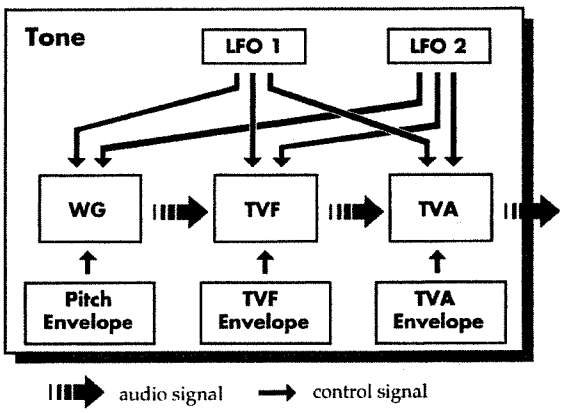
List of Functions by Display Screen

How the JV-2080 Is Organized

The JV-2080 uses four units of sound data: "Tones," "Patches," "Rhythm Sets," and "Performances."

■ Tone

On the JV-2080, tones are the smallest unit of sound. However, it is not possible to play a Tone by itself. The Patch is the unit of sound which can be played, and the Tones are the basic building blocks which make up the Patch. Tones consist of the following five components.



WG (Wave generator)
This specifies the PCM waveform (wave) that is the basis of the sound, and determines how the pitch of the sound will change.

The JV-2080 has 448 different waveforms (INT-A: 255 and INT-B: 193). (Factory settings "Waveforms" →p. 182). All Patches built into the JV-2080 consist of combinations of Tones which are created based on these waveforms.

TVF (Time variant filter)
This specifies how the frequency characteristics of the sound will change.

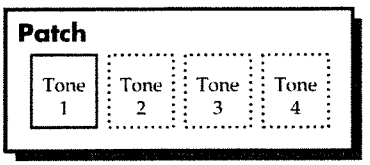
TVA (Time variant amplifier)
This specifies how the volume and panning will change.

Envelope
The envelope specifies how change will occur over time. There are separate envelopes for Pitch, TVF (filter), and TVA (volume). For example if you wish to modify the way in which the sound attacks or decays over time, you would adjust the TVA envelope.

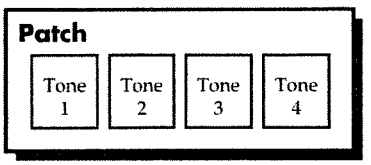
LFO (Low frequency oscillator)
The LFO creates cyclic change (modulation). There are two LFOs, and the WG (pitch), TVF (filter), and TVA (volume) effects can be applied to each of the LFOs. When an LFO is applied to the WG pitch, a vibrato effect is produced. When an LFO is applied to the TVF cutoff frequency, a wah effect is produced. When an LFO is applied to the TVA volume, a tremolo effect is produced.

■ Patch

On the JV-2080, the sounds that you normally play are called "Patches." Each Patch consists of 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.

By switching Tones on/off you can specify which Tones will actually sound. (→p. 71)

You can also specify how Tones 1 and 2 and Tones 3 and 4 will be combined internally (Structure). (→p. 74)

■ Rhythm Set

A Rhythm Set is a collection of percussion instrument sounds. When you play a MIDI keyboard that is connected to the JV-2080, each key will play a different percussion instrument sound.

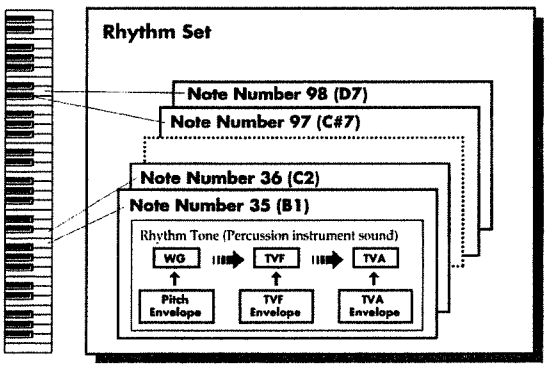
Each percussion instrument sound consists of the following four elements. (For details, refer to the explanations for Tone.)

WG (Wave generator)

TVF (Time variant filter)

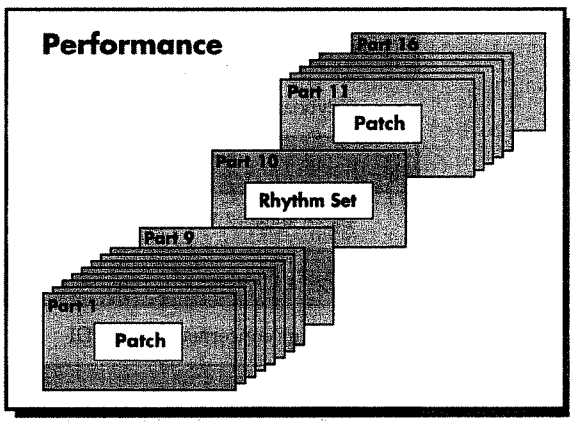
TVA (Time variant amplifier)

Envelope



■ Performance

A Performance has 16 Parts, to which 15 Patches and 1 Rhythm Set (fixed at Part 10) are assigned. Since a Performance can simultaneously handle 16 different sounds, it allows you to play multiple Patches simultaneously (layer) or to play different Patches in different areas of the keyboard (split), and to create ensembles.



Performance ([PERFORM])

** Performance settings are indicated by "*". Unmarked items are settings for each Part.*

[F1] (Common)

* Performance name (→p. 59)
* Performance clock (tempo) (→p. 110—123)

[F2] (K.Range)

Keyboard range (→p. 66)

[F3] (Part)

Patch select / Volume / Pan / Pitch / Polyphony (→p. 66)

[F4] (MIDI)

Settings concerned with MIDI (→p. 67)

[F5] (Effects)

[F1] (General)		Effect unit structure	(→p. 28)
[F2] (EFX Prm)	*	EFX Type	(→p. 33)
[F3] (EFX Ctl)	*	Use MIDI controllers to modify EFX settings	(→p. 104)
[F4] (Chorus)	*	Chorus	(→p. 53)
[F5] (Reverb)	*	Reverb	(→p. 54)

[F6] (Info)

Verify MIDI reception status (→p. 143)

* Each time [F6] (Menu) is pressed the function of [F1]—[F5] will change.

[F1] (Mod)	Modulation
[F2] (Breath)	Breath
[F3] (Foot)	Foot
[F4] (Volume)	Volume
[F5] (Pan)	Pan

[F1] (Exp)	Expression
[F2] (Hold)	Hold
[F3] (Bend)	Pitch bend
[F4] (Aft)	Channel aftertouch
[F5] (Voices)	Number of voices

[F1] (Sys 1)	MIDI message specified for System Control 1
[F2] (Sys 2)	MIDI message specified for System Control 2

Patch ([PATCH])

** Patch settings are indicated by an "*," and unmarked items are settings for each Tone.*

[F1] (Common)

[F1] (General)	*	Patch name / Volume / Pan / Pitch bend width / Category / Octave shift / Patch clock (tempo) etc.	(→p. 72)
[F2] (Control)	*	How the Patch will sound / Portamento / Using MIDI controllers to modify the Tone settings	(→p. 73) (→p. 106)
[F3] (Struct)	*	Internal structure of the Tone	(→p. 74)
[F4] (K.Range)		Keyboard range	(→p. 76)
[F5] (V.Range)		Specify the range of keyboard velocities that will cause the Tone to sound	(→p. 76)

[F2] (WG)

[F1] (WG Prm)	Waveform select / Tone on/off / Delay etc.	(→p. 79)
[F2] (Pitch)	Pitch	(→p. 82)
[F3] (Pch Env)	Pitch envelope	(→p. 82)

[F3] (TVF)

[F1] (TVF Prm)	Use the filter to modify the brightness	(→p. 83)
[F2] (TVF Env)	TVF envelope	(→p. 84)

[F4] (TVA)

[F1] (TVA Prm)	Volume / Pan	(→p. 85)
[F2] (TVA Prm)	TVA envelope	(→p. 85)

[F5] (LFO&Ctl)

[F1] (LFO 1)	Apply vibrato or tremolo	(→p. 86)
[F2] (LFO 2)	Apply vibrato or tremolo	(→p. 86)
[F3] (Control)	Use MIDI controllers to modify Tone settings	(→p. 106)
[F4] (Ctrl Sw)	How MIDI messages are received	(→p. 88)

[F6] (Effects)

[F1] (General)		Effect unit structure	(→p. 25)
[F2] (EFX Prm)	*	EFX Type	(→p. 33)
[F3] (EFX Ctl)	*	Use MIDI controllers to modify EFX settings	(→p. 104)
[F4] (Chorus)	*	Chorus	(→p. 53)
[F5] (Reverb)	*	Reverb	(→p. 54)

Rhythm Set ([RHYTHM])

** The * symbol indicates a Rhythm Set setting. Unmarked items are settings for each percussion instrument sound.*

** The # symbol indicates items which affect the Performance settings in the temporary area.*

** [F2] (Key WG)—[F4] (Key TVA) will alternate between two pages each time they are pressed.*

[F1] (Common)

* Rhythm Set name (→p. 59)

[F2] (Key WG)

Waveform select / Percussion instrument sound on/off / Pitch etc. (→p. 92)
Pitch envelope (→p. 93)

[F3] (Key TVF)

Use the filter to modify the brightness (→p. 94)
TVF envelope (→p. 94)

[F4] (Key TVA)

Volume / Pan (→p. 95)
TVA envelope (→p. 95)

[F5] (Key Ctl)

Pitch bend width / Prohibit simultaneous sounding / Make sounds decay naturally / MIDI message reception (→p. 96)

[F6] (Effects)

[F1] (General)		Effect unit structure	(→p. 32)
[F2] (EFX Prm)	#	EFX Type	(→p. 33)
[F3] (EFX Ctl)	#	Use MIDI controllers to modify EFX settings	(→p. 104)
[F4] (Chorus)	#	Chorus	(→p. 53)
[F5] (Reverb)	#	Reverb	(→p. 54)

GM System (General MIDI) ([SHIFT]+[PERFORM])

** The * symbol indicates GM System settings. Unmarked items are settings for each Part.*

[F4] (Part)

Patch select / Volume / Pan / Pitch (→p. 127)

[F5] (Effects)

[F1] (General)		Effect unit structure	(→p. 32)
[F2] (EFX Prm)	*	EFX Type	(→p. 33)
[F3] (EFX Ctl)	*	Use MIDI controllers to modify EFX settings	(→p. 104)
[F4] (Chorus)	*	Chorus	(→p. 53)
[F5] (Reverb)	*	Reverb	(→p. 54)

[F6] (Info)

Verify MIDI reception status (→p. 143)

* Each time [F6] (Menu) is pressed the function of [F1]—[F5] will change.

[F1] (Mod)	Modulation
[F2] (Breath)	Breath
[F3] (Foot)	Foot
[F4] (Volume)	Volume
[F5] (Pan)	Pan

[F1] (Exp)	Expression
[F2] (Hold)	Hold
[F3] (Bend)	Pitch bend
[F4] (Aft)	Channel aftertouch
[F5] (Voices)	Number of voices

System ([SYSTEM])

* *System settings are settings common to the entire JV-2080.*

* *[F3] (MIDI), [F4] (Control) and [F6] (Info) will alternate between two pages each time they are pressed.*

[F1] (Setup)

Overall settings	(→p. 142)
Specify how percussion instrument sounds will be selected	(→p. 90)
Clock (tempo)	(→p. 111—123)

[F2] (Tune)

Tuning	(→p. 98)

[F3] (MIDI)

Patch MIDI receive channel	(→p. 16, 135)
Use MIDI messages to select Performances	(→p. 21, 136)
Connect two or more JV-2080s to increase the polyphony	(→p. 140)
Device ID number and overall transmit/receive switches	(→p. 136)

[F4] (Control)

MIDI messages (MIDI controllers)	(→p. 105, 107)
Hold the changes produced by MIDI controllers	(→p. 106, 109)
MIDI message used when the intervals at which a pedal is pressed set the clock (tempo)	(→p. 112, 122)
MIDI messages which change the volume	(→p. 140)
MIDI messages which apply aftertouch	(→p. 140)

[F5] (Preview)

Select the preview method	(→p. 23)

[F6] (Info)

Check the wave expansion board installation status	(→p. 143)
Check the name of a DATA card	(→p. 143)
Check the battery condition	(→p. 143)

Utility ([UTILITY])

** Each time [F6] (Menu) is pressed, <Menu 1>—<Menu3> will alternate.*

** When GM System is selected, the following items cannot be selected.*

<Menu 1> [F1] (Write), [F4] (Xfer), and [F5] (Protect)

<Menu 2> [F1] (Card)

<Menu 1>

[F1] (Write)

Save a sound you created

Save to internal memory		(→p. 56)
Save to DATA card		(→p. 58)

[F2] (Copy)

Copy sound data settings

Performance	Part	(→p. 68)
	Effect	(→p. 55)
	Name	(→p. 60)
Patch	Tone	(→p. 89)
	Effect	(→p. 55)
	Name	(→p. 60)
Rhythm Set	Percussion instrument sound	(→p. 97)
	Name	(→p. 60)
GM System	Effect	(→p. 55)

[F3] (Init)

Initialize the selected sound

Set the data to standard values	(→p. 63, 100)
Restore factory settings for USER group data	(→p. 60, 100)
Initialize GM System	(→p. 128)

[F4] (Xfer)

Transmit data

Transmit (save) to external MIDI device	(→p. 58, 129)
Transmit to DATA card	(→p. 130)
Transmit to internal memory	(→p. 131)

[F5] (Protect)

Prohibit writing to internal memory (→p. 61)

<Menu 2>

[F1] (Card)

DATA card-related settings

[F1] (Format)	Format a card	(→p. 10)
[F2] (Rename)	Modify the name	(→p. 11)
[F3] (Copy)	Transmit data between DATA card and internal memory	(→p. 132)
[F4] (Swap)	Exchange data between DATA card and internal memory	(→p. 133)

<Menu 3>

[F1] (Factory)

Return all settings to the factory values (→p. 101)

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.

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 JV-2080. (→p. 16)

Are the Tone, Patch and Part level settings excessively low?

→ Check the level settings of each Tone, Patch and each Part. (Tone →p. 85, Patch →p. 72, Part →p. 67)

Are Tones or Parts turned off?

→ Check the on/off settings of each Tone and each Part. (Tone →p. 71, Part →p. 64)

Are the key range settings correct?

→ Check the key range settings of each Tone and each Part. (Tone →p. 76, Part →p. 66)

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 Information display. (→p. 143)

Are the effect settings correct?

→ Check settings such as Effect On/Off (→p. 25, 125), and Effect Balance and Level (→p. 33—55).

Are the output destination settings correct?

→ Check the Output Assign and EFX Output Assign settings. (→p.25—32)

Can't select Patches

Is [RX] on?

→ When [RX] is on in the PATCH Play page, [A]—[H] (PART SELECT [1/9]—[8/16]) act as buttons which change the MIDI channel. (→p. 16) Turn [RX] off.

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. 64) 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. 64) Turn [RX] off.

Pitch is wrong

Is the Master Tune setting correct?

→ Check the setting. (→p. 98)

Is Scale Tune selected?

→ Check the setting. (→p. 98)

Are the pitch settings for each Tone and each Part correct?

→ Check each setting. (Tone →p. 82, Part →p. 67)

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 Information page allows you to check the reception status of each type of messages. (→p. 143)

Effects do not apply

Are [EFX], [CHORUS], and [REVERB] turned off?

→ Press the corresponding button to turn on the indicator. (→p. 25, 125)

Are the various effect settings correct?

→ If the send levels to each effect are at 0, effects will not apply. Check each setting. (→p.26, 27, 29, 31, 32)

→ Even if the send level to each effect is above 0, effects will not apply if the EFX Output Level, Chorus Level, and Reverb Level are set to 0. Check each setting. (→p. 26, 27, 30, 31)

→ If Output Assign is set to MIX, DIR1 or DIR2, the EFX sound will not be output. (→p.27, 31)

→ If Output Assign is set to PAT-A—C 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 MIX, DIR1 or DIR2, the EFX setting will be displayed in the General page for PERFORM/Effects, but the EFX sound will not be output. (→p.30)

MIDI messages are not received correctly

Are the receive channel and receive switch settings correct?

→ Check the settings for the MIDI receive channel (→p. 135) and the various switches for reception of MIDI messages (→p. 136—139).

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. 136) Also, if you wish to rewrite data in the USER group, the System Exclusive message Protect Switch must be turned off as well. (→p. 61)

Is the ROM Play page displayed?

→ When the ROM Play page is displayed, MIDI messages received from an external device will be ignored.

DATA card cannot be used

Has the DATA card (MEMORY CARD: M-512E, M-256E) been initialized?

→ An uninitialized DATA card cannot be used. Perform the initialize operation. (→p. 10)

Are you using a card which the JV-2080 does not support?

→ It is not possible to read the contents of a card which is for the JV series (JV-2080/1080/1000/90/80/880). Also, it is not possible to write data to a DATA card which was formatted on a device other than the JV-2080 or the JV-1080.

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 JV-2080 is a GM system compatible sound source, there may be cases in which GS format song data will not playback correctly.

Error Messages

If a mistake is made during operation, or if processing cannot be carried out as specified, a window will open to briefly display an error message. Refer to the error message and take the appropriate action.

Error messages are arranged below in alphabetical order.

● Battery Low

Cause:

The internal backup battery (which protects the USER group memory) has run down.

Action:

Contact your dealer or a nearby Roland service center to have the battery replaced.

● Data Card Battery Low

Cause:

The battery of the DATA card has run down.

Action:

Read the owner's manual for your DATA card, and replace the battery (CR2016). (→p. 10)

● Data Card Not Properly Formatted

Cause:

An unformatted DATA card is inserted.

Action:

Perform the format (initialize) operation. (→p. 10)

Cause:

A DATA card belonging to another device, or a read-only DATA card (SOUND LIBRARY CARD: PN-JV80 series) is inserted.

Action:

Insert a JV-2080 compatible DATA card into which data can be written (MEMORY CARD: M-512E, M-256E), and try the operation once again.

● Data Card Not Ready

Cause:

A DATA card is not inserted into the card slot, or is not inserted all the way into the slot.

Action:

Check that the DATA card is inserted correctly.

● Data Card Write Protected

Cause:

The protect switch of the DATA card is turned on.

Action:

Turn off the protect switch of the DATA card, and try the operation once again.

Cause:

A read-only DATA card (SOUND LIBRARY CARD: PN-JV80 series) is inserted.

Action:

Insert a JV-2080 compatible DATA card into which data can be written (MEMORY CARD: M-512E, M-256E), and try the operation once again.

● Edited Patch or Rhythm Exists! Write?

Cause:

The settings of a Patch or Rhythm Set assigned to a Part of the Performance which you are attempting to save has been modified.

Action:

Save the Patch or Rhythm Set whose settings were modified. (→p. 57)

● Edited Patch or Rhythm will be discarded. Sure?

Condition:

If you save the Performance now, the settings of the modified Patch or Rhythm Set will be lost.

Action:

If you do not need to keep the modified settings, press [F5] (OK) to save the Performance. If you wish to keep the modified settings, press [F6] (Cancel) to halt the Performance save operation.

● MIDI Buffer Full

Cause:

More MIDI messages were received in a short time than could be processed correctly.

Action:

Reduce the amount of MIDI messages that are transmitted.

● MIDI Communication Error

Cause:

There a problem with the MIDI cable connections.

Action:

Check that MIDI cables have not been disconnected or broken.

● System Exclusive Message: Check Sum Error

Cause:

A system exclusive message that was received had an incorrect check sum value.

Action:

Correct the check sum value.

● System Exclusive Message: Data Card Not Ready

Cause:

A DATA card is not inserted into the card slot, or is not inserted all the way.

Action:

Check that the DATA card is inserted correctly.

● System Exclusive Message: Data Card Write Protected

Cause:

The protect switch of the DATA card is turned on.

Action:

Turn off the protect switch of the DATA card, and try the operation once again.

● System Exclusive Message: Improper Data Card

Cause:

An unformatted DATA card is inserted.

Action:

Perform the format (initialize) operation. (→p. 10)

Cause:

A DATA card of another device, or a read-only DATA card (SOUND LIBRARY CARD: PN-JV80 series) is inserted.

Action:

Insert a DATA card which the JV-2080 is able to write (MEMORY CARD: M-512E, M-256E), and try the operation once again.

● System Exclusive Message: Receive Data Error

Cause:

A MIDI message could not be received correctly.

Action:

If this message appears repeatedly, there is a problem with the content of the MIDI messages.

● System Exclusive Message: User Memory Write Protected

Cause:

Since the System Exclusive Message setting (User Memory Protect page [UTILITY] → [F5] (Protect)) is ON, it is not possible to rewrite data of the USER group.

Action:

Turn the setting OFF, and try the operation once again.

● User Memory Damaged

Cause:

The data in the USER group has been damaged.

Action:

Perform the Factory Preset operation to restore the factory settings. (→p. 101)

● User Memory Write Protected: Write Protect ON

Cause:

Since the Write Operation setting (User Memory Protect page [UTILITY] → [F5] (Protect)) is ON, it is not possible to save data in the USER group.

Action:

Press [DEC] to select "Write Protect OFF," then press [F6] (OK) to leave this display, and then press [F6] (Execute) once again to execute the save operation. (→p. 56)

Parameter List

Performance

[F1](Common)

Common Page ([PERFORM] → [F1](Common))

Parameter Name	Full Name of Parameter	Value	
Performance Name	Performance name	ASCII Character (max. 12)	(→p. 59)
Clock Source	Performance clock source	PERFORM, SYSTEM	(→p. 110—123)
Performance Tempo	Performance tempo	20—250	(→p. 110—123)

[F2](K.Range)

Part Key Range Lower:Upper Page ([PERFORM] → [F2](K.Range)) (p. 66)

Parameter Name	Full Name of Parameter	Value
1—16 Lower	Part1—16 Key range lower	C-1—Upper
1—16 Upper	Part1—16Key range upper	Lower—G9
Switch	Key range switch	OFF, ON

[F3](Part)

Part Param Page ([PERFORM] → [F3](Part)) (p. 66)

Parameter Name	Full Name of Parameter	Value
Patch Group	Patch Group	USER, CARD, PR-A, PR-B, PR-C, GM, PR-E, XP-A—XP-H
Patch Number	Patch number	001—255
Part Level	Part level	0—127
Part Pan	Part pan	L64—0—63R
Coarse Tune	Part coarse tune	-48—+48 semitone
Fine Tune	Part fine tune	-50—+50 cent
Voice Reserve	Voice reserve	0—64

[F4](MIDI)

Part MIDI Page ([PERFORM] → [F4](MID)) (p. 67)

Parameter Name	Full Name of Parameter	Value
Channel	MIDI channel	1—16
Rx Switch	Receive switch	OFF, ON
Rx Prog Chg Switch	Receive program change switch	OFF, ON
Rx Volume Switch	Receive volume switch	OFF, ON
Rx Hold-1 Switch	Receive Hold-1 switch	OFF, ON

[F5](Effects)

General Page ([PERFORM] → [F5](Effects) → [F1](General)) (p. 28)

Parameter Name	Full Name of Parameter	Value
Output Assign	output assign	MIX, EFX-A—C, DIR1, DIR2, PAT-A—C
Reverb Send Level	Reverb send level	0—127
Chorus Send Level	Chorus send level	0—127
Mix/EFX Send Level	Mix/EFX send level	0—127
EFX Type	EFX type	1—40
EFX Reverb Send Level	EFX Reverb send level	0—127
EFX Chorus Send Level	EFX Chorus send level	0—127
EFX Output Level	EFX output level	0—127
EFX Output Assign	EFX output assign	MIX, DIR 1, DIR 2
Chorus Level	Chorus level	0—127
Chorus Output Assign	Chorus output assign	MIX, REV, M+R
Reverb Level	Reverb level	0—127
EFX-A—C Source	EFX-A—C source	PERFORM, PART1—PART9, PART11—PART16

EFX Param Page ([PERFORM] → [F5](Effects) → [F2](EFX Prm)) (p. 33)

Refer to EFX parameters (→p. 168—172).

EFX Control Page ([PERFORM] → [F5](Effects) → [F3](EFX Ctl)) (p. 104)

Parameter Name	Full Name of Parameter	Value
EFX 1, 2 Control Source	EFX controller 1, 2 control source	1*
EFX 1, 2 Control Depth	EFX controller 1, 2 control depth	-63—+63

1*: OFF, SYS-CTRL1, SYS-CTRL2, MODULATION, BREATH, FOOT, VOLUME, PAN, EXPRESSION, PITCH BEND, AFTERTOUCH

Chorus Page ([PERFORM] → [F5](Effects) → [F4](Chorus)) (p. 53)

Parameter Name	Full Name of Parameter	Value
Level	Chorus level	0—127
Rate	Chorus rate	0—127
Depth	Chorus depth	0—127
Pre-Delay	Chorus pre delay	0—127
Feedback	Chorus feedback	0—127
Output	Chorus output assign	MIX, REVERB, MIX+REV

Reverb Page ([PERFORM] → [F5](Effects) → [F5](Reverb)) (p. 54)

Parameter Name	Full Name of Parameter	Value
Type	Reverb/Delay type	1*
Level	Reverb/Delay level	0—127
Time	Reverb/Delay time	0—127
HF damp	Reverb/Delay HF damp	2*
Delay Feedback	Delay feedback	0—127

1*: ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DLY
2*: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

[F6](Info)

Part Information Page ([PERFORM] → [F6](Info) → [F1] — [F5]) (p. 143)

Parameter Name	Full Name of Parameter	Value
Modulation	Modulation	0—127
Breath	Breath	0—127
Foot	Foot	0—127
Volume	Volume	0—127
Pan	Pan	L64—0—63R
Expression	Expression	0—127
Hold-1	Hold-1	0—127
Pitch Bend	Pitch Bend	-128—+127
Channel Aftertouch	Channel Aftertouch	0—127
Voices	Voices	0—64
System Control 1	System Control 1	0—127
System Control 2	System Control 2	0—127

Patch

[F1](Common)

Common General Page ([PATCH] → [F1](Common) → [F1](General)) (p. 72)

Parameter Name	Full Name of Parameter	Value
Patch Name	Patch name	ASCII Characters (max. 12)
Patch Level	Patch level	0—127
Patch Pan	Patch pan	L64—0—63R
Analog Feel	Analog feel depth	0—127
Bend Range Up	Bend range up	0—+12
Bend Range Down	Bend range down	-48—0
Category	Patch Category	1*
Octave Shift	Octave shift	-3—+3
Stretch Tune Depth	Stretch tune depth	OFF, 1—3
Voice Priority	Voice priority	LAST, LOUDEST
Clock Source	Patch clock source	PATCH, SYSTEM
Patch Tempo	Patch tempo	20—250

1* NO ASSIGN, AC.PIANO, EL.PIANO, KEYBOARDS, BELL, MALLET, ORGAN, ACCORDION, HARMONICA, 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

Common Control Page ([PATCH] → [F1](Common) → [F2](Control))

Parameter Name	Full Name of Parameter	Value	
Key Assign	Key assign	POLY, SOLO	(→p. 73)
Legato Switch	Solo legato switch	OFF, ON	(→p. 73)
Switch	Portamento switch	OFF, ON	(→p. 73)
Time	Portamento time	0—127	(→p. 73)
Type	Portamento type	RATE, TIME	(→p. 73)
Mode	Portamento mode	NORMAL, LEGATO	(→p. 73)
Start	Portamento start	PITCH, NOTE	(→p. 73)
Ctrl 1 Control Source	Controller 1 control source	MODULATION	(→p. 106)
Ctrl 1 Peak&Hold	Controller 1 peak&hold	OFF, HOLD, PEAK	(→p. 106)
Ctrl 2, 3 Control Source	Controller 2, 3 control source	1*	(→p. 106)
Ctrl 2, 3 Peak&Hold	Controller 2, 3 peak&hold	OFF, HOLD, PEAK	(→p. 106)

1*: OFF, SYS-CTRL1, SYS-CTRL2, MODULATION, BREATH, FOOT, VOLUME, PAN, EXPRESSION, PITCH BEND, AFTERTOUCH, LFO1, LFO2, VELOCITY, KEYFOLLOW, PLAYMATE

Structure Page ([PATCH] → [F1](Common) → [F3](Struct)) (p. 74)

Parameter Name	Full Name of Parameter	Value
Structure Type 1&2	Structure type1&2	1—10
Booster 1&2	Booster gain1&2	0, +6, +12, +18
Structure Type 3&4	Structure type3&4	1—10
Booster 3&4	Booster gain3&4	0, +6, +12, +18

Tone Key Range Lower:Upper Page ([PATCH] → [F1](Common) → [F4](K.Range)) (p. 76)

Parameter Name	Full Name of Parameter	Value
Tone 1—4 Lower	Tone1—4 key range lower	C-1—Upper
Tone 1—4 Upper	Tone1—4 key range upper	Lower—G9

Tone Vel Range Lower:Upper:Fade Page ([PATCH] → [F1](Common) → [F5](V.Range)) (p. 76)

Parameter Name	Full Name of Parameter	Value
Tone 1—4 Lower	Tone1—4 velocity range lower	1—Upper
Tone 1—4 Upper	Tone1—4 velocity range upper	Lower—127
Tone 1—4 Fade	Tone1—4 velocity cross fade	0—127
Switch	Velocity range switch	OFF, ON

[F2](WG)

Wave Param Page ([PATCH] → [F2](WG) → [F1](WG Prm)) (p. 79)

Parameter Name	Full Name of Parameter	Value
Wave Group	Wave group	INT-A, INT-B, XP-A—XP-H
Wave Number	Wave number	001—255
Wave Gain	Wave gain	-6, 0, +6, +12
Tone Switch	Tone switch	OFF, ON
FXM Switch	FXM switch	OFF, ON
FXM Color	FXM color	1—4
FXM Depth	FXM depth	1—16
Mode	Tone delay mode	1*
Time	Tone delay time	0—127, 0—880 (2*), 0—5000

1*: NORMAL, HOLD, PLAYMATE, CLOCK-SYNC, KEY-OFF-N, KEY-OFF-D, TEMPO-SYNC

2*: When the Mode is set to "CLOCK-SYNC" or "TEMPO-SYNC" this is set as a Note value.

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

Pitch Page ([PATCH] → [F2](WG) → [F2](Pitch)) (p. 82)

Parameter Name	Full Name of Parameter	Value
Coarse Tune	Coarse tune	-48—+48 semitone
Fine Tune	Fine tune	-50—+50 cent
Random Pitch Depth	Random pitch depth	1*
Pitch Keyfollow	Pitch keyfollow	2*-

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*: -100, -70, -50, -30, -10, 0, +10, +20, +30, +40, +50, +70, +100, +120, +150, +200

Pitch Envelope Page ([PATCH] → [F2](WG) → [F3](Pch Env)) (p. 82)

Parameter Name	Full Name of Parameter	Value
Time 1—4	Pitch envelope time 1—4	0—127
Level 1—4	Pitch envelope level 1—4	-63—+63
Envelope Depth	Pitch envelope depth	-12—+12
Velocity Sens	Pitch envelope sensitivity	-100—+150
Velocity Time1	Pitch envelope velocity time 1 sensitivity	1*
Velocity Time4	Pitch envelope velocity time 4 sensitivity	1*
Time Keyfollow	Pitch envelope time keyfollow	1*

*1: -100, -70, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +70, +100

[F3](TVF)

TVF Param Page ([PATCH] → [F3](TVF) → [F1](TVF Prm)) (p. 83)

Parameter Name	Full Name of Parameter	Value
Filter Type	Filter type	OFF, LPF, BPF, HPF, PKG
Cutoff Frequency	Cutoff frequency	0—127
Resonance	Resonance	0—127
Resonance Vel Sens	Resonance velocity sensitivity	-100—+150
Cutoff Keyfollow	Cutoff frequency keyfollow	1*

1*: -100, -70, -50, -30, -10, 0, +10, +20, +30, +40, +50, +70, +100, +120, +150, +200

TVF Envelope Page ([PATCH] → [F3](TVF) → [F2](TVF Env)) (p. 84)

Parameter Name	Full Name of Parameter	Value
Time 1—4	TVF envelope time 1—4	0—127
Level 1—4	TVF envelope level 1—4	0—127
Envelope Depth	TVF envelope depth	-63—+63
Velocity Curve	TVF envelope velocity curve	1—7
Velocity Sens	TVF envelope velocity sensitivity	-100—+150
Velocity Time1	TVF envelope velocity time1 sensitivity	1*
Velocity Time4	TVF envelope velocity time4 sensitivity	1*
Time Keyfollow	TVF envelope time keyfollow	1*

1*: -100, -70, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +70, +100

[F4](TVA)

TVA Param Page ([PATCH] → [F4](TVA) → [F1](TVA Prm)) (p. 85)

Parameter Name	Full Name of Parameter	Value
Tone Level	Tone level	0—127
Tone Pan	Tone pan	L64—0—63R
Pan Keyfollow	Pan keyfollow	1*
Random Pan Depth	Random pan depth	0—63
Alternate Pan Depth	Alternate pan depth	L63—0—63R
Direction	Bias direction	LOWER, UPPER, LOW&UP, ALL
Position	Bias position	C-1—G9
Level	Bias level	1*

1*: -100, -70, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +70, +100

TVA Envelope Page ([PATCH] → [F4](TVA) → [F2](TVA Env)) (p. 85)

Parameter Name	Full Name of Parameter	Value
Time 1—4	TVA envelope time 1—4	0—127
Level 1—3	TVA envelope level 1—3	0—127
Velocity Curve	TVA envelope velocity curve	1—7
Velocity Sens	TVA envelope velocity sensitivity	-100—+150
Velocity Time1	TVA envelope velocity time1 sensitivity	1*
Velocity Time4	TVA envelope velocity time 4 sensitivity	1*
Time Keyfollow	TVA envelope time keyfollow	1*

1*: -100, -70, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +70, +100

[F5](LFO&Ctl)

LFO 1 Param Page ([PATCH] → [F5](LFO&Ctl) → [F1](LFO 1)) (p. 86)
LFO 2 Param Page ([PATCH] → [F5](LFO&Ctl) → [F2](LFO 2)) (p. 86)

Parameter Name	Full Name of Parameter	Value
Waveform	LFO waveform	TRI, SIN, SAW, SQR, TRP, S&H, RND, CHS
Key Sync	LFO key sync	OFF, ON
Rate	LFO rate	0—127, 0—880 (1*)
Ext Sync	LFO external sync	OFF, CLOCK
Fade Mode	LFO fade mode	ON-IN, ON-OUT, OFF-IN, OFF-OUT
Delay Time	LFO delay time	0—127
Fade Time	LFO fade time	0—127
Offset	LFO level offset	-100, -50, 0, +50, +100
Pitch	Pitch LFO depth	-63—+63
Filter	Filter LFO depth	-63—+63
Level	Level LFO depth	-63—+63
Pan	Pan LFO depth	-63—+63

1*: When the Ext Sync is set to "CLOCK" this is set as a Note Value.

Control Param Page ([PATCH] → [F5](LFO&Ctl) → [F3](Control)) (p. 106)

Parameter Name	Full Name of Parameter	Value
1 Common Source	Patch controller 1 control source	MODURATION
2—3 Common Source	Patch controller 2—3 control source	1*
1—3 Control Dest	Patch controller 1—3 control destination1—4	2*
1—3 Depth	Patch controller 1—3 depth1—4	-63—+63

1*: OFF, SYS-CTRL1, SYS-CTRL2, MODULATION, BREATH, FOOT, VOLUME, PAN, EXPRESSION, PITCH BEND, AFTERTOUCH, LFO1, LFO2, VELOCITY, KEYFOLLOW, PLAYMATE

2*: OFF, PCH, CUT, RES, LEV, PAN, MIX, CHO, REV, PL1, PL2, FL1, FL2, AL1, AL2, pL1, pL2, L1R, L2R

Control Switch Page ([PATCH] → [F5](LFO&Ctl) → [F4](Ctrl Sw)) (p. 88)

Parameter Name	Full Name of Parameter	Value
Volume	Volume control switch	OFF, ON
Pan	Pan control switch	OFF, CONTINUOUS, KEY-ON
Pitch Bend	Pitch bend control switch	OFF, ON
Hold-1	Hold-1 control switch	OFF, ON
Redamper	Redamper control switch	OFF, ON

[F6](Effects)

General Page ([PATCH] → [F6](Effects) → [F1](General)) (p. 25)

Parameter Name	Full Name of Parameter	Value
Output Assign	Output assign	MIX, EFX, DIR1, DIR2
Reverb Send Level	Reverb send level	0—127
Chorus Send Level	Chorus send level	0—127
Mix/EFX Send Level	Mix/EFX send level	0—127
EFX Type	EFX type	1—40
EFX Reverb Send Level	EFX reverb send level	0—127
EFX Chorus Send Level	EFX chorus send level	0—127
EFX Output Level	EFX output level	0—127
EFX Output Assign	EFX output assign	MIX, DIR1, DIR2
Chorus Level	Chorus level	0—127
Chorus Output Assign	Chorus output assign	MIX, REV, M+R
Reverb Level	Reverb level	0—127

EFX Param Page ([PATCH] → [F6](Effects) → [F2](EFX Prm)) (p. 33)

Refer to EFX parameters (p. 168—172).

EFX Control Page ([PATCH] → [F6](Effects) → [F3](EFX Ctl)) (p. 104)

Parameter Name	Full Name of Parameter	Value
EFX 1, 2 Control Source	EFX controller 1, 2 control source	1*
EFX 1, 2 Control Depth	EFX controller 1, 2 control depth	-63—+63
EFX Ctrl Peak&Hold	EFX controller peak&hold	OFF, HOLD, PEAK

1*: OFF, SYS-CTRL1, SYS-CTRL2, MODULATION, BREATH, FOOT, VOLUME, PAN, EXPRESSION, PITCH BEND, AFTERTOUCH

Chorus Page ([PATCH] → [F6](Effects) → [F4](Chorus)) (p. 53)

Parameter Name	Full Name of Parameter	Value
Level	Chorus level	0—127
Rate	Chorus rate	0—127
Depth	Chorus depth	0—127
Pre-Delay	Chorus pre delay	0—127
Feedback	Chorus feedback	0—127
Output	Chorus output assign	MIX, REVERB, MIX+REV

Reverb Page ([PATCH] → [F6](Effects) → [F5](Reverb)) (p. 54)

Parameter Name	Full Name of Parameter	Value
Type	Reverb/Delay type	1*
Level	Reverb/Delay level	0—127
Time	Reverb/Delay time	0—127
HF damp	Reverb/Delay HF damp	2*
Delay Feedback	Delay feedback	0—127

1*: ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DLY

2*: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

Rhythm Set

[F1](Common)

Rhythm Set Name Page ([RHYTHM] → [F1](Common)) (p. 59)

Parameter Name	Full Name of Parameter	Value
Rhythm Set Name	Rhythm set name	ASCII Character (max. 12)

[F2](Key WG)

Wave Page ([RHYTHM] → [F2](Key WG)) (p. 92)

Parameter Name	Full Name of Parameter	Value
Wave Group	Wave group	INT-A, INT-B, XP-A—XP-H
Wave Number	Wave number	001—255
Wave Gain	Wave gain	-6, 0, +6, +12
Tone Switch	Tone switch	OFF, ON
Coarse Tune	Coarse tune	C-1—G9
Fine Tune	Fine tune	-50—+50 cent
Random Pitch Depth	Random pitch depth	1*

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

Pitch Envelope Page ([RHYTHM] → [F2](Key WG)) (p. 93)

Parameter Name	Full Name of Parameter	Value
Time 1—4	Pitch envelope time1—4	0—127
Level 1—4	Pitch envelope level1—4	-63—+63
Envelope Depth	Pitch envelope depth	-12—+12
Velocity Sens	Pitch envelope velocity sensitivity	-100—+150
Velocity Time	Pitch envelope velocity time sensitivity	1*

1*: -100, -70, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +70, +100

[F3](Key TVF)

TVF Param Page ([RHYTHM] → [F3](Key TVF)) (p. 94)

Parameter Name	Full Name of Parameter	Value
Filter Type	Filter type	OFF, LPF, BPF, HPF, PKG
Cutoff Frequency	Cutoff frequency	0—127
Resonance	Resonance	0—127
Resonance Vel Sens	Resonance velocity sensitivity	-100—+150

TVF Envelope Page ([RHYTHM] → [F3](Key TVF)) (p. 94)

Parameter Name	Full Name of Parameter	Value
Time 1—4	TVF envelope time1—4	0—127
Level 1—4	TVF envelope level1—4	0—127
Envelope Depth	TVF envelope depth	-63—+63
Velocity Sens	TVF envelope velocity sensitivity	-100—+150
Velocity Time	TVF envelope velocity time sensitivity	1*

1*: -100, -70, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +70, +100

[F4](Key TVA)

TVA Param Page ([RHYTHM] → [F4](Key TVA)) (p. 95)

Parameter Name	Full Name of Parameter	Value
Tone Level	Rhythm tone level	0—127
Tone Pan	Rhythm tone pan	L64—0—63R
Random Pan Depth	Random pan depth	0—63
Alternate Pan Depth	Alternate pan depth	L63—0—63R

TVA Envelope Page ([RHYTHM] → [F4](Key TVA)) (p. 95)

Parameter Name	Full Name of Parameter	Value
Time 1—4	TVA envelope time1—4	0—127
Level 1—3	TVA envelope level1—3	0—127
Velocity Sens	TVA envelope velocity sensitivity	-100—+150
Velocity Time	TVA envelope velocity time sensitivity	1*

1*: -100, -70, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +70, +100

[F5](Key Ctl)

Control Param Page ([RHYTHM] → [F5](Key Ctl)) (p. 96)

Parameter Name	Full Name of Parameter	Value
Bend Range	Pitch bend range	0—12
Mute Group	Mute group	OFF, 1—31
Envelope Mode	envelope mode	NO-SUS, SUSTAIN
Volume	Volume control switch	OFF, ON
Pan	Pan control switch	OFF, CONTINUOUS, KEY-ON
Hold-1	Hold-1 control switch	OFF, ON

[F6](Effects)

General Page ([RHYTHM] → [F6](Effects) → [F1](General)) (p. 32)

Parameter Name	Full Name of Parameter	Value
Output Assign	Output assign	MIX, EFX, DIR1, DIR2
Reverb Send Level	Reverb send level	0—127
Chorus Send Level	Chorus send level	0—127
Mix/EFX Send Level	Mix/EFX send level	0—127
EFX Type	EFX type	1—40
EFX Reverb Send Level	EFX Reverb send level	0—127
EFX Chorus Send Level	EFX Chorus send level	0—127
EFX Output Level	EFX output level	0—127
EFX Output Assign	EFX output assign	MIX, DIR1, DIR2
Chorus Level	Chorus level	0—127
Chorus Output Assign	Chorus output assign	MIX, REV, M+R
Reverb Level	Reverb level	0—127
EFX-A—C Source	EFX-A—C source	PERFORM, PART1—PART9, PART11—PART16

EFX Param Page ([RHYTHM] → [F6](Effects) → [F2](EFX Prm)) (p. 33)

Refer to EFX parameters (p.168—172).

EFX Control Page ([RHYTHM] → [F6](Effects) → [F3](EFX Ctl)) (p. 104)

Parameter Name	Full Name of Parameter	Value
EFX 1, 2 Control Source	EFX controller 1, 2 control source	1*
EFX 1, 2 Control Depth	EFX controller 1, 2 control depth	-63—+63

1*: OFF, SYS-CTRL1, SYS-CTRL2, MODULATION, BREATH, FOOT, VOLUME, PAN, EXPRESSION, PITCH BEND, AFTERTOUCH

Chorus Page ([RHYTHM] → [F6](Effects) → [F4](Chorus)) (p. 53)

Parameter Name	Full Name of Parameter	Value
Level	Chorus level	0—127
Rate	Chorus rate	0—127
Depth	Chorus depth	0—127
Pre-Delay	Chorus pre delay	0—127
Feedback	Chorus feedback	0—127
Output	Chorus output assign	MIX, REVERB, MIX+REV

Reverb Page ([RHYTHM] → [F6](Effects) → [F5](Reverb)) (p. 54)

Parameter Name	Full Name of Parameter	Value
Type	Reverb/Delay type	1*
Level	Reverb/Delay level	0—127
Time	Reverb/Delay time	0—127
HF damp	Reverb/Delay HF damp	2*
Delay Feedback	Delay feedback	0—127

1*: ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DLY
2*: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

GM System (General MIDI)

[F4](Part)

Part Param Page ([SHIFT] + [PERFORM] → [F4](Part)) (p. 127)

Parameter Name	Full Name of Parameter	Value
Patch Number	GM patch number	001—128
Part Volume	Part volume	0—127
Part Pan	Part pan	L64—0—63R
Coarse Tune	Part coarse tune	-48—+48 semitone
Fine Tune	Part fine tune	-50—+50 cent

[F5](Effects)

General Page ([SHIFT] + [PERFORM] → [F5](Effects) → [F1](General)) (p. 32)

Parameter Name	Full Name of Parameter	Value
Output Assign	Output assign	MIX, EFX, DIR1, DIR2, PAT
Reverb Send Level	Reverb send level	0—127
Chorus Send Level	Chorus send level	0—127
Mix/EFX Send Level	Mix/EFX send level	0—127
EFX Type	EFX type	1—40
EFX Reverb Send Level	EFX Reverb send level	0—127
EFX Chorus Send Level	EFX Chorus send level	0—127
EFX Output Level	EFX output level	0—127
EFX Output Assign	EFX output assign	MIX, DIR1, DIR2
Chorus Level	Chorus level	0—127
Chorus Output Assign	Chorus output assign	MIX, REV, M+R
Reverb Level	Reverb level	0—127

EFX Param Page ([SHIFT] + [PERFORM] → [F5](Effects) → [F2](EFX Prm)) (p. 33)

Refer to EFX Parameters (p. 168—172)

EFX Control Page ([SHIFT] + [PERFORM] → [F5](Effects) → [F3](EFX Ctl)) (p. 104)

Parameter Name	Full Name of Parameter	Value
EFX 1, 2 Control Source	EFX controller 1, 2 control source	1*
EFX 1, 2 Control Depth	EFX controller 1, 2 control depth	-63—+63

1*: OFF, SYS-CTRL1, SYS-CTRL2, MODULATION, BREATH, FOOT, VOLUME, PAN, EXPRESSION, PITCH BEND, AFTERTOUCH

Chorus Page ([SHIFT] + [PERFORM] → [F5](Effects) → [F4](Chorus)) (p. 53)

Parameter Name	Full Name of Parameter	Value
Level	Chorus level	0—127
Rate	Chorus rate	0—127
Depth	Chorus depth	0—127
Pre-Delay	Chorus pre delay	0—127
Feedback	Chorus feedback	0—127
Output	Chorus output assign	MIX, REVERB, MIX+REV

Reverb Page ([SHIFT] + [PERFORM] → [F5](Effects) → [F5](Reverb)) (p. 54)

Parameter Name	Full Name of Parameter	Value
Type	Reverb/Delay type	1*
Level	Reverb/Delay level	0—127
Time	Reverb/Delay type	0—127
HF Damp	Reverb/Delay HF damp	2*
Delay Feedback	Delay feedback	0—127

1*: ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DLY

2*: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000 Hz, BYPASS

[F6](Info)

Part Information Page ([SHIFT] + [PERFORM] → [F5](Effects) → [F6](Info) → [F1]—[F5]) (p. 143)

Parameter Name	Full Name of Parameter	Value
Modulation	Modulation	0—127
Breath	Breath	0—127
Foot	Foot	0—127
Volume	Volume	0—127
Pan	Pan	L64—0—63R
Expression	Expression	0—127
Hold-1	Hold-1	0—127
Pitch Bend	Pitch Bend	-128—+127
Channel Aftertouch	Channel Aftertouch	0—127
Voices	Voices	0—64

EFX

01:STEREO-EQ (p. 34)

Parameter Name	Full Name of Parameter	Value
Low Freq	Low frequency	200, 400 Hz
Low Gain	Low gain	-15—+15 dB
P1 Freq	Peaking 1 frequency	*1
P1 Gain	Peaking 1 gain	-15—+15 dB
P1 Q	Peaking 1 Q	0.5, 1.0, 2.0, 4.0, 8.0
High Freq	High frequency	4000, 8000 Hz
High Gain	High gain	-15—+15 dB
P2 Freq	Peaking 2 frequency	*1
P2 Gain	Peaking 2 gain	-15—+15 dB
P2 Q	Peaking 2 Q	0.5, 1.0, 2.0, 4.0, 8.0
Level	Output level	0—127

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

02:OVER-DRIVE (p. 34)

Parameter Name	Full Name of Parameter	Value
Drive	Drive	0—127
Amp Type	Amp simulator type	SMALL, BUILT-IN, 2-STACK, 3-STACK
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Pan	Output pan	L64—0—63R
Level	Output level	0—127

03:DISTORTION (p. 35)

Parameter Name	Full Name of Parameter	Value
Drive	Drive	0—127
Amp Type	Amp simulator type	SMALL, BUILT-IN, 2-STACK, 3-STACK
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Pan	Output pan	L64—0—63R
Level	Output level	0—127

04:PHASER (p. 35)

Parameter Name	Full Name of Parameter	Value
Manual	Manual	100— 8000 Hz
Rate	Phaser rate	0.05—10.00 Hz
Depth	Phaser depth	0—127
Resonance	Resonance	0—127
Mix	Mix level	0—127
Pan	Output pan	L64—0—63R
Level	Output level	0—127

05:SPECTRUM (p. 35)

Parameter Name	Full Name of Parameter	Value
Band1	Band1 gain	-15—+15 dB
Band2	Band2 gain	-15—+15 dB
Band3	Band3 gain	-15—+15 dB
Band4	Band4 gain	-15—+15 dB
Band5	Band5 gain	-15—+15 dB
Band6	Band6 gain	-15—+15 dB
Band7	Band7 gain	-15—+15 dB
Band8	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

06:ENHANCER (p. 36)

Parameter Name	Full Name of Parameter	Value
Sens	Sensitivity	0—127
Mix	Mix level	0—127
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Level	Output level	0—127

07:AUTO-WAH (p. 36)

Parameter Name	Full Name of Parameter	Value
Filter Type	Filter type	LPF, BPF
Sens	Sensitivity	0—127
Manual	Manual	0—127
Peak	Peak	0—127
Rate	LFO rate	0.05—10.00 Hz
Depth	LFO depth	0—127
Level	Output level	0—127

08:ROTARY (p. 37)

Parameter Name	Full Name of Parameter	Value
Low Slow Rate	Low frequency slow rate	0.05—10.00Hz
Low Fast Rate	Low frequency fast rate	0.05—10.00Hz
Low Acceleration	Low frequency acceleration	0—15
Low Level	Low frequency level	0—127
Speed	Speed	SLOW, FAST
High Slow Rate	High frequency slow rate	0.05—10.00Hz
High Fast Rate	High frequency fast rate	0.05—10.00Hz
High Acceleration	High frequency acceleration	0—15
High Level	High frequency level	0—127
Separation	Separation	0—127
Level	Output level	0—127

09: COMPRESSOR (p. 37)

Parameter Name	Full Name of Parameter	Value
Attack	Attack time	0—127
Sustain	Sustain	0—127
Post Gain	Post gain	0, +6, +12, +18 dB
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Pan	Output pan	L64—0—63R
Level	Output level	0—127

10: LIMITER (p. 38)

Parameter Name	Full Name of Parameter	Value
Threshold	Threshold level	0—127
Ratio	Compression ratio	1.5:1, 2:1, 4:1, 100:1
Release	Release time	0—127
Post Gain	Post gain	0, +6, +12, +18 dB
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Pan	Output pan	L64—0—63R
Level	Output level	0—127

11: HEXA-CHORUS (p. 38)

Parameter Name	Full Name of Parameter	Value
Pre Delay	Pre delay time	0.0—100.0 ms
Rate	Chorus rate	0.05—10.00 Hz
Depth	Chorus depth	0—127
Pre Delay Deviation	Pre delay deviation	0—20
Depth Deviation	Depth deviation	-20—+20
Pan Deviation	Pan deviation	0—20
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

12: TREMOLO-CHORUS (p. 39)

Parameter Name	Full Name of Parameter	Value
Pre Delay	Pre delay time	0.0—100.0 ms
Chorus Rate	Chorus rate	0.05—10.00 Hz
Chorus Depth	Chorus depth	0—127
Tremolo Phase	Tremolo phase	0—180 degree
Tremolo Rate	Tremolo rate	0.05—10.00 Hz
Tremolo Separation	Tremolo separation	0—127
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

13: SPACE-D (p. 39)

Parameter Name	Full Name of Parameter	Value
Pre Delay	Pre delay time	0.0—100.0 ms
Rate	Chorus rate	0.05—10.00 Hz
Depth	Chorus depth	0—127
Phase	Phase	0—180 degree
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

14: STEREO-CHORUS (p. 40)

Parameter Name	Full Name of Parameter	Value
Pre Delay	Pre delay time	0.0—100.0 ms
Rate	Chorus rate	0.05—10.00 Hz
Depth	Chorus depth	0—127
Phase	Phase	0—180 degree
Filter Type	Filter Type	OFF, LPF, HPF
Cutoff Freq	Cutoff frequency	1*
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

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

15: STEREO-FLANGER (p. 40)

Parameter Name	Full Name of Parameter	Value
Pre Delay	Pre delay time	0.0—100.0 ms
Rate	LFO rate	0.05—10.00 Hz
Depth	LFO depth	0—127
Feedback	Feedback	-98—+98 %
Phase	Phase	0—180 degree
Filter Type	Filter Type	OFF, LPF, HPF
Cutoff Freq	Cutoff frequency	1*
Low Gain	Low gain	15—+15 dB
High Gain	High gain	15—+15 dB
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

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

16: STEP-FLANGER (p. 41)

Parameter Name	Full Name of Parameter	Value
Pre Delay	Pre delay time	0.0—100.0 ms
Rate	LFO rate	0.05—10.00 Hz
Depth	LFO depth	0—127
Feedback	Feedback	-98—+98 %
Phase	Phase	0—180 degree
Step Rate	Step rate	0.10—20.00Hz, note
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

17: STEREO-DELAY (p. 42)

Parameter Name	Full Name of Parameter	Value
Delay Left	Delay time left	0.0—500.0 ms
Delay Right	Delay time right	0.0—500.0 ms
Phase Left	Phase left	NORMAL, INVERT
Phase Right	Phase right	NORMAL, INVERT
Feedback	Feedback	-98—+98 %
Feedback Mode	Feedback mode	NORMAL, CROSS
HF Damp	HF damp	1*
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

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

18: MODULATION-DELAY (p. 42)

Parameter Name	Full Name of Parameter	Value
Delay Left	Delay time left	0.0—500.0 ms
Delay Right	Delay time right	0.0—500.0 ms
Feedback	Feedback	-98—+98 %
Feedback Mode	Feedback mode	NORMAL, CROSS
Rate	Modulation rate	0.05—10.00 Hz
Depth	Modulation depth	0—127
Phase	Phase	0—180 degree
HF Damp	HF damp	1*
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

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

19: TRIPLE-TAP-DELAY (p. 43)

Parameter Name	Full Name of Parameter	Value
Delay Center	Delay time center	200—1000 ms, note
Delay Left	Delay time left	200—1000 ms, note
Delay Right	Delay time right	200—1000 ms, note
Center Level	Center level	0—127
Left Level	Left level	0—127
Right Level	Right level	0—127
Feedback	Feedback	-98—+98 %
HF Damp	HF damp	1*
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

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

20: QUADRUPLE-TAP-DELAY (p. 44)

Parameter Name	Full Name of Parameter	Value
Delay 1	Delay time1	200—1000 ms, note
Delay 2	Delay time2	200—1000 ms, note
Delay 3	Delay time3	200—1000 ms, note
Delay 4	Delay time4	200—1000 ms, note
Feedback	Feedback level	-98—+98%
HF Damp	HF damp	1*
Level 1	Level1	0—127
Level 2	Level2	0—127
Level 3	Level3	0—127
Level 4	Level4	0—127
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

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

21: TIME-CONTROL-DELAY (p. 45)

Parameter Name	Full Name of Parameter	Value
Delay	Delay time	200—1000ms
Acceleration	Acceleration	0—15
Feedback	Feedback	-98—+98%
HF Damp	HF damp	1*
Pan	Output pan	L64—0—63R
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

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

22: 2VOICE-PITCH-SHIFTER (p. 46)

Parameter Name	Full Name of Parameter	Value
Coarse A	Coarse pitch A	-24—+12 semitone
Fine A	Fine pitch A	-100—+100 cent
Pan A	Output pan A	L64—0—63R
Pre Delay A	Pre delay time A	0.0—500.0 ms
Level Balance	Level balance	A100:0B—A0:100B
Mode	Pitch shifter mode	1, 2, 3, 4, 5
Coarse B	Coarse pitch B	-24—+12 semitone
Fine B	Fine pitch B	-100—+100 cent
Pan B	Output pan B	L64—0—63R
Pre Delay B	Pre delay time B	0.0—500 ms
Balance	Effect balance	D100:0W—D0:100W
Level	Output level	0—127

23: FBK-PITCH-SHIFTER (p. 46)

Parameter Name	Full Name of Parameter	Value
Coarse	Coarse pitch	-24—+12 semitone
Fine	Fine pitch	-100—+100 cent
Pan	Output pan	L64—0—63R
Pre Delay	Pre delay time	0.0—500.0 ms
Mode	Pitch shifter mode	1, 2, 3, 4, 5
Feedback	Feedback	-98—+98%
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

24: REVERB (p. 47)

Parameter Name	Full Name of Parameter	Value
Type	Reverb type	ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2
Pre Delay	Pre delay time	0.0—100.0 ms
Time	Reverb time	0—127
HF Damp	HF damp	1*
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

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

25: GATE-REVERB (p. 47)

Parameter Name	Full Name of Parameter	Value
Type	Reverb type	NORMAL, REVERSE, SWEEP1, SWEEP2
Pre Delay	Pre delay time	0.0—100.0 ms
Gate Time	Gate time	5—500 ms
Low Gain	Low gain	-15—+15 dB
High Gain	High gain	-15—+15 dB
Balance	Effect balance	DRY100:0WET—DRY0:100WET
Level	Output level	0—127

26: OVERDRIVE → CHORUS (p. 48)

Parameter Name	Full Name of Parameter	Value
OD Drive	Drive	0—127
OD Pan	Over drive pan	L64—0—63R
Chorus Pre Delay	Chorus pre delay time	0.0—100.0 ms
Chorus Rate	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. 48)

Parameter Name	Full Name of Parameter	Value
OD Drive	Drive	0—127
OD Pan	Over drive pan	L64—0—63R
FLNG Pre Delay	Flanger pre delay time	0.0—100.0 ms
FLNG Rate	Flanger rate	0.05—10.00 Hz
FLNG Depth	Flanger depth	0—127
FLNG Feedback	Flanger feedback	-98—+98%
FLNG Balance	Flanger balance	D100:0W—D0:100W
Level	Output level	0—127

28: OVERDRIVE → DELAY (p. 49)

Parameter Name	Full Name of Parameter	Value
OD Drive	Drive	0—127
OD Pan	Over drive pan	L64—0—63R
Delay Time	Delay time	0.0—500.0 ms
Delay Feedback	Delay feedback	-98—+98%
Delay HF Damp	Delay HF damp	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, 8000Hz, BYPASS

29: DISTORTION → CHORUS (p. 49)

Parameter Name	Full Name of Parameter	Value
DIST Drive	Drive	0—127
DIST Pan	Distortion pan	L64—0—63R
Chorus Pre Delay	Chorus pre delay time	0.0—100.0 ms
Chorus Rate	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

30: DISTORTION → FLANGER (p. 49)

Parameter Name	Full Name of Parameter	Value
DIST Drive	Drive	0—127
DIST Pan	Distortion pan	L64—0—63R
FLNG Pre Delay	Flanger pre delay time	0.0—100.0 ms
FLNG Rate	Flanger rate	0.05—10.00 Hz
FLNG Depth	Flanger depth	0—127
FLNG Feedback	Flanger feedback	-98—+98%
FLNG Balance	Flanger balance	D100:0W—D0:100W
Level	Output level	0—127

31: DISTORTION → DELAY (p. 50)

Parameter Name	Full Name of Parameter	Value
DIST Drive	Drive	0—127
DIST Pan	Distortion pan	L64—0—63R
Delay Time	Delay time	0.0—500.0 ms
Delay Feedback	Delay feedback	-98—+98%
Delay HF Damp	Delay HF damp	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, 8000Hz, BYPASS

32: ENHANCER → CHORUS (p. 50)

Parameter Name	Full Name of Parameter	Value
Enhancer Sens	Enhancer sensitivity	0—127
Enhancer Mix	Enhancer mix level	0—127
Chorus Pre Delay	Chorus pre delay time	0.0—100 ms
Chorus Rate	Chorus rate	0.05—10.0Hz
Chorus Depth	Chorus depth	0—127
Chorus Balance	Chorus balance	D100:0W—D0:100W
Level	Output level	0—127

33: ENHANCER → FLANGER (p. 50)

Parameter Name	Full Name of Parameter	Value
Enhancer Sens	Enhancer sensitivity	0—127
Enhancer Mix	Enhancer mix level	0—127
FLNG Pre Delay	Flanger pre delay time	0.0—100.0 ms
FLNG Rate	Flanger rate	0.05—10.00 Hz
FLNG Depth	Flanger depth	0—127
FLNG Feedback	Flanger feedback	-98—+98%
FLNG Balance	Flanger balance	D100:0W—D0:100W
Level	Output level	0—127

34: ENHANCER → DELAY (p. 51)

Parameter Name	Full Name of Parameter	Value
Enhancer Sens	Enhancer sensitivity	0—127
Enhancer Mix	Enhancer mix level	0—127
Delay Time	Delay time	0.0—500.0 ms
Delay Feedback	Delay feedback	-98—+98%
Delay HF Damp	Delay HF damp	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, 8000Hz, BYPASS

35: CHORUS → DELAY (p. 51)

Parameter Name	Full Name of Parameter	Value
Chorus Pre Delay	Chorus pre delay time	0.0—100.0 ms
Chorus Rate	Chorus rate	0.05—10.00 Hz
Chorus Depth	Chorus depth	0—127
Chorus Balance	Chorus balance	D100:0W—D0:100W
Delay Time	Delay time	0.0—500.0 ms
Delay Feedback	Delay feedback	-98—+98%
Delay HF Damp	Delay HF damp	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, 8000Hz, BYPASS

36: FLANGER → DELAY (p. 52)

Parameter Name	Full Name of Parameter	Value
FLNG Pre Delay	Flanger pre delay time	0.0—100.0 ms
FLNG Rate	Flanger rate	0.05—10.00 Hz
FLNG Depth	Flanger depth	0—127
FLNG Feedback	Flanger feedback	-98—+98%
FLNG Balance	Flanger balance	D100:0W—D0:100W
Delay Time	Delay time	0.0—500.0 ms
Delay Feedback	Delay feedback	-98—+98%
Delay HF Damp	Delay HF damp	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, 8000Hz, BYPASS

37: CHORUS → FLANGER (p. 52)

Parameter Name	Full Name of Parameter	Value
Chorus Pre Delay	Chorus pre delay time	0.0—100.0 ms
Chorus Rate	Chorus rate	0.05—10.00 Hz
Chorus Depth	Chorus depth	0—127
Chorus Balance	Chorus balance	D100:0W—D0:100W
FLNG Pre Delay	Flanger pre delay time	0.0—100.0 ms
FLNG Rate	Flanger rate	0.05—10.00 Hz
FLNG Depth	Flanger depth	0—127
FLNG Feedback	Flanger feedback	-98—+98%
FLNG Balance	Flanger balance	D100:0W—D0:100W
Level	Output level	0—127

38: CHORUS/DELAY (p. 53)

Parameter Name	Full Name of Parameter	Value
Chorus Pre Delay	Chorus pre delay time	0.0—100.0 ms
Chorus Rate	Chorus rate	0.05—10.00 Hz
Chorus Depth	Chorus depth	0—127
Chorus Balance	Chorus balance	D100:0W—D0:100W
Delay Time	Delay time	0.0—500.0 ms
Delay Feedback	Delay feedback	-98—+98%
Delay HF Damp	Delay HF damp	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, 8000Hz, BYPASS

39: FLANGER/DELAY (p. 53)

Parameter Name	Full Name of Parameter	Value
FLNG Pre Delay	Flanger pre delay time	0.0—100.0 ms
FLNG Rate	Flanger rate	0.05—10.00 Hz
FLNG Depth	Flanger depth	0—127
FLNG Feedback	Flanger feedback	-98—+98%
FLNG Balance	Flanger balance	D100:0W—D0:100W
Delay Time	Delay time	0.0—500.0 ms
Delay Feedback	Delay feedback	-98—+98%
Delay HF Damp	Delay HF damp	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, 8000Hz, BYPASS

40: CHORUS/FLANGER (p. 53)

Parameter Name	Full Name of Parameter	Value
Chorus Pre Delay	Chorus pre delay time	0.0—100.0 ms
Chorus Rate	Chorus rate	0.05—10.00 Hz
Chorus Depth	Chorus depth	0—127
Chorus Balance	Chorus balance	D100:0W—D0:100W
FLNG Pre Delay	Flanger pre delay time	0.0—100.0 ms
FLNG Rate	Flanger rate	0.05—10.00 Hz
FLNG Depth	Flanger depth	0—127
FLNG Feedback	Flanger feedback	-98—+98%
FLNG Balance	Flanger balance	D100:0W—D0:100W
Level	Output level	0—127

System

[F1](Setup)

Setup Page ([SYSTEM] → [F1](Setup))

Parameter Name	Full Name of Parameter	Value	
LCD Contrast	LCD contrast	1—10	(→p. 142)
Patch Remain	Patch remain switch	OFF, ON	(→p. 142)
Power Up Mode	Power up mode	LAST-SET, DEFAULT	(→p. 142)
Character Style	Character style	TYPE1, TYPE2, TYPE3, TYPE4	(→p. 142)
Rhythm Edit Key	Rhythm edit source	PNL, PNL&MIDI	(→p. 90)
Clock Source	Clock source	INT, MIDI	(→p. 111—123)
System Tempo	System tempo	20—250	(→p. 111—123)

[F2](Tune)

Tune Page ([SYSTEM] → [F2](Tune)) (p. 98)

Parameter Name	Full Name of Parameter	Value
Master Tune	Master tune	427.4—452.6Hz
Master Key Shift	Master key shift	-12—+12 semitone
Switch	Scale tune switch	OFF, ON
Scale Tune	Scale tune C—B	-64—63 cent

[F3](MIDI)

MIDI Param 1 Page (PERFORM) ([PERFORM] → [SYSTEM] → [F3](MIDI))

Parameter Name	Full Name of Parameter	Value	
Performance Ctrl-Ch	Control channel	1—16, OFF	(→p. 21, 136)
Stack	Stack	1*	(→p. 140)
Device ID Number	Device ID number	17—32	(→p. 136)
Rx Sys. Excl	Receive system exclusive message switch	OFF, ON	(→p. 136)
Tx Edit Data	Transmit edit data switch	OFF, ON	(→p. 136)
Rx GM-ON Message	Receive GM-ON message switch	OFF, ON	(→p. 137)

1*: OFF, 1—2 of 2, 1—3 of 3, 1—4 of 4, 1—5 of 5, 1—6 of 6, 1—7 of 7, 1—8 of 8

MIDI Param 1 Page (PATCH) ([PATCH] → [SYSTEM] → [F3](MIDI))

Parameter Name	Full Name of Parameter	Value	
Patch Rx-Ch	Patch Receive channel	1—16	(→p. 16, 135)
Stack	Stack	1*	(→p. 140)
Device ID Number	Device ID number	17—32	(→p. 136)
Rx Sys. Excl	Receive system exclusive message switch	OFF, ON	(→p. 136)
Tx Edit Data	Transmit edit data switch	OFF, ON	(→p. 136)
Rx GM-ON Message	Receive GM-ON message switch	OFF, ON	(→p. 137)

1*: OFF, 1—2 of 2, 1—3 of 3, 1—4 of 4, 1—5 of 5, 1—6 of 6, 1—7 of 7, 1—8 of 8

MIDI Param 1 Page (GM) ([SHIFT] + [PERFORM] → [SYSTEM] → [F3](MIDI))

Parameter Name	Full Name of Parameter	Value	
Stack	Stack	1*	(→p. 140)
Device ID Number	Device ID number	17—32	(→p. 136)
Rx GM-ON Message	Receive GM-ON switch	OFF, ON	(→p. 137)

1*: OFF, 1—2 of 2, 1—3 of 3, 1—4 of 4, 1—5 of 5, 1—6 of 6, 1—7 of 7, 1—8 of 8

MIDI Param 2 Page ([SYSTEM] → [F3](MIDI)) (p. 137)

Parameter Name	Full Name of Parameter	Value
Rx Program Change	Receive program change switch	OFF, ON
Rx Bank Select	Receive bank select switch	OFF, ON
Rx Control Change	Receive control change switch	OFF, ON
Rx Volume	Receive volume switch	OFF, ON
Rx Hold-1	Receive hold 1 switch	OFF, ON
Rx Pitch Bend	Receive pitch bend switch	OFF, ON
Rx Modulation	Receive modulation switch	OFF, ON
Rx Aftertouch	Receive aftertouch switch	OFF, ON

[F4](Control)

Control Assign Page ([SYSTEM] → [F4](Control)) (p. 105, 107)

Parameter Name	Full Name of Parameter	Value
System Control 1 <Assign>	System controller 1 assign	1*
System Control 2 <Assign>	System controller 2 assign	1*

1*: CC01—CC05, CC07—CC31, CC64—CC95, PITCH BEND, AFTERTOUCH

Control Source Page ([SYSTEM] → [F4](Control))

Parameter Name	Full Name of Parameter	Value	
Hold	Hold control source	OFF, HOLD-1, SOSTENUTO, SOFT, HOLD-2	(→p. 106, 109)
Peak	Peak control source	OFF, HOLD-1, SOSTENUTO, SOFT, HOLD-2	(→p. 106, 109)
Tap	Tap control source	OFF, HOLD-1, SOSTENUTO, SOFT, HOLD-2	(→p. 112, 122)
Volume	Volume control source	VOLUME, VOL&EXP	(→p. 140)
Aftertouch Source	Aftertouch control source	CHANNEL, POLY, CH&POLY	(→p. 140)

[F5](Preview)

Preview Page ([SYSTEM] → [F5](Preview)) (p. 23)

Parameter Name	Full Name of Parameter	Value
Preview Mode	Preview sound mode	SINGLE, CHORD, PHRASE
Note 1—4	Preview key set	C-1—G9
Note 1—4	Preview velocity set	0—127

[F6](Info)

System Information 1 Page ([SYSTEM] → [F6](Info)) (p. 143)

Parameter Name	Full Name of Parameter
Expansion A—H	Wave expansion board name A—H

System Information 2 Page ([SYSTEM] → [F6](Info)) (p. 143)

Parameter Name	Full Name of Parameter
Data Card	Data card name
Internal	Internal battery
Data Card	Data card battery

Factory Settings

Performances

USER (User Group)

No.	Name
01	Strobe Pad 1
02	HardRock Uni
03	Aggressive
04	Opening Orch
05	Cyber Sweep
06	TempleOf2080
07	Humming Pno
08	Horror Movie
09	Tekno Loop 1
10	FarEast Stak
11	Progresso
12	SH Split
13	Fr.Horn Sect
14	Sweep Pad
15	Reso Clav
16	LateAutumnSP
17	Orchestral
18	Rave Split
19	Flying Jazz
20	CeremonialFX
21	AcPiano+Pad
22	AcPiano+Pad2
23	EchoPianoStk
24	Pop Ballad
25	E.Pno Split
26	2080 Fantasy
27	FX Bell Pad
28	Chime FX
29	Multi Sax
30	Big Band
31	Pizz Brass
32	Step Brass

PR-A (Preset A Group)

No.	Name
01	Seq:Template
02	Seq:Pop
03	Seq:LABallad
04	Seq:Fusion
05	Seq:FunkRock
06	Seq:HardRock
07	Seq:H.Metal
08	Seq:Blues
09	Seq:Cont.Jz
10	Seq:Ac.Jazz
11	Seq:Country
12	Seq:Folk
13	Seq:Dixie
14	Seq:BigBand
15	Seq:Latin
16	Seq:Africa
17	Seq:World
18	Seq:Zydeco
19	Seq:60's
20	Seq:Gospel
21	Seq:PopDance
22	Seq:TeknoPop
23	Seq:House
24	Seq:Hip Hop
25	Seq:HardCore
26	Seq:Acid
27	Seq:Ambient
28	Seq:New Age
29	Seq:Orch
30	Seq:Film
31	Seq:Chamber
32	Seq:Baroque

PR-B (Preset B Group)

No.	Name
01	Dulcimar&Gtr
02	DulcitarStk
03	Tekno Loop 2
04	Rave Attack
05	SpaceCarrier
06	Terminator
07	Symphony JV
08	Nebular Vox
09	Humming Vox
10	Cosmic Dawn
11	Labyrinth
12	Sweeper
13	Stack Pad
14	Strobe Pad 2
15	Rhythmatic
16	Voyage
17	S&H Pad
18	Cyclic Pad
19	White Hole
20	EasternSplit
21	Tekno Asia
22	TeknoSplit 1
23	TeknoSplit 2
24	TknoPopSplit
25	ChildrenSplt
26	Purple Split
27	PulsingSplit
28	Pad / Lead
29	Organ / Lead
30	Bass / Lead
31	S&H / Pad
32	Drone / Pipe

*The USER and PR-B groups contain split and layered Performances. The PR-A group contains Performances designed for use when creating songs.

In particular, PR-A:01 Seq:Template has the following settings to make it easy for you to create your own desired settings.

Parts 1, 3—9, 11—16: PR-A:001 64voicePiano
Part 2: PR-B:013Finger Bass
Part 10: PR-A:001 PopDrumSet1

Patches

Voice: number of voice

USER (User Group)

No.	Name	Voice	Key Assign	Oct.	PR-E No.	PR-E Oct.
001	2 0 8 0	4	POLY	0	119	+1
002	Keep :-)	2	POLY	0	074	+1
003	Temple of JV	4	POLY	0	078	0
004	Adrenaline	4	POLY	-1	090	0
005	Rich Dynapad	4	POLY	0	098	+1
006	Morning Lite	2	POLY	0	020	-1
007	Rain Forest	4	POLY	0	128	0
008	Str + Winds	4	POLY	0	051	0
009	Booster Bips	2	POLY	0	069	+2
010	Jupiterings	2	POLY	0	096	+1
011	Sm.Brass Grp	4	POLY	0	056	0
012	Techno Dream	3	POLY	-1	063	0
013	Trancing Pad	2	POLY	0	081	+1
014	Mental Chord	4	SOLO	0	066	0
015	Feed Me!	4	POLY	0	034	0
016	3 Osc Brass	3	POLY	0	060	+1
017	Planet Asia	4	POLY	0	079	+1
018	PieceOfCheez	1	POLY	0	016	+1
019	December Sky	4	POLY	0	106	0
020	East Europe	2	POLY	0	040	0
021	RiversOfTime	4	POLY	0	117	0
022	RD-1000	3	POLY	0	003	0
023	Civilization	3	POLY	0	065	0
024	Pulsatronic	3	POLY	0	082	+1
025	Ring E.Piano	4	POLY	0	010	0
026	Creamy	2	POLY	0	036	+1
027	Echo Rhodes	4	POLY	0	007	0
028	202 Rude Bs	2	SOLO	+1	044	+1
029	HolidayCheer	4	POLY	0	019	0
030	Glider	2	POLY	0	029	+1
031	Atmos Harp	4	POLY	0	042	0
032	Phobos	2	POLY	0	118	0
033	VintagePlunk	4	SOLO	-1	070	+2
034	Dirty Organ	3	POLY	+1	012	+1
035	X..? Whistle	3	POLY	+1	087	0
036	Acid TB	1	SOLO	+2	049	+2
037	Rotodreams	3	POLY	-1	115	-1
038	Analog Drama	3	POLY	0	097	+1
039	Cyber Dreams	3	POLY	0	083	0
040	P5 Polymod	2	POLY	0	061	+1
041	Clear Guitar	3	POLY	+1	032	+1
042	Progresso Ld	4	SOLO	0	089	0
043	pp Harmonium	1	POLY	0	015	0
044	Blue Notes	4	POLY	0	116	+1
045	RingSequence	4	POLY	0	072	0
046	Enlighten	4	POLY	0	091	0
047	Brass Mutes	2	POLY	0	058	0
048	FM BellPiano	3	POLY	-1	009	-1
049	SH-2000	2	SOLO	0	086	0
050	Shadows	4	POLY	-2	123	-2
051	Far East	4	POLY	0	025	+1
052	Tube Smoke	2	POLY	0	035	+1
053	Organizer	3	POLY	0	064	+1
054	Full Orchest	4	POLY	0	050	+1
055	B'on d'moov!	3	POLY	0	076	0
056	Prefab Chime	3	POLY	0	021	+1
057	Player's EP	2	POLY	+1	004	+1
058	BandPass Mod	2	POLY	0	101	+1
059	4pole Bass	2	SOLO	+2	046	+2
060	Octapad	3	POLY	0	107	+1
061	Wire Pad	3	POLY	-1	026	0
062	Warm Pipe	1	SOLO	0	084	0
063	Spectrum Mod	4	POLY	0	109	0
064	D-50 Rhodes	4	POLY	0	005	0
065	Solo Strat	3	POLY	0	033	0
066	Dist TB-303	2	SOLO	0	077	0
067	Soap Opera	1	POLY	0	011	+1
068	Pilgrimage	4	POLY	0	043	0
069	Sax Choir	4	POLY	0	054	0
070	Dimensional	2	POLY	0	095	+1
071	Stacc.Heaven	4	POLY	0	023	0
072	PhaseBlipper	2	POLY	0	027	0
073	Pure Pipe	2	POLY	0	085	-1
074	Afterlife	3	POLY	+1	080	+1
075	JUNO Power!	4	POLY	0	108	0
076	See-Thru EP	3	POLY	0	008	0
077	JX SqrCarpet	2	POLY	0	094	0
078	Phaser MC	2	POLY	+2	047	+2
079	Harpsy Clav	2	POLY	0	017	0
080	Blusey OD	2	POLY	0	037	+1
081	Belfry Chime	3	POLY	0	022	0
082	Scat Flute	2	POLY	0	053	0
083	Soundtraque	2	POLY	0	102	0
084	House Chord	4	SOLO	0	067	0
085	Glass Blower	3	POLY	0	092	0
086	DesertCrystl	4	POLY	+1	031	+1
087	Breathy Brs	3	POLY	0	059	0
088	Jay Vee Solo	3	POLY	0	088	0
089	Upright Pno	3	POLY	0	002	0
090	Darkshine	4	POLY	0	104	+1
091	Exotic Velo	4	POLY	0	018	0
092	Surf's Up!	2	POLY	0	013	0
093	Grindstone	2	POLY	0	038	+1
094	Stringsheen	3	POLY	0	110	0
095	2pole Bass	2	SOLO	+2	045	+2
096	D50FantaPerc	3	POLY	0	114	+1
097	Resojuice	2	SOLO	0	075	+2
098	Silicon Str	4	POLY	0	113	+1
099	Cyber Swing	4	POLY	0	073	0
100	Royale	4	POLY	+1	057	+1
101	Echo Piano	3	POLY	0	001	0
102	Sequalog	4	POLY	+1	068	+1
103	Translucence	4	POLY	0	103	+1
104	Organesque	3	POLY	0	014	+1
105	Solo Steel	4	POLY	0	030	0
106	Ballad Trump	4	POLY	0	055	0
107	Dulcitar	4	POLY	0	041	+1
108	2.2 Bell Pad	4	POLY	-1	024	0
109	Flute 2080	2	POLY	0	052	0
110	Plik-Plok	2	POLY	0	071	-1
111	Triumph Brs	3	POLY	+1	062	+1
112	Sweep Clav	3	POLY	0	028	0
113	GR500 TmpDly	2	POLY	0	111	+1
114	Unearthly	4	POLY	0	120	+1
115	Gluey Pad	3	POLY	0	100	0
116	Innocent EP	2	POLY	0	006	0
117	Earth Blow	2	POLY	0	093	0
118	D'light	2	POLY	0	105	0
119	Perky Noize	3	POLY	-1	126	-1
120	Mod DirtyWav	3	POLY	0	112	0
121	Miniphaser	2	POLY	+2	048	+2
122	Sci-Fi Str	3	POLY	0	122	0
123	OD 5ths	3	POLY	0	039	+2
124	Glistening	4	POLY	0	121	0
125	Droplet	3	POLY	0	127	0
126	Silky Way	2	POLY	0	099	+1
127	Helium Queen	4	SOLO	0	124	+1
128	Sci-Fi FX x4	1	POLY	0	125	0

PR-A (Preset A Group)

No.	Name	Voice	Key Assign	No.	Name	Voice	Key Assign
001	64voicePiano	1	POLY	065	Dual Profs	3	POLY
002	Bright Piano	1	POLY	066	Saw Mass	4	POLY
003	Classique	2	POLY	067	Poly Split	4	POLY
004	Nice Piano	3	POLY	068	Poly Brass	3	POLY
005	Piano Thang	3	POLY	069	Stackoid	4	POLY
006	Power Grand	3	POLY	070	Poly Rock	4	POLY
007	House Piano	2	POLY	071	D-50 Stack	4	POLY
008	E.Grand	1	POLY	072	Fantasia JV	4	POLY
009	MIDIed Grand	3	POLY	073	Jimmee Dee	4	POLY
010	Piano Blend	3	POLY	074	Heavenals	4	POLY
011	West Coast	4	POLY	075	Mallet Pad	4	POLY
012	PianoStrings	4	POLY	076	Huff N Stuff	3	POLY
013	Bs/Pno+Brs	4	POLY	077	Puff 1080	2	POLY
014	Waterhodes	2	POLY	078	BellVox 1080	4	POLY
015	S.A.E.P.	3	POLY	079	Fantasy Vox	4	POLY
016	SA Rhodes 1	4	POLY	080	Square Keys	2	POLY
017	SA Rhodes 2	2	POLY	081	Childlike	4	POLY
018	Stiky Rhodes	3	POLY	082	Music Box	3	POLY
019	Dig Rhodes	2	POLY	083	Toy Box	2	POLY
020	Nylon EPiano	4	POLY	084	Wave Bells	4	POLY
021	Nylon Rhodes	4	POLY	085	Tria Bells	4	POLY
022	Rhodes Mix	3	POLY	086	Beauty Bells	4	POLY
023	PsychoRhodes	2	POLY	087	Music Bells	2	POLY
024	Tremo Rhodes	4	POLY	088	Pretty Bells	2	POLY
025	MK-80 Rhodes	1	POLY	089	Pulse Key	3	POLY
026	MK-80 Phaser	1	POLY	090	Wide Tubular	4	POLY
027	Delicate EP	2	POLY	091	AmbienceVibe	4	POLY
028	Octa Rhodes1	4	POLY	092	Warm Vibes	2	POLY
029	Octa Rhodes2	4	POLY	093	Dyna Marimba	1	POLY
030	JV Rhodes+	4	POLY	094	Bass Marimba	4	POLY
031	EP+Mod Pad	4	POLY	095	Nomad Perc	3	POLY
032	Mr.Mellow	4	POLY	096	Ethno Metals	4	POLY
033	Comp Clav	1	POLY	097	Islands Mlt	4	POLY
034	Klavinet	4	POLY	098	Steelin Keys	3	POLY
035	Winger Clav	4	POLY	099	Steel Drums	1	POLY
036	Phaze Clav 1	2	POLY	100	Voicey Pizz	3	POLY
037	Phaze Clav 2	1	POLY	101	Sitar	2	POLY
038	Phuzz Clav	2	POLY	102	Drone Split	4	POLY
039	Chorus Clav	1	POLY	103	Ethnopluck	4	POLY
040	Claviduck	2	POLY	104	Jamisen	2	POLY
041	Velo-Rez Clv	1	POLY	105	Dulcimer	2	POLY
042	Clavicembalo	4	POLY	106	East Melody	2	POLY
043	Analog Clav1	1	POLY	107	MandolinTrem	4	POLY
044	Analog Clav2	1	POLY	108	Nylon Gtr	1	POLY
045	Metal Clav	3	POLY	109	Gtr Strings	3	POLY
046	Full Stops	2	POLY	110	Steel Away	3	POLY
047	Ballad B	3	POLY	111	Heavenly Gtr	4	POLY
048	Mellow Bars	4	POLY	112	12str Gtr 1	2	POLY
049	AugerMentive	3	POLY	113	12str Gtr 2	3	POLY
050	Perky B	2	POLY	114	Jz Gtr Hall	1	POLY
051	The Big Spin	3	POLY	115	LetterFrmPat	4	POLY
052	Gospel Spin	3	POLY	116	Jazz Scat	3	POLY
053	Roller Spin	3	POLY	117	Lounge Gig	3	POLY
054	Rocker Spin	3	POLY	118	JC Strat	1	POLY
055	Tone Wh.Solo	3	POLY	119	Twin Strats	3	POLY
056	Purple Spin	4	POLY	120	JV Strat	2	POLY
057	60's LeadORG	2	POLY	121	Syn Strat	2	POLY
058	Assalt Organ	3	POLY	122	Rotary Gtr	2	POLY
059	D-50 Organ	2	POLY	123	Muted Gtr	1	POLY
060	Cathedral	4	POLY	124	SwitchOnMute	2	POLY
061	Church Pipes	4	POLY	125	Power Trip	2	POLY
062	Poly Key	3	POLY	126	Crunch Split	4	POLY
063	Poly Saws	4	POLY	127	Rezodrive	2	SOLO
064	Poly Pulse	4	POLY	128	RockYurSocks	4	SOLO

PR-B (Preset B Group)

No.	Name	Voice	Key Assign	No.	Name	Voice	Key Assign
001	Dist Gtr 1	3	POLY	065	Analog Seq	2	POLY
002	Dist Gtr 2	3	POLY	066	Impact Vox	4	POLY
003	R&R Chunk	4	POLY	067	TeknoSoloVox	2	POLY
004	Phripphuzz	1	SOLO	068	X-Mod Man	2	POLY
005	Grungeroni	3	POLY	069	Paz <==> Zap	1	SOLO
006	Black Widow	4	POLY	070	4 Hits 4 You	4	POLY
007	Velo-Wah Gtr	1	POLY	071	Impact	4	POLY
008	Mod-Wah Gtr	2	POLY	072	Phase Hit	3	POLY
009	Pick Bass	1	SOLO	073	Tekno Hit 1	2	POLY
010	Hip Bass	2	POLY	074	Tekno Hit 2	2	POLY
011	Perc.Bass	3	SOLO	075	Tekno Hit 3	4	POLY
012	Homey Bass	2	SOLO	076	Reverse Hit	3	POLY
013	Finger Bass	1	SOLO	077	SquareLead 1	3	POLY
014	Nylon Bass	2	POLY	078	SquareLead 2	2	POLY
015	Ac.Upright	1	SOLO	079	You and Luck	2	SOLO
016	Wet Fretls	1	SOLO	080	Belly Lead	4	POLY
017	Fretls Dry	2	POLY	081	WhistlinAtom	2	POLY
018	Slap Bass 1	2	POLY	082	Edye Boost	2	SOLO
019	Slap Bass 2	1	SOLO	083	MG Solo	4	SOLO
020	Slap Bass 3	1	SOLO	084	FXM Saw Lead	4	SOLO
021	Slap Bass 4	2	POLY	085	Sawteeth	3	SOLO
022	4 Pole Bass	1	SOLO	086	Smoothe	2	SOLO
023	Tick Bass	4	SOLO	087	MG Lead	2	SOLO
024	House Bass	3	SOLO	088	MG Interval	4	SOLO
025	Mondo Bass	3	SOLO	089	Pulse Lead 1	3	POLY
026	Clk AnalogBs	2	SOLO	090	Pulse Lead 2	4	SOLO
027	Bass In Face	2	POLY	091	Little Devil	4	SOLO
028	101 Bass	2	SOLO	092	Loud SynLead	4	SOLO
029	Noiz Bass	2	SOLO	093	Analog Lead	2	SOLO
030	Super Jup Bs	2	POLY	094	5th Lead	2	SOLO
031	Occitan Bass	3	POLY	095	Flute	2	POLY
032	Hugo Bass	4	SOLO	096	Piccolo	1	POLY
033	Multi Bass	2	POLY	097	VOX Flute	4	POLY
034	Moist Bass	2	SOLO	098	Air Lead	2	POLY
035	BritelowBass	4	SOLO	099	Pan Pipes	2	POLY
036	Untamed Bass	3	SOLO	100	Airplaaane	4	POLY
037	Rubber Bass	3	SOLO	101	Taj Mahal	1	POLY
038	Stereoww Bs	3	SOLO	102	Raya Shaku	3	POLY
039	Wonder Bass	3	SOLO	103	Oboe mf	1	POLY
040	Deep Bass	2	POLY	104	Oboe Express	2	POLY
041	Super JX Bs	2	SOLO	105	Clarinet mp	1	POLY
042	W<RED>-Bass	4	POLY	106	ClariExpress	2	POLY
043	HI-Ring Bass	3	POLY	107	Mitzva Split	4	POLY
044	Euro Bass	2	SOLO	108	ChamberWinds	4	POLY
045	SinusoidRave	1	SOLO	109	ChamberWoods	3	POLY
046	Alternative	2	SOLO	110	Film Orch	4	POLY
047	Acid Line	1	SOLO	111	Sop.Sax mf	2	POLY
048	Auto TB-303	3	SOLO	112	Alto Sax	3	POLY
049	Hihat Tekno	2	POLY	113	AltoLead Sax	3	POLY
050	Velo Tekno 1	3	SOLO	114	Tenor Sax	3	POLY
051	Raggatronic	4	POLY	115	Baritone Sax	3	POLY
052	Blade Racer	4	POLY	116	Take A Tenor	4	POLY
053	S&H Pad	1	POLY	117	Sax Section	4	POLY
054	Syncrosonix	3	POLY	118	Bigband Sax	4	POLY
055	Fooled Again	1	POLY	119	Harmonica	2	POLY
056	Alive	3	POLY	120	Harmo Blues	2	POLY
057	Velo Tekno 2	2	POLY	121	BluesHarp	1	POLY
058	Rezoid	4	POLY	122	Hillbillys	4	POLY
059	Raverborg	4	POLY	123	French Bags	4	POLY
060	Blow Hit	4	POLY	124	Majestic Tpt	1	SOLO
061	Hammer Bell	3	POLY	125	Voluntare	2	POLY
062	Seq Mallet	2	POLY	126	2Trumpets	2	POLY
063	Intentions	3	POLY	127	Tpt Sect	4	POLY
064	Pick It	3	POLY	128	Mute TP mod	4	POLY

PR-C (Preset C Group)

No.	Name	Voice	Key Assign	No.	Name	Voice	Key Assign
001	Harmon Mute	1	POLY	065	Harmonicum	2	POLY
002	Tp&Sax Sect	4	POLY	066	D-50 Heaven	2	POLY
003	Sax+Tp+Tb	3	POLY	067	Afro Horns	3	POLY
004	Brass Sect	4	POLY	068	Pop Pad	4	POLY
005	Trombone	1	POLY	069	Dreamesque	4	POLY
006	Hybrid Bones	4	POLY	070	Square Pad	4	POLY
007	Noble Horns	4	POLY	071	JP-8 Hollow	4	POLY
008	Massed Horns	3	POLY	072	JP-8Haunting	4	POLY
009	Horn Swell	4	POLY	073	Heirborne	4	POLY
010	Brass It!	4	POLY	074	Hush Pad	4	POLY
011	Brass Attack	3	POLY	075	Jet Pad 1	2	POLY
012	Archimede	3	POLY	076	Jet Pad 2	2	POLY
013	Rugby Horn	3	POLY	077	Phaze Pad	3	POLY
014	MKS-80 Brass	2	POLY	078	Phaze Str	4	POLY
015	True ANALOG	2	POLY	079	Jet Str Ens	2	POLY
016	Dark Vox	2	POLY	080	Pivotal Pad	4	POLY
017	RandomVowels	4	POLY	081	3D Flanged	1	POLY
018	Angels Sing	2	POLY	082	Fantawine	4	POLY
019	Pvox Oooze	3	POLY	083	Glassy Pad	3	POLY
020	Longing...	3	POLY	084	Moving Glass	1	POLY
021	Arasian Morn	4	POLY	085	Glasswaves	3	POLY
022	Beauty Vox	3	POLY	086	Shiny Pad	4	POLY
023	Mary-AnneVox	4	POLY	087	ShiftedGlass	2	POLY
024	Belltree Vox	4	POLY	088	Chime Pad	3	POLY
025	Vox Panner	2	POLY	089	Spin Pad	2	POLY
026	Spaced Voxx	4	POLY	090	Rotary Pad	4	POLY
027	Glass Voices	3	POLY	091	Dawn 2 Dusk	3	POLY
028	Tubular Vox	4	POLY	092	Aurora	4	POLY
029	Velo Voxx	2	POLY	093	Strobe Mode	4	POLY
030	Wavox	3	POLY	094	Albion	2	POLY
031	Doos	1	POLY	095	Running Pad	4	POLY
032	Synvox Comps	4	POLY	096	Stepped Pad	4	POLY
033	Vocal Oohz	3	POLY	097	Random Pad	4	POLY
034	LFO Vox	1	POLY	098	SoundtrkDANC	4	POLY
035	St.Strings	2	POLY	099	Flying Waltz	4	POLY
036	Warm Strings	4	POLY	100	Vanishing	1	POLY
037	Somber Str	4	POLY	101	5th Sweep	4	POLY
038	Marcato	2	POLY	102	Phazweep	4	POLY
039	Bright Str	2	POLY	103	Big BPF	4	POLY
040	String Ens	4	POLY	104	MG Sweep	4	POLY
041	TremoloStrng	2	POLY	105	CeremonyTimp	3	POLY
042	Chambers	3	POLY	106	Dyno Toms	4	POLY
043	ViolinCello	4	POLY	107	Sands ofTime	4	POLY
044	Symphonique	4	POLY	108	Inertia	4	POLY
045	Film Octaves	4	POLY	109	Vektogram	4	POLY
046	Film Layers	4	POLY	110	Crash Pad	4	POLY
047	Bass Pizz	4	POLY	111	Feedback VOX	4	POLY
048	Real Pizz	3	POLY	112	Cascade	1	POLY
049	Harp On It	3	POLY	113	Shattered	2	POLY
050	Harp	2	POLY	114	NextFrontier	2	POLY
051	JP-8 Str 1	2	POLY	115	Pure Tibet	1	POLY
052	JP-8 Str 2	3	POLY	116	Chime Wash	4	POLY
053	E-Motion Pad	4	POLY	117	Night Shade	4	POLY
054	JP-8 Str 3	4	POLY	118	Tortured	4	POLY
055	Vintage Orch	4	POLY	119	Dissimilate	4	POLY
056	JUNO Strings	3	POLY	120	Dunes	4	POLY
057	Gigantalog	4	POLY	121	Ocean Floor	1	POLY
058	PWM Strings	3	POLY	122	Cyber Space	3	POLY
059	Warmth	2	POLY	123	Biosphere	2	POLY
060	ORBit Pad	2	POLY	124	Variable Run	4	POLY
061	Deep Strings	2	POLY	125	Ice Hall	2	POLY
062	Pulsify	4	POLY	126	ComputerRoom	4	POLY
063	Pulse Pad	4	POLY	127	Inverted	4	POLY
064	Greek Power	4	POLY	128	Terminate	3	POLY

PR-D (GM Group)

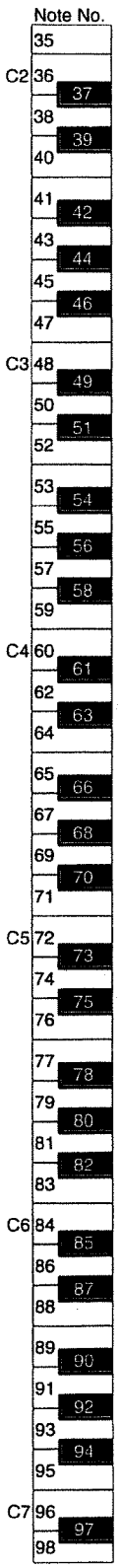
No.	Name	Voice	Key Assign	No.	Name	Voice	Key Assign
001	Piano 1	2	POLY	065	Soprano Sax	1	POLY
002	Piano 2	2	POLY	066	Alto Sax	1	POLY
003	Piano 3	2	POLY	067	Tenor Sax	1	POLY
004	Honky-tonk	2	POLY	068	Baritone Sax	2	POLY
005	E.Piano 1	2	POLY	069	Oboe	2	POLY
006	E.Piano 2	4	POLY	070	English Horn	2	POLY
007	Harpsichord	2	POLY	071	Bassoon	2	POLY
008	Clav.	2	POLY	072	Clarinet	1	POLY
009	Celesta	1	POLY	073	Piccolo	1	POLY
010	Glockenspiel	2	POLY	074	Flute	1	POLY
011	Music Box	1	POLY	075	Recorder	2	POLY
012	Vibraphone	1	POLY	076	Pan Flute	2	POLY
013	Marimba	2	POLY	077	Bottle Blow	2	POLY
014	Xylophone	2	POLY	078	Shakuhachi	1	POLY
015	Tubular-bell	2	POLY	079	Whistle	1	POLY
016	Santur	2	POLY	080	Ocarina	2	POLY
017	Organ 1	1	POLY	081	Square Wave	2	POLY
018	Organ 2	1	POLY	082	Saw Wave	2	POLY
019	Organ 3	2	POLY	083	Syn.Calliope	2	POLY
020	Church Org.1	2	POLY	084	Chiffer Lead	2	POLY
021	Reed Organ	1	POLY	085	Charang	3	POLY
022	Accordion Fr	2	POLY	086	Solo Vox	2	POLY
023	Harmonica	1	POLY	087	5th Saw Wave	3	POLY
024	Bandoneon	2	POLY	088	Bass & Lead	2	POLY
025	Nylon-str.Gt	1	POLY	089	Fantasia	3	POLY
026	Steel-str.Gt	1	POLY	090	Warm Pad	2	POLY
027	Jazz Gt.	1	POLY	091	Polysynth	2	POLY
028	Clean Gt.	1	POLY	092	Space Voice	2	POLY
029	Muted Gt.	1	POLY	093	Bowed Glass	3	POLY
030	Overdrive Gt	1	POLY	094	Metal Pad	2	POLY
031	DistortionGt	1	POLY	095	Halo Pad	3	POLY
032	Gt.Harmonics	3	POLY	096	Sweep Pad	2	POLY
033	Acoustic Bs.	3	POLY	097	Ice Rain	2	POLY
034	Fingered Bs.	1	POLY	098	Soundtrack	2	POLY
035	Picked Bs.	1	POLY	099	Crystal	2	POLY
036	Fretless Bs.	1	POLY	100	Atmosphere	2	POLY
037	Slap Bass 1	1	POLY	101	Brightness	3	POLY
038	Slap Bass 2	2	POLY	102	Goblin	2	POLY
039	Synth Bass 1	1	POLY	103	Echo Drops	2	POLY
040	Synth Bass 2	1	POLY	104	Star Theme	2	POLY
041	Violin	1	POLY	105	Sitar	1	POLY
042	Viola	1	POLY	106	Banjo	1	POLY
043	Cello	1	POLY	107	Shamisen	2	POLY
044	Contrabass	1	POLY	108	Koto	1	POLY
045	Tremolo Str	1	POLY	109	Kalimba	1	POLY
046	PizzicatoStr	1	POLY	110	Bag Pipe	3	POLY
047	Harp	2	POLY	111	Fiddle	1	POLY
048	Timpani	1	POLY	112	Shanai	1	POLY
049	Strings	2	POLY	113	Tinkle Bell	4	POLY
050	Slow Strings	1	POLY	114	Agogo	1	POLY
051	Syn.Strings1	2	POLY	115	Steel Drums	1	POLY
052	Syn.Strings2	2	POLY	116	Woodblock	1	POLY
053	Choir Aahs	3	POLY	117	Taiko	4	POLY
054	Voice Oohs	1	POLY	118	Melo. Tom 1	2	POLY
055	SynVox	1	POLY	119	Synth Drum	2	POLY
056	OrchestraHit	2	POLY	120	Reverse Cym.	2	POLY
057	Trumpet	2	POLY	121	Gt.FretNoise	1	POLY
058	Trombone	1	POLY	122	Breath Noise	2	POLY
059	Tuba	2	POLY	123	Seashore	3	POLY
060	MutedTrumpet	1	POLY	124	Bird	4	POLY
061	French Horn	2	POLY	125	Telephone 1	1	POLY
062	Brass 1	2	POLY	126	Helicopter	2	POLY
063	Synth Brass1	1	POLY	127	Applause	4	POLY
064	Synth Brass2	2	POLY	128	Gun Shot	2	POLY

PR-E (Preset E Group)

No.	Name	Voice	Key Assign	No.	Name	Voice	Key Assign
001	Echo Piano	3	POLY	065	Civilization	3	POLY
002	Upright Pno	3	POLY	066	Mental Chord	4	SOLO
003	RD-1000	3	POLY	067	House Chord	4	SOLO
004	Player's EP	2	POLY	068	Sequalog	4	POLY
005	D-50 Rhodes	4	POLY	069	Booster Bips	2	POLY
006	Innocent EP	2	POLY	070	VintagePlunk	4	SOLO
007	Echo Rhodes	4	POLY	071	Plik-Plok	2	POLY
008	See-Thru EP	3	POLY	072	RingSequence	4	POLY
009	FM BellPiano	3	POLY	073	Cyber Swing	4	POLY
010	Ring E.Piano	4	POLY	074	Keep :-)	2	POLY
011	Soap Opera	1	POLY	075	Resojuice	2	SOLO
012	Dirty Organ	3	POLY	076	B'on d'moov!	3	POLY
013	Surf's Up!	2	POLY	077	Dist TB-303	2	SOLO
014	Organesque	3	POLY	078	Temple of JV	4	POLY
015	pp Harmonium	1	POLY	079	Planet Asia	4	POLY
016	PieceOfCheez	1	POLY	080	Afterlife	3	POLY
017	Harpsy Clav	2	POLY	081	Trancing Pad	2	POLY
018	Exotic Velo	4	POLY	082	Pulsatronic	3	POLY
019	HolidayCheer	4	POLY	083	Cyber Dreams	3	POLY
020	Morning Lite	2	POLY	084	Warm Pipe	1	SOLO
021	Prefab Chime	3	POLY	085	Pure Pipe	2	POLY
022	Belfry Chime	3	POLY	086	SH-2000	2	SOLO
023	Stacc.Heaven	4	POLY	087	X..? Whistle	3	POLY
024	2.2 Bell Pad	4	POLY	088	Jay Vee Solo	3	POLY
025	Far East	4	POLY	089	Progresso Ld	4	SOLO
026	Wire Pad	3	POLY	090	Adrenaline	4	POLY
027	PhaseBlipper	2	POLY	091	Enlighten	4	POLY
028	Sweep Clav	3	POLY	092	Glass Blower	3	POLY
029	Glider	2	POLY	093	Earth Blow	2	POLY
030	Solo Steel	4	POLY	094	JX SqrCarpet	2	POLY
031	DesertCrystl	4	POLY	095	Dimensional	2	POLY
032	Clear Guitar	3	POLY	096	Jupiterings	2	POLY
033	Solo Strat	3	POLY	097	Analog Drama	3	POLY
034	Feed Me!	4	POLY	098	Rich Dynapad	4	POLY
035	Tube Smoke	2	POLY	099	Silky Way	2	POLY
036	Creamy	2	POLY	100	Gluey Pad	3	POLY
037	Blusey OD	2	POLY	101	BandPass Mod	2	POLY
038	Grindstone	2	POLY	102	Soundtraque	2	POLY
039	OD 5ths	3	POLY	103	Translucence	4	POLY
040	East Europe	2	POLY	104	Darkshine	4	POLY
041	Dulcitar	4	POLY	105	D'light	2	POLY
042	Atmos Harp	4	POLY	106	December Sky	4	POLY
043	Pilgrimage	4	POLY	107	Octapad	3	POLY
044	202 Rude Bs	2	SOLO	108	JUNO Power!	4	POLY
045	2pole Bass	2	SOLO	109	Spectrum Mod	4	POLY
046	4pole Bass	2	SOLO	110	Stringsheen	3	POLY
047	Phaser MC	2	POLY	111	GR500 TmpDly	2	POLY
048	Miniphaser	2	POLY	112	Mod DirtyWav	3	POLY
049	Acid TB	1	SOLO	113	Silicon Str	4	POLY
050	Full Orchest	4	POLY	114	D50FantaPerc	3	POLY
051	Str + Winds	4	POLY	115	Rotodreams	3	POLY
052	Flute 2080	2	POLY	116	Blue Notes	4	POLY
053	Scat Flute	2	POLY	117	RiversOfTime	4	POLY
054	Sax Choir	4	POLY	118	Phobos	2	POLY
055	Ballad Trump	4	POLY	119	2 0 8 0	4	POLY
056	Sm.Brass Grp	4	POLY	120	Unearthly	4	POLY
057	Royale	4	POLY	121	Glistening	4	POLY
058	Brass Mutes	2	POLY	122	Sci-Fi Str	3	POLY
059	Breathy Brs	3	POLY	123	Shadows	4	POLY
060	3 Osc Brass	3	POLY	124	Helium Queen	4	SOLO
061	P5 Polymod	2	POLY	125	Sci-Fi FX x4	1	POLY
062	Triumph Brs	3	POLY	126	Perky Noize	3	POLY
063	Techno Dream	3	POLY	127	Droplet	3	POLY
064	Organizer	3	POLY	128	Rain Forest	4	POLY

Rhythm Sets

Note No.	USER (User) 001 HouseDrumSet 1	USER (User) 002 JazzDrumSet1	PR-A (Preset A Group) 001 PopDrumSet 1	PR-A (Preset A Group) 002 PopDrumSet 2	PR-B (Preset B Group) 001 PowerDrumSet	PR-B (Preset B Group) 002 RaveDrumSet
35	Scratch 1	Hybrid Kick2	Verb Kick	Hybrid Kick1	Verb Kick	808 Kick
C2 36	808 SN	Hybrid Kick1	Hybrid Kick1	Round Kick	Round Kick	Round Kick
37	Dry Stick	Side Stick	Side Stick	Dry Stick	Dry Stick	Side Stick
38	808 SN	Ballad SN	Natural SN2	Piccolo SN	Piccolo SN	808 SN
39	808 Claps	Brush Slap	808 Claps	Hand Claps	808 Claps	808 Claps
40	808 SN	Brush Swish	SN Roll	Piccolo SN	Natural SN2	808 SN
41	808 Kick	Verb Tom Lo	Verb Tom Lo	Verb Tom Lo	Verb Tom Lo	808 Kick
42	606 HiHat Cl	Cl HiHat 1	Cl HiHat 1	Cl HiHat 1	Cl HiHat 1	606 HiHat Cl
43	808 SN	Verb Tom Lo	Verb Tom Lo	Verb Tom Lo	Verb Tom Lo	Tekno Hit
44	606 HiHat Cl	Pedal HiHat	Cl HiHat 2	Cl HiHat 2	Pedal HiHat	606 HiHat Cl
45	808 Kick	Verb Tom Hi	Verb Tom Hi	Verb Tom Hi	Verb Tom Lo	808 Kick
46	606 HiHat Op	Op HiHat	Op HiHat	Op HiHat	Op HiHat	606 HiHat Op
47	808 SN	Verb Tom Hi	Verb Tom Hi	Verb Tom Hi	Verb Tom Lo	Tekno Hit
C3 48	808 Kick	Verb Tom Hi	Verb Tom Hi	Verb Tom Hi	Verb Tom Hi	808 Kick
49	Crash 1	Crash 1	Crash 1	Crash 1	Crash 1	Crash 1
50	808 SN	Verb Tom Hi	Verb Tom Hi	Verb Tom Hi	Verb Tom Hi	Tekno Hit
51	Ride 2	Ride 2	Ride 2	Ride 1	Ride 1	Voice Breath
52	REV Crash 1	China Cym	China Cym	China Cym	China Cym	MC500 Beep 1
53	Ride Bell 1	Ride Bell 1	Ride Bell 1	Ride Bell 1	Ride Bell 1	MC500 Beep 2
54	Tambourine	Tambourine	Tambourine	Tambourine	Tambourine	R8 Click
55	Crash 1	Crash 1	Crash 1	Crash 1	Crash 1	Pizz
56	Cowbell 1	Cowbell 1	Cowbell 1	Cowbell 1	Cowbell 1	DIGI Bell 1
57	Crash 1	Crash 1	Crash 1	Crash 1	Crash 1	Rattles
58	Vibraslap	Vibraslap	Cowbell 1	Cowbell 1	Vibraslap	Ride Bell 1
59	Ride 2	Ride 2	Ride Bell 1	Ride Bell 1	Ride 1	REV Tamb
C4 60	Bongo Hi	Bongo Hi	Cga Mute Hi	Cga Mute Hi	Bongo Hi	2.2 Vibwave
61	Bongo Lo	Bongo Lo	Cga Mute Lo	Cga Mute Lo	Bongo Lo	Low Pink NZ
62	Cga Mute Hi	Cga Mute Hi	Cga Slap	Cga Slap	Cga Mute Hi	Kalimba
63	Cga Open Hi	Cga Open Hi	Cga Open Hi	Cga Open Hi	Cga Open Hi	Metal Wind
64	Cga Open Lo	Cga Open Lo	Cga Open Lo	Cga Open Lo	Cga Open Lo	Lead Wave
65	Timbale	Timbale	Timbale	Timbale	Timbale	Tin Wave
66	Timbale	Timbale	Timbale	Timbale	Timbale	Agogo
67	Agogo	Agogo	Agogo	Agogo	Agogo	Lite Kick
68	Agogo	Agogo	Agogo	Agogo	Agogo	Agogo
69	Cabasa Cut	Cabasa Up	Cabasa Up	Cabasa Up	Cabasa Up	Lite Kick
70	Maracas	Maracas	Maracas	Maracas	Maracas	Agogo
71	Soft Pad B	Soft Pad B	Soft Pad A	Cabasa Down	Soft Pad A	Gtr Harm A
C5 72	Soft Pad A	Soft Pad A	Soft Pad B	Cabasa Cut	Soft Pad B	Gtr Harm A
73	Long Guiro	Long Guiro	Long Guiro	808 Kick	Long Guiro	Piano Thump
74	Long Guiro	Long Guiro	Long Guiro	808 SN	Long Guiro	Natural SN1
75	Claves	Claves	Claves	DIGI Bell 1	Claves	Hand Claps
76	Wood Block	Wood Block	Wood Block	808 SN	Wood Block	Natural SN1
77	Wood Block	Wood Block	Wood Block	808 Kick	Wood Block	808 SN
78	Cuica	Cuica	Cuica	Spectrum	Cuica	PowerChord B
79	Cuica	Cuica	Cuica	808 Kick	Cuica	Hybrid Kick2
80	Open Triangl	Open Triangl	Open Triangl	Spectrum	Open Triangl	PowerChord B
81	Open Triangl	Open Triangl	Open Triangl	808 Kick	Open Triangl	Gt.FretNoise
82	Cabasa Cut	Cabasa Cut	Cabasa Cut	Spectrum	Maracas	Banjo B
83	Tambourine	Spectrum	Spectrum	808 Kick	Ice Rain	Slap Bass 1
C6 84	Old Kick	Wind Chimes	Wind Chimes	808 Kick	Wind Chimes	Oboe mf A
85	Scratch 1	Wood Block	Wood Block	Feedbackwave	Claves	Shakuhachi
86	Piccolo SN	Cga Slap	Cga Slap	808 Kick	808 SN	Pizz
87	Scratch 3	Dry Tom Lo	Dry Tom Lo	Feedbackwave	Verb Tom Hi	Syn Vox 1
88	White Noise	Lite Kick	Lite Kick	Pop Voice	Piccolo SN	Voice Aahs A
89	Synth Saw 1	Hybrid Kick2	Hybrid Kick2	Pop Voice	Scratch 3	Voice Oohs2A
90	Synth Pulse1	Old Kick	Old Kick	Wind Agogo	Tin Wave	Pop Voice
91	Back Hit	808 Kick	Pop Voice	Pop Voice	Spectrum	Male Ooh A
92	Tekno Hit	Natural SN1	Wind Agogo	Wind Agogo	REV Steel DR	Voice Breath
93	Orch. Hit	Natural SN2	Op HiHat	Op HiHat	REV Tin Wave	Org Vox C
94	Philly Hit	SN Roll	Anklungs	Anklungs	REV PiccloSN	Vox Noise
95	REV Back Hit	Natural SN2	Op HiHat	Op HiHat	REV Crash 1	Vox Noise
C7 96	MC500 Beep 1	Metronome 2	Metronome 2	Metronome 2	Metronome 2	Applause
97	R8 Click	R8 Click	R8 Click	R8 Click	R8 Click	R8 Click
98	MC500 Beep 2	Metronome 1	Metronome 1	Metronome 1	Metronome 1	Metronome 2



Note No.	PR-C (Preset C Group) 001 JazzDrumSet2	PR-C (Preset C Group) 002 OrchDrumSet	PR-D (GM Group) 001 GM Drum Set	PR-D (GM Group) 002 BrushDrumSet	PR-E (Preset E Group) 001 PowerDrmSet2	PR-E (Preset E Group) 002 PowerRaveSet
35	Round Kick	Old Kick	Verb Kick	Hybrid Kick2	Verb Kick	Verb Kick
C2 36	Old Kick	Round Kick	Hybrid Kick1	Hybrid Kick1	Round Kick	Round Kick
37	Side Stick	Side Stick	Side Stick	Side Stick	Dry Stick	Dry Stick
38	Ballad SN	Ballad SN	Ballad SN	Brush Swish	Piccolo SN	Piccolo SN
39	Hand Claps	808 Claps	808 Claps	Brush Slap	808 Claps	808 Claps
40	SN Roll	SN Roll	Piccolo SN	Brush Roll	SN Roll	Natural SN2
41	Verb Tom Lo	Timpani	Verb Tom Lo	Dry Tom Lo	Verb Tom Lo	Verb Tom Lo
42	Cl HiHat 2	Timpani	Cl HiHat 1	Cl HiHat 1	Cl HiHat 1	Cl HiHat 1
43	Dry Tom Lo	Timpani	Verb Tom Lo	Dry Tom Lo	Verb Tom Lo	Verb Tom Lo
44	Pedal HiHat	Timpani	Pedal HiHat	Pedal HiHat	Pedal HiHat	Pedal HiHat
45	Verb Tom Lo	Timpani	Verb Tom Hi	Dry Tom Hi	Verb Tom Lo	Verb Tom Lo
46	Op HiHat	Timpani	Op HiHat	Op HiHat	Op HiHat	Op HiHat
47	Dry Tom Lo	Timpani	Verb Tom Hi	Dry Tom Hi	Verb Tom Lo	Verb Tom Lo
C3 48	Verb Tom Hi	Timpani	Verb Tom Hi	Dry Tom Hi	Verb Tom Hi	Verb Tom Hi
49	Crash 1	Timpani	Crash 1	Crash 1	Crash 1	Crash 1
50	Dry Tom Hi	Timpani	Verb Tom Hi	Dry Tom Hi	Verb Tom Hi	Verb Tom Hi
51	Ride 2	Timpani	Ride 2	Ride 2	Ride 1	Ride 1
52	China Cym	Timpani	China Cym	China Cym	China Cym	China Cym
53	Ride Bell 1	Timpani	Ride Bell 1	Ride Bell 1	Ride Bell 1	Ride Bell 1
54	Tambourine	Tambourine	Tambourine	Tambourine	Tambourine	Tambourine
55	Crash 1	Crash 1	Crash 1	Crash 1	Crash 1	Crash 1
56	Cowbell 1	Cowbell 1	Cowbell 1	Cowbell 1	Cowbell 1	Cowbell 1
57	Crash 1	Crash 1	Crash 1	Crash 1	Crash 1	Crash 1
58	Vibraslap	Ride 1	Vibraslap	Vibraslap	Vibraslap	Vibraslap
59	Ride 2	Ride 2	Ride 2	Ride 2	Ride 1	Ride 1
C4 60	Bongo Hi	Bongo Hi	Bongo Hi	Cga Mute Hi	Bongo Hi	Bongo Hi
61	Bongo Lo	Bongo Lo	Bongo Lo	Cga Mute Lo	Bongo Lo	Bongo Lo
62	Cga Mute Hi	Cga Mute Hi	Cga Mute Hi	Cga Slap	Cga Mute Hi	Cga Mute Hi
63	Cga Open Hi	Cga Open Hi	Cga Open Hi	Cga Open Hi	Cga Open Hi	Cga Open Hi
64	Cga Open Lo	Cga Open Lo	Cga Open Lo	Cga Open Lo	Cga Open Lo	Cga Open Lo
65	Timbale	Timbale	Timbale	Timbale	Timbale	Timbale
66	Timbale	Timbale	Timbale	Timbale	Timbale	Timbale
67	Agogo	Agogo	Agogo	Agogo	Agogo	Agogo
68	Agogo	Agogo	Agogo	Agogo	Agogo	Agogo
69	Cabasa Up	Cabasa Up	Cabasa Up	Cabasa Up	Cabasa Up	Agogo
70	Maracas	Maracas	Maracas	Maracas	Maracas	Maracas
71	Soft Pad A	Soft Pad A	Soft Pad A	Soft Pad A	Soft Pad A	606 HiHat Cl
C5 72	Brush Swish	Soft Pad B	Soft Pad B	Soft Pad B	Soft Pad B	606 HiHat Cl
73	Long Guiro	Long Guiro	Long Guiro	Long Guiro	Long Guiro	606 HiHat Op
74	Long Guiro	Long Guiro	Long Guiro	Long Guiro	Long Guiro	Long Guiro
75	Claves	Claves	Claves	Claves	Claves	Claves
76	Wood Block	Wood Block	Wood Block	Wood Block	Wood Block	Wood Block
77	Metronome 2	Wood Block	Wood Block	Wood Block	Wood Block	Wood Block
78	Cuica	Cuica	Cuica	Cuica	Cuica	Pizz
79	Cuica	Cuica	Cuica	Cuica	Cuica	Syn Vox 1
80	Open Triangl	Open Triangl	Open Triangl	Open Triangl	Open Triangl	Voice Aahs A
81	Open Triangl	Open Triangl	Open Triangl	Open Triangl	Open Triangl	Voice Oohs2A
82	Cabasa Cut	Cabasa Cut	Cabasa Cut	Cabasa Cut	Maracas	Male Ooh A
83	Spectrum	Spectrum	Spectrum	Spectrum	Ice Rain	Ice Rain
C6 84	Wind Chimes	Wind Chimes	Wind Chimes	Wind Chimes	Wind Chimes	808 SN
85	Wood Block	Wood Block	Wood Block	Wood Block	Claves	808 SN
86	Cga Slap	Cga Slap	Cga Slap	Cga Slap	808 SN	808 SN
87	Dry Tom Lo	Dry Tom Lo	Dry Tom Lo	Dry Tom Lo	Verb Tom Hi	Hand Claps
88	Lite Kick	Applause	Lite Kick	Lite Kick	Piccolo SN	Voice Breath
89	Hybrid Kick2	Hybrid Kick2	Hybrid Kick2	Hybrid Kick2	Scratch 3	Scratch 3
90	Old Kick	Cl HiHat 1	Old Kick	Old Kick	Tin Wave	Tin Wave
91	Natural SN2	Round Kick	808 Kick	808 Kick	Spectrum	Crash 1
92	Natural SN1	Pedal HiHat	Natural SN1	Natural SN1	REV Steel DR	Ride Bell 1
93	Brush Swish	Natural SN2	Natural SN2	Natural SN2	REV Tin Wave	REV Tin Wave
94	Brush Roll	Op HiHat	808 SN	SN Roll	REV PiccioSN	DIGI Bell 1
95	Brush Slap	Brush Slap	Brush Slap	Brush Slap	REV Crash 1	Metal Wind
C7 96	Metronome 2	Brush Swish	Brush Swish	Metronome 2	Metronome 2	Applause
97	R8 Click	Brush Roll	Brush Roll	R8 Click	R8 Click	R8 Click
98	Metronome 1	SN Roll	SN Roll	Metronome 1	Metronome 1	Metronome 1

Waveforms

*: *Waveform marked "*" are One-shot type waveforms (non-sustaining).*

INT-A (Internal A)

No.	Name		No.	Name	No.	Name	No.	Name	No.	Name
001	Ac Piano1 A		052	Nylon Gtr A	103	Syn Gtr B	154	MC-202 Bs B	205	Cello A
002	Ac Piano1 B		053	Nylon Gtr B	104	Syn Gtr C	155	MC-202 Bs C	206	Cello B
003	Ac Piano1 C		054	Nylon Gtr C	105	Harp 1A	156	Flute 1A	207	Cello C
004	Ac Piano2 pA		055	6-Str Gtr A	106	Harp 1B	157	Flute 1B	208	ST.Strings-R
005	Ac Piano2 pB		056	6-Str Gtr B	107	Harp 1C	158	Flute 1C	209	ST.Strings-L
006	Ac Piano2 pC		057	6-Str Gtr C	108	Banjo A	159	Blow Pipe	210	MonoStringsA
007	Ac Piano2 fA	*	058	Gtr Harm A	109	Banjo B	160	Bottle	211	MonoStringsC
008	Ac Piano2 fB	*	059	Gtr Harm B	110	Banjo C	161	Shakuhachi	212	Pizz *
009	Ac Piano2 fC	*	060	Gtr Harm C	111	Sitar A	162	Clarinet A	213	JP Strings1A
010	Piano Thump	*	061	Comp Gtr A	112	Sitar B	163	Clarinet B	214	JP Strings1B
011	Piano Up TH	*	062	Comp Gtr B	113	Sitar C	164	Clarinet C	215	JP Strings1C
012	MKS-20 P3 A		063	Comp Gtr C	114	Dulcimer A	165	Oboe mf A	216	JP Strings2A
013	MKS-20 P3 B		064	Comp Gtr A+	115	Dulcimer B	166	Oboe mf B	217	JP Strings2B
014	MKS-20 P3 C		065	Mute Gtr 1	116	Dulcimer C	167	Oboe mf C	218	JP Strings2C
015	SA Rhodes 1A		066	Mute Gtr 2A	117	Shamisen A	168	Sop.Sax mf A	219	Soft Pad A
016	SA Rhodes 1B		067	Mute Gtr 2B	118	Shamisen B	169	Sop.Sax mf B	220	Soft Pad B
017	SA Rhodes 1C		068	Mute Gtr 2C	119	Shamisen C	170	Sop.Sax mf C	221	Soft Pad C
018	SA Rhodes 2A		069	Pop Strat A	120	Koto A	171	Alto Sax 1A	222	Fantasynth A
019	SA Rhodes 2B		070	Pop Strat B	121	Koto B	172	Alto Sax 1B	223	Fantasynth B
020	SA Rhodes 2C		071	Pop Strat C	122	Koto C	173	Alto Sax 1C	224	Fantasynth C
021	E.Piano 1A		072	Jazz Gtr A	123	Pick Bass A	174	Tenor Sax A	225	D-50 HeavenA
022	E.Piano 1B		073	Jazz Gtr B	124	Pick Bass B	175	Tenor Sax B	226	D-50 HeavenB
023	E.Piano 1C		074	Jazz Gtr C	125	Pick Bass C	176	Tenor Sax C	227	D-50 HeavenC
024	E.Piano 2A		075	JC Strat A	126	Fingerd Bs A	177	Bari.Sax f A	228	Fine Wine
025	E.Piano 2B		076	JC Strat B	127	Fingerd Bs B	178	Bari.Sax f B	229	D-50 Brass A
026	E.Piano 2C		077	JC Strat C	128	Fingerd Bs C	179	Bari.Sax f C	230	D-50 Brass B
027	E.Piano 3A		078	JC Strat A+	129	E.Bass	180	Harmonica A	231	D-50 Brass C
028	E.Piano 3B		079	JC Strat B+	130	Fretless A	181	Harmonica B	232	D-50 BrassA+
029	E.Piano 3C		080	JC Strat C+	131	Fretless B	182	Harmonica C	233	DualSquare A
030	MK-80 EP A		081	Clean Gtr A	132	Fretless C	183	Chanter	234	DualSquare C
031	MK-80 EP B		082	Clean Gtr B	133	UprightBs 1	184	Tpt Sect. A	235	DualSquareA+
032	MK-80 EP C		083	Clean Gtr C	134	UprightBs 2A	185	Tpt Sect. B	236	Pop Voice
033	D-50 EP A		084	Stratus A	135	UprightBs 2B	186	Tpt Sect. C	237	Syn Vox 1
034	D-50 EP B		085	Stratus B	136	UprightBs 2C	187	Trumpet 1A	238	Syn Vox 2
035	D-50 EP C		086	Stratus C	137	Slap Bass 1	188	Trumpet 1B	239	Voice Aahs A
036	Celesta		087	OD Gtr A	138	Slap & Pop	189	Trumpet 1C	240	Voice Aahs B
037	Music Box		088	OD Gtr B	139	Slap Bass 2	190	Trumpet 2A	241	Voice Aahs C
038	Clav 1A		089	OD Gtr C	140	Slap Bass 3	191	Trumpet 2B	242	Voice Oohs1A
039	Clav 1B		090	OD Gtr A+	141	Jz.Bs Thumb	192	Trumpet 2C	243	Voice Oohs1B
040	Clav 1C		091	Heavy Gtr A	142	Jz.Bs Slap 1	193	HarmonMute1A	244	Voice Oohs1C
041	Organ 1		092	Heavy Gtr B	143	Jz.Bs Slap 2	194	HarmonMute1B	245	Voice Oohs2A
042	Jazz Organ 1		093	Heavy Gtr C	144	Jz.Bs Slap 3	195	HarmonMute1C	246	Voice Oohs2B
043	Jazz Organ 2		094	Heavy Gtr A+	145	Jz.Bs Pop	196	Trombone 1	247	Voice Oohs2C
044	Organ 2		095	Heavy Gtr B+	146	Syn Bass A	197	French 1A	248	Voice Breath
045	Organ 3		096	Heavy Gtr C+	147	Syn Bass C	198	French 1C	249	Male Ooh A
046	Organ 4		097	PowerChord A	148	Mini Bs 1A	199	F.Horns A	250	Male Ooh B
047	Rock Organ		098	PowerChord B	149	Mini Bs 1B	200	F.Horns B	251	Male Ooh C
048	Dist. Organ		099	PowerChord C	150	Mini Bs 1C	201	F.Horns C	252	Org Vox A
049	Rot.Org Slw		100	EG Harm	151	Mini Bs 2	202	Violin A	253	Org Vox B
050	Rot.Org Fst		101	Gt.FretNoise	* 152	Mini Bs 2+	203	Violin B	254	Org Vox C
051	Pipe Organ		102	Syn Gtr A	153	MC-202 Bs A	204	Violin C	255	Vox Noise

INT-B (Internal B)

No.	Name		No.	Name		No.	Name		No.	Name	
001	Kalimba		052	Feedbackwave		103	Cowbell 1	*	154	REV 606HH Op	*
002	Marimba Wave		053	Spectrum		104	Wood Block	*	155	REV Ride	
003	Log Drum		054	BreathNoise	*	105	Claves	*	156	REV Cup	
004	Vibes		055	Rattles		106	Bongo Hi	*	157	REV Crash 1	*
005	Bottle Hit		056	Ice Rain		107	Bongo Lo	*	158	REV China	*
006	Glockenspiel		057	Tin Wave		108	Cga Open Hi	*	159	REV DrySick	*
007	Tubular		058	Anklungs		109	Cga Open Lo	*	160	REV RealCLP	*
008	Steel Drums		059	Wind Chimes		110	Cga Mute Hi	*	161	REV FingSnap	*
009	Fanta Bell A		060	Orch. Hit	*	111	Cga Mute Lo	*	162	REV Cowbell	*
010	Fanta Bell B		061	Tekno Hit	*	112	Cga Slap	*	163	REV WoodBlck	*
011	Fanta Bell C		062	Back Hit	*	113	Timbale	*	164	REV Clve	*
012	FantaBell A+		063	Philly Hit	*	114	Cabasa Up	*	165	REV Conga	*
013	Org Bell		064	Scratch 1	*	115	Cabasa Down	*	166	REV Tamb	*
014	Agogo		065	Scratch 2		116	Cabasa Cut	*	167	REV Maracas	*
015	DIGI Bell 1		066	Scratch 3	*	117	Maracas	*	168	REV Guiro	*
016	DIGI Bell 1+		067	Natural SN1	*	118	Long Guiro	*	169	REV Cuica	*
017	DIGI Chime		068	Natural SN2	*	119	Tambourine	*	170	REV Metro	*
018	Wave Scan		069	Piccolo SN	*	120	Open Triangl		171	Loop 1	
019	Wire String		070	Ballad SN	*	121	Cuica	*	172	Loop 2	
020	2.2 Bellwave		071	SN Roll	*	122	Vibraslap		173	Loop 3	
021	2.2 Vibwave		072	808 SN	*	123	Timpani		174	Loop 4	
022	Spark VOX		073	Brush Slap	*	124	Applause		175	Loop 5	
023	MMM VOX		074	Brush Swish	*	125	REV Orch.Hit	*	176	Loop 6	
024	Lead Wave		075	Brush Roll		126	REV TeknoHit	*	177	Loop 7	
025	Synth Reed		076	Dry Stick	*	127	REV Back Hit	*	178	R8 Click	*
026	Synth Saw 1		077	Side Stick	*	128	REV PhillHit	*	179	Metronome 1	
027	Synth Saw 2		078	Lite Kick	*	129	REV Steel DR		180	Metronome 2	*
028	Syn Saw 2inv		079	Hybrid Kick1	*	130	REV Tin Wave		181	MC500 Beep 1	*
029	Synth Saw 3		080	Hybrid Kick2	*	131	REV NatrlSN1	*	182	MC500 Beep 2	*
030	JP-8 Saw A		081	Old Kick	*	132	REV NatrlSN2	*	183	Low Saw	
031	JP-8 Saw B		082	Verb Kick	*	133	REV PiccloSN	*	184	Low Saw inv	
032	JP-8 Saw C		083	Round Kick	*	134	REV BalladSN	*	185	Low P5 Saw	
033	P5 Saw A		084	808 Kick		135	REV Side Stk	*	186	Low Pulse 1	
034	P5 Saw B		085	Verb Tom Hi	*	136	REV SN Roll	*	187	Low Pulse 2	
035	P5 Saw C		086	Verb Tom Lo	*	137	REV Brush 1	*	188	Low Square	
036	D-50 Saw A		087	Dry Tom Hi		138	REV Brush 2	*	189	Low Sine	
037	D-50 Saw B		088	Dry Tom Lo		139	REV Brush 3		190	Low Triangle	
038	D-50 Saw C		089	Cl HiHat 1	*	140	REV LiteKick	*	191	Low White NZ	
039	Synth Square		090	Cl HiHat 2	*	141	REV HybridK1	*	192	Low Pink NZ	
040	JP-8 SquareA		091	Op HiHat		142	REV HybridK2	*	193	DC	
041	JP-8 SquareB		092	Pedal HiHat	*	143	REV Old Kick	*			
042	JP-8 SquareC		093	606 HiHat Cl	*	144	REV Timpani	*			
043	Synth Pulse1		094	606 HiHat Op		145	REV VerbTomH	*			
044	Synth Pulse2		095	808 Claps	*	146	REV VerbTomL	*			
045	Triangle		096	Hand Claps	*	147	REV DryTom H				
046	Sine		097	Finger Snaps	*	148	REV DryTom M				
047	Org Click	*	098	Ride 1		149	REV ClHiHat1	*			
048	White Noise		099	Ride 2		150	REV ClHiHat2	*			
049	Pink Noise		100	Ride Bell 1		151	REV Op HiHat	*			
050	Metal Wind		101	Crash 1		152	REV Pedal HH	*			
051	Wind Agogo		102	China Cym		153	REV 606HH Cl	*			

MIDI implementation

Model : JV-2080 (Synthesizer Module)
Date : Oct. 30 1996
Version : 1.00

Symbol	Description	Range
n	MIDI Channel	0H - FH (ch.1 - ch.16)
vv	Control value	00H - 7FH (0 - 127)
kk	Note Number	00H - 7FH (0 - 127)
xx	ON/OFF	00H - 3FH (0 - 63:OFF), 40H - 7FH (64 - 127:ON)

1. Data reception

■ Channel voice messages

● Note Off

status	2nd byte	3rd byte
8nH	kkH	vvH
9nH	kkH	00H

* Not received in Performance mode when the Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.
* Not received by the Rhythm Part (Part 10) when the Envelope Mode parameter (Control Param page [RHYTHM] → [F5](Key Ctl)) is NO-SUS.

● Note On

status	2nd byte	3rd byte
9nH	kkH	vvH

* Not received in Performance mode when the Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.

● Polyphonic Aftertouch

status	2nd byte	3rd byte
AnH	kkH	vvH

* Not received when the Aftertouch parameter (Control Source page [SYSTEM] → [F4](Control)) is POLY or CH&POLY.
* Not received in Performance mode when the Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.
* Not received in GM mode.

● Control Change

* If the corresponding Controller number is selected for the <Ctrl 2> or <Ctrl 3> control source parameter (Common Control page [PATCH] → [F1](Common) → [F2](Control)), the corresponding effect will occur.
* If a Controller number that corresponds to the System Control 1 parameter or System Control 2 parameter (Control Assign page [SYSTEM] → [F4](Control)) is selected, the specified effect will apply if <Ctrl 2> or <Ctrl 3> control source parameter is set to SYS-CTRL1 or SYS-CTRL2.
* Not received in Performance mode when the Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) or the Control Change Receive Switch is OFF.

○ Bank Select (Controller number 0,32)

status	2nd byte	3rd byte
BnH	00H	mmH
BnH	20H	llH

mm,ll=Bank number : 00 00H - 7F 7FH (bank.1 - bank.16384)

* Not received when the Rx Program Change or Rx Bank Select parameter (MIDI Param 2 page [SYSTEM] → [F3](MIDI)) is OFF.
* Not received in GM mode.

* The Patches corresponding to each Bank Select are as follows.

Bank Select MSB	LSB	Program No	Group	Patch No.
80	0	0 - 127	User	1 - 128
81	0	0 - 127	PR-A	1 - 128
81	1	0 - 127	PR-B	1 - 128
81	2	0 - 127	PR-C	1 - 128
81	3	0 - 127	GM	1 - 128
81	4	0 - 127	PR-E	1 - 128
82	0	0 - 127	CARD	1 - 128
84	0	0 - 127	XP-A	1 - 128
84	1	0 - 126	XP-A	129 - 255
84	2	0 - 127	XP-B	1 - 128
84	3	0 - 126	XP-B	129 - 255
84	4	0 - 127	XP-C	1 - 128
84	5	0 - 126	XP-C	129 - 255
84	6	0 - 127	XP-D	1 - 128
84	7	0 - 126	XP-D	129 - 255
84	8	0 - 127	XP-E	1 - 128
84	9	0 - 126	XP-E	129 - 255
84	10	0 - 127	XP-F	1 - 128
84	11	0 - 126	XP-F	129 - 255
84	12	0 - 127	XP-G	1 - 128
84	13	0 - 126	XP-G	129 - 255
84	14	0 - 127	XP-H	1 - 128
84	15	0 - 126	XP-H	129 - 255

* The Performance corresponding to each Bank Select are as follows.

Bank Select MSB	LSB	Program No	Group	Performance No.
80	0	0 - 31	User	1 - 32
81	0	0 - 31	PR-A	1 - 32
81	1	0 - 31	PR-B	1 - 32
82	0	0 - 31	CARD	1 - 32

* The Rhythm set corresponding to each Bank Select are as follows.

Bank Select MSB	LSB	Program No	Group	Rhythm set No.
80	0	0 - 1	User	1 - 2
81	0	0 - 1	PR-A	1 - 2
81	1	0 - 1	PR-B	1 - 2
81	2	0 - 1	PR-C	1 - 2
81	3	0 - 1	GM	1 - 2
81	4	0 - 1	PR-E	1 - 2
82	0	0 - 127	CARD	1 - 128
84	0	0 - 127	XP-A	1 - 128
84	1	0 - 126	XP-A	129 - 255
84	2	0 - 127	XP-B	1 - 128
84	3	0 - 126	XP-B	129 - 255
84	4	0 - 127	XP-C	1 - 128
84	5	0 - 126	XP-C	129 - 255
84	6	0 - 127	XP-D	1 - 128
84	7	0 - 126	XP-D	129 - 255
84	8	0 - 127	XP-E	1 - 128
84	9	0 - 126	XP-E	129 - 255
84	10	0 - 127	XP-F	1 - 128
84	11	0 - 126	XP-F	129 - 255
84	12	0 - 127	XP-G	1 - 128
84	13	0 - 126	XP-G	129 - 255
84	14	0 - 127	XP-H	1 - 128
84	15	0 - 126	XP-H	129 - 255

○ Modulation (Controller number 1)

status	2nd byte	3rd byte
BnH	01H	vvH

○ Breath type (Controller number 2)

status	2nd byte	3rd byte
BnH	02H	vvH

○ Foot type (Controller number 4)

status	2nd byte	3rd byte
BnH	04H	vvH

○ Portamento Time (Controller number 5)

status	2nd byte	3rd byte
BnH	05H	vvH

* The Time parameter (Common Control page [PATCH] → [F1](Common) → [F2](Control)) will change.

○ Data Entry (Controller number 6,38)

status	2nd byte	3rd byte
BnH	06H	mmH
BnH	26H	llH

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

○ Balance (Controller number 8)

status	2nd byte	3rd byte
BnH	08H	vvH

○ Panpot (Controller number 10)

status	2nd byte	3rd byte
BnH	0AH	vvH

* Adjust the stereo location over 128 steps, where 0 is far left, 64 is center, and 127 is far right. However this is not received when the Pan parameter (Control Switch page [PATCH] → [F5](LFO&Ctl) → [F4](Ctrl Sw)) is OFF.

○ Expression (Controller number 11)

status	2nd byte	3rd byte
BnH	0BH	vvH

* If the Volume parameter (Control Source page [SYSTEM] → [F4](Control)) is set to VOL&EXP, the volume of the Part corresponding to the MIDI channel of the received message will be adjusted. However this is not received if the Volume parameter (Control Switch page [PATCH] → [F5](LFO&Ctl) → [F4](Ctrl Sw)) is OFF.
* In GM mode, the volume can always be controlled.

○ Hold 1 (Controller number 64)

status	2nd byte	3rd byte
BnH	40H	xxH

* Not received when the Hold-1 parameter (Control Switch page [PATCH] → [F5](LFO&Ctl) → [F4](Ctrl Sw)) is OFF.

○ Portamento (Controller number 65)

status	2nd byte	3rd byte
BnH	41H	xxH

* The Switch parameter (Common Control page [PATCH] → [F1](Common) → [F2](Control)) will change.

○ Sostenuto (Controller number 66)

status	2nd byte	3rd byte
BnH	42H	xxH

○ Soft (Controller number 67)

status	2nd byte	3rd byte
BnH	43H	xxH

○ Hold 2 (Controller number 69)

status	2nd byte	3rd byte
BnH	45H	vvH

○ Sound Controller 2 (Controller number 71)

status	2nd byte	3rd byte
BnH	47H	vvH
vv=control value	: 00H - 40H - 7FH (-128 - 0 - +126)	

* The Resonance parameter (TVF Param page [PATCH] → [F3](TVF) → [F1](TVF Prm)) will change relatively.

○ Sound Controller 3 (Controller number 72)

status	2nd byte	3rd byte
BnH	48H	vvH
vv=control value	: 00H - 40H - 7FH (-128 - 0 - +126)	

* The Time 2-4 parameter (TVF Envelope page [PATCH] → [F3](TVF) → [F2](TVF Env)), The Time 2-4 parameter (TVA Envelope page [PATCH] → [F4](TVA) → [F2](TVA Env)) will change relatively.

○ Sound Controller 4 (Controller number 73)

status	2nd byte	3rd byte
BnH	49H	vvH
vv=control value	: 00H - 40H - 7FH (-128 - 0 - +126)	

* The Time 1 parameter (TVF Envelope page [PATCH] → [F3](TVF) → [F2](TVF Env)), The Time 1 parameter (TVA Envelope page [PATCH] → [F4](TVA) → [F2](TVA Env)) will change relatively.

○ Sound Controller 5 (Controller number 74)

status	2nd byte	3rd byte
BnH	4AH	vvH
vv=control value	: 00H - 40H - 7FH (-64 - 0 - +63)	

* The Cutoff Frequency parameter (TVF Param page [PATCH] → [F3](TVF) → [F1](TVF Prm)) will change relatively.

○ General Purpose Controller 5 (Controller number 80)

status	2nd byte	3rd byte
BnH	50H	vvH
vv=control value	: 00H - 40H - 7FH (-128 - 0 - +126)	

* The Level 1-3 parameter (TVA Param page [PATCH] → [F4](TVA) → [F1](TVA Prm)) of Tone 1 will change relatively.

○ General Purpose Controller 6 (Controller number 81)

status	2nd byte	3rd byte
BnH	51H	vvH
vv=control value	: 00H - 40H - 7FH (-128 - 0 - +126)	

* The Level 1-3 parameter (TVA Param page [PATCH] → [F4](TVA) → [F1](TVA Prm)) of Tone 2 will change relatively.

○ General Purpose Controller 7 (Controller number 82)

status	2nd byte	3rd byte
BnH	52H	vvH
vv=control value	: 00H - 40H - 7FH (-128 - 0 - +126)	

* The Level 1-3 parameter (TVA Param page [PATCH] → [F4](TVA) → [F1](TVA Prm)) of Tone 3 will change relatively.

○ General Purpose Controller 8 (Controller number 83)

status	2nd byte	3rd byte
BnH	53H	vvH
vv=control value	: 00H - 40H - 7FH (-128 - 0 - +126)	

* The Level 1-3 parameter (TVA Param page [PATCH] → [F4](TVA) → [F1](TVA Prm)) of Tone 4 will change relatively.

○ Portamento Control (Controller number 84)

status	2nd byte	3rd byte
BnH	54H	kkH

* A Note On message received immediately after a Portamento control will be sounded with the pitch changing smoothly from the source note number. If a voice is already sounding at the same note number as the source note number, that voice will change pitch to the pitch of the newly received Note On, and continue sounding (i.e., will be played legato).
* The speed of the pitch change caused by Portamento is determined by the Time parameter (Common Control page [PATCH] → [F1](Common) → [F2](Control)) value.

○ Effect 1 (Reverb Send Level) (Controller number 91)

status	2nd byte	3rd byte
BnH	5BH	vvH

* Not received in Patch mode.

○ Effect 3 (Chorus Send Level) (Controller number 93)

status	2nd byte	3rd byte
BnH	5DH	vvH

* Not received in Patch mode.

○ RPN MSB/LSB (Controller number 100,101)

status	2nd byte	3rd byte
BnH	65H	mmH
BnH	64H	llH

mm=MSB of the parameter number specified by RPN
ll=LSB of the parameter number specified by RPN

<<< RPN >>>

Control Changes include RPN (Registered Parameter Numbers), which are extended parameters whose function is defined in the MIDI specification. When using RPNs, first the RPN (Controller numbers 100 and 101; they can be sent in any order) is transmitted to specify the parameter you wish to control. Then, Data Entry messages (Controller numbers 6 and 38) are used to set the value of the specified parameter. Once a RPN parameter has been specified, all further Data Entry messages on that channel are considered to apply to that specified 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.

This device receives the following RPNs.

RPN MSB LSB	Data entry MSB LSB	Notes
00H 00H	mmH —	Pitch Bend Sensitivity mm : 00H - 0CH (0 - 12 semitones) ll : ignored (processed as 00H) Up to 1 octave can be specified in semitone steps. * The Bend Range up parameter, Bend Range Down parameter (Common Control page [PATCH] → [F1](Common) → [F2](Control)) will also be changed. * Not received by the Rhythm Part (Part 10).
00H 01H	mmH llH	Master Fine Tuning mm, ll : 20 00H - 40 00H - 60 00H (-8192 *50 / 8192 - 0 - +8192 * 50 / 8192 cent) * In Patch mode, the Master Tune parameter (Tune page [SYSTEM] → [F2](Tune)) will change. * In Performance mode, the Fine Tune parameter of each Part (Part Param page [PERFORM] → [F3](Part)) will change. When received on the Control channel, the Master Tune parameter (Tune page [SYSTEM] → [F2](Tune)) will change.
00H 02H	mmH —	Master Coarse Tuning mm : 10H - 40H - 70H (-48 - 0 - +48 semitones) ll : ignored (processed as 00H) * Not received in Patch mode. * In Performance mode, the Coarse parameter of each Part (Part Param page [PERFORM] → [F3](Part)) will change.
7FH 7FH	— —	RPN null RPN and NRPN will be set as "unspecified". Once this setting has been made, subsequent Data Entry messages will be ignored. (It is not necessary to transmit Data Entry for RPN Null settings. Parameter values that were previously set will not change. mm, ll : ignored

● Program Change

status	2nd byte	
CnH	ppH	
pp=Program number		: 00H - 7FH (prog.1 - prog.128)

* Not received when the Rx Program Change parameter (MIDI Param 2 page [SYSTEM] → [F3](MIDI)) is OFF.
* When received on the Control channel, the Performance will change.
* Not received in Performance mode when the Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.

● Channel Aftertouch

status	2nd byte
DnH	vvH

* Not received in Performance mode when the Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.

● Pitch Bend Change

status	2nd byte	3rd byte	
EnH	llH	mmH	
mm,ll=Pitch Bend value			: 00 00H - 40 00H - 7F 7FH (-8192 - 0 - +8191)

* Not received in Performance mode when the Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.

■ Channel Mode messages

● All Sound Off (Controller number 120)

status	2nd byte	3rd byte
BnH	78H	00H

* When this message is received, all notes currently sounding on the corresponding channel will be turned off.
* Not received in Performance mode when the Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.

● Reset All Controllers (Controller number 121)

status	2nd byte	3rd byte
BnH	79H	00H

* Not received in Performance mode when the Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.
* When this message is received, the following controllers will be set to their reset values.

Controller	Reset value
Pitch Bend Change	±0 (center)
Polyphonic Key Pressure	0 (off)
Channel Pressure	0 (off)
Modulation	0 (off)
Breath type	0 (minimum)
Expression	127 (maximum) However the controller will be at minimum.
Hold 1	0 (off)
Sostenuto	0 (off)
Soft	0 (off)
Hold 2	0 (off)
RPN	Unset. Previously set data will not change.
NRPN	Unset. Previously set data will not change.
System General purpose controller 1	0 (minimum)
System General purpose controller 2	0 (minimum)

● All Note Off (Controller number 123)

status	2nd byte	3rd byte
BnH	7BH	00H

* When All Note Off is received, all currently sounding notes of the corresponding channel will be turned off. However if Hold 1 or Sostenuto are on, the sound will be held until these are turned off.
* Not received in Performance mode if Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.

● Omni Off (Controller number 124)

status	2nd byte	3rd byte
BnH	7CH	00H

* The same processing as when All Note Off is received will be done.
* Not received in Performance mode if Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.

● Omni On (Controller number 125)

status	2nd byte	3rd byte
BnH	7DH	00H

* The same processing as when All Note Off is received will be done. The instrument will not be set to OMNI ON.
* Not received in Performance mode if Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.

● Mono (Controller number 126)

status	2nd byte	3rd byte	
BnH	7EH	mmH	
mm=Mono number			: 00H - 10H (0 - 16)

* The same processing as when All Note Off is received will be done, and the Key Assign parameter (Common Control page [PATCH] → [F1](Common) → [F2](Control)) will be set to SOLO.
* Not received in Performance mode if Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.

● Poly (Controller number 127)

status	2nd byte	3rd byte
BnH	7FH	00H

* The same processing as when All Note Off is received will be done, and the Key Assign parameter (Common Control page [PATCH] → [F1](Common) → [F2](Control)) will be set to POLY.
* Not received in Performance mode if Rx Switch parameter (Part MIDI page [PERFORM] → [F4](MIDI)) is OFF.

■ System Realtime messages

● Timing Clock

status
F8H

* This message will be received if the Clock Source parameter (Setup page [SYSTEM] → [F1](Setup)) is MIDI.

● Active Sensing

status
FEH

* When an Active Sensing message is received, the unit will begin monitoring the interval at which MIDI messages are received. During monitoring, if more than 420 ms passes without a message being received, the same processing will be done as when All Sound Off, All Note Off, and Reset All Controllers messages are received. Then monitoring will be halted.

■ System Exclusive messages

status	data byte	status
F0H	iiH, ddH, ..., eeH	F7H

F0H : System Exclusive message status
ii = ID number : This is the ID number (manufacturer ID) that specifies the manufacturer whose exclusive message this is. Roland's manufacturer ID is 41H.ID numbers 7EH and 7FH are defined in an expansion of the MIDI standard as Universal Non-realtime messages (7EH) and Universal Realtime Messages (7FH).
dd,..., ee = data : 00H - 7FH (0 - 127)
F7H : EOX (End Of Exclusive) This is the last status of system exclusive message.

● GM System On

"GM System On" is a command message that resets the internal settings of the instrument to the GM initial state (General MIDI System - Level 1). A GM instrument that receives this message will automatically enter a state in which it can correctly perform a GM score.

status	data byte	status
F0H	7EH, 7FH, 09H, 01H	F7H

* Not received when the Rx.GM-ON Message parameter (MIDI Param 1 page [SYSTEM] → [F3](MIDI)) is OFF.

● GM System Off

When this messages is received, this instrument will return to the performance mode.

status	data byte	status
F0H	7EH, 7FH, 09H, 02H	F7H

* Not received when the Rx.GM-ON Message parameter (MIDI Param 1 page [SYSTEM] → [F3](MIDI)) is OFF.

● Data Request 1 RQ1

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.
The model ID of the exclusive messages used by this instrument is 6AH.

status	data byte	status
F0H	41H, dev, 6AH, 11H, aaH, bbH, ccH, ddH, ssH, ttH, uuH, vvH, sum	F7H

Byte	Remarks	
F0H	Exclusive status	
41H	ID number	(Roland)
dev	device ID	(dev: 10H - 1FH)
6AH	model ID	(JV-2080)
11H	command ID	(RQ1)
aaH	address MSB	
bbH	address	
ccH	address	
ddH	address LSB	
ssH	size MSB	
ttH	size	
uuH	size	
vvH	size LSB	
sum	checksum	
F7H	EOX	(End Of Exclusive)

* For the address, size, and checksum, refer to "Examples of system exclusive messages and calculating the checksum." (p.193)
* This message is not received if the Rx.Sys.Excl parameter (MIDI Param 1 page [SYSTEM] → [F3](MIDI)) is OFF.
* This message is not received in GM mode.

● Data Set 1 DT1

This message transmits the actual data, and is used when you wish to set the data of the receiving device.

status	data byte	status
F0H	41H, dev, 6AH, 12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum	F7H

Byte	Remarks	
F0H	Exclusive status	
41H	ID number	(Roland)
dev	device ID	(dev: 10H - 1FH)
6AH	model ID	(JV-2080)
12H	command ID	(DT1)
aaH	address MSB	
bbH	address	
ccH	address	
ddH	address LSB	
eeH	data	: The actual data to be transmitted. Multi-byte data is transmitted in the order of the address.
:	:	
ffH	data	
sum	checksum	
F7H	EOX	(End Of Exclusive)

* For the address, size, and checksum, refer to "Examples of system exclusive messages and calculating the checksum." (p.193)
* Data whose size is greater than 128 bytes should be divided into packets of 128 bytes or less and transmitted. Successive "Data Set 1" messages should have at least 20 ms of time interval between them.
* This message is not received if Rx.Sys.Excl parameter (MIDI Param 1 page [SYSTEM] → [F3](MIDI)) is OFF.
* This message is not received in GM mode.
* This device is able to receive GS Exclusive messages only for Scale Tune settings.

2. Data transmission

■ System Exclusive messages

● Data Set1 DT1

status	data byte	status
F0H	41H, dev, 6AH, 12H, aaH, bbH, ccH, ddH, eeH, ... ffH, sum	F7H

Byte	Remarks	
F0H	Exclusive status	
41H	ID number	(Roland)
dev	device ID	(dev: 10H - 1FH)
6AH	model ID	(JV-2080)
12H	command ID	(DT1)
aaH	address MSB	
bbH	address	
ccH	address	
ddH	address LSB	
eeH	data	: The actual data to be transmitted. Multi-byte data is transmitted in the address order.
:	:	
ffH	data	
sum	checksum	
F7H	EOX	(End Of Exclusive)

* For the address, size, and checksum, refer to "Examples of system exclusive messages and calculating the checksum." (p.193)
* Large amounts of data must be divided into packets of 128 bytes or less, and transmitted at intervals of approximately 20 ms.

3. Parameter address map

1. JV-2080 (Model ID=6AH)

Note: For addresses marked by a #, the data must be divided into 2 parts for transmission. For example, data with the hexadecimal value ABH would be divided into 0AH and 0BH, and transmitted in that order.

Note: Parameter values enclosed in < > are for the JV-1080 or XP-80, and will be ignored if received by the JV-2080.

Start Address	Description	
00 00 00 00	System	1-1
01 00 00 00	Temporary Performance	1-2
02 00 00 00	Performance Mode Temporary Patch(part 1)	1-3
02 01 00 00	Performance Mode Temporary Patch(part 2)	
:		
02 08 00 00	Performance Mode Temporary Patch(part 9)	
02 09 00 00	Temporary Rhythm Setup	1-4
02 0A 00 00	Performance Mode Temporary Patch(part 11)	1-3
:		
02 0F 00 00	Performance Mode Temporary Patch(part 16)	
03 00 00 00	Patch Mode Temporary Patch	1-3
10 00 00 00	User Performance USER:01	1-2
10 01 00 00	User Performance USER:02	
:		
10 1F 00 00	User Performance USER:32	
10 40 00 00	User Rhythm Setup USER:1	1-4
10 41 00 00	User Rhythm Setup USER:2	
11 00 00 00	User Patch USER:001	1-3
11 01 00 00	User Patch USER:002	
:		
11 7F 00 00	User Patch USER:128	

■ 1-1.System

Offset Address	Description	
00 00	System Common	1-1-1
10 00	Part 1 Scale Tune	1-1-2
11 00	Part 2 Scale Tune	
:		
1F 00	Part 16 Scale Tune	
20 00	Patch Mode Scale Tune	1-1-2

■ 1-1-1.System Common

	Offset Address	Size	Description	Data (Value)	
	00 00	0000 00aa	Sound Mode	0 - 2	*1
	00 01	0aaa aaaa	Performance Number	0 - 127	*2
	00 02	0000 00aa	Patch Group Type	0 - 2	*3
	00 03	0aaa aaaa	Patch Group ID	0 - 127	
#	00 04	0000 aaaa	Patch Number	0 - 254	
		0000 bbbb			(001 - 255)
	00 06	0aaa aaaa	Master Tune	0 - 126	*4
	00 07	0000 000a	Scale Tune Switch	0 - 1	(OFF,ON)
	00 08	0000 000a	EFX Switch	0 - 1	(OFF,ON)
	00 09	0000 000a	Chorus Switch	0 - 1	(OFF,ON)
	00 0A	0000 000a	Reverb Switch	0 - 1	(OFF,ON)
	00 0B	0000 000a	Patch Remain	0 - 1	(OFF,ON)
	00 0C	0000 000a	Clock Source	0 - 1	(INT,MIDI)
	00 0D	0000 0aaa	TAP Control Source	0 - 4	*5
	00 0E	0000 0aaa	Hold Control Source	0 - 4	*5
	00 0F	0000 0aaa	Peak Control Source	0 - 4	*5
	00 10	0000 000a	Volume Control Source	0 - 1	*6
	00 11	0000 00aa	Aftertouch Source	0 - 2	*7
	00 12	0aaa aaaa	System Control Source 1	1 - 97	*8
	00 13	0aaa aaaa	System Control Source 2	1 - 97	*8
	00 14	0000 000a	Receive Program Change	0 - 1	(OFF,ON)
	00 15	0000 000a	Receive Bank Select	0 - 1	(OFF,ON)
	00 16	0000 000a	Receive Control Change	0 - 1	(OFF,ON)
	00 17	0000 000a	Receive Modulation	0 - 1	(OFF,ON)
	00 18	0000 000a	Receive Volume	0 - 1	(OFF,ON)
	00 19	0000 000a	Receive Hold-1	0 - 1	(OFF,ON)
	00 1A	0000 000a	Receive Pitch Bend	0 - 1	(OFF,ON)
	00 1B	0000 000a	Receive Aftertouch	0 - 1	(OFF,ON)
	00 1C	000a aaaa	Control Channel	0 - 16	(1 - 16,OFF)
	00 1D	0000 aaaa	Patch Receive Channel	0 - 15	(1 - 16)
	00 1E	0000 000a	Rhythm Edit Source	0 - 1	*9
	00 1F	0000 00aa	Preview Sound Mode	0 - 2	*10
	00 20	0aaa aaaa	Preview Note Set 1	0 - 127	(C-1 - G9)
	00 21	0aaa aaaa	Preview Velocity Set 1	0 - 127	*11
	00 22	0aaa aaaa	Preview Note Set 2	0 - 127	(C-1 - G9)
	00 23	0aaa aaaa	Preview Velocity Set 2	0 - 127	*11
	00 24	0aaa aaaa	Preview Note Set 3	0 - 127	(C-1 - G9)
	00 25	0aaa aaaa	Preview Velocity Set 3	0 - 127	*11
	00 26	0aaa aaaa	Preview Note Set 4	0 - 127	(C-1 - G9)
	00 27	0aaa aaaa	Preview Velocity Set 4	0 - 127	*11
	00 28	0000 000a	Transmit Program Change	0 - 1	(<OFF,ON>)
	00 29	0000 000a	Transmit Bank Select	0 - 1	(<OFF,ON>)
	00 2A	000a aaaa	Patch Transmit Channel	0 - 17	*12
	00 2B	0000 000a	Transpose Switch	0 - 1	(<OFF,ON>)
	00 2C	0000 aaaa	Transpose Value	0 - 11	(<-5 - +6>)
	00 2D	0000 0aaa	Octave Shift	0 - 6	(<-3 - +3>)
	00 2E	0aaa aaaa	Keyboard Velocity	0 - 127	*13
	00 2F	0000 00aa	Keyboard Sens	0 - 2	*14
	00 30	0aaa aaaa	Aftertouch Sens	0 - 100	(<0 - 100>)
	00 31	0aaa aaaa	Pedal1 Assign	1 - 104	*15
	00 32	0000 00aa	Pedal1 Output Mode	0 - 3	*16
	00 33	0000 000a	Pedal1 Polarity	0 - 1	*17
	00 34	0aaa aaaa	Pedal2 Assign	1 - 104	*15
	00 35	0000 00aa	Pedal2 Output Mode	0 - 3	*16
	00 36	0000 000a	Pedal2 Polarity	0 - 1	*17
	00 37	0aaa aaaa	C1 Assign	1 - 97	*18
	00 38	0000 00aa	C1 Output Mode	0 - 3	*16
	00 39	0aaa aaaa	C2 Assign	1 - 97	*18
	00 3A	0000 00aa	C2 Output Mode	0 - 3	*16
	00 3B	0000 00aa	Hold Pedal Output Mode	0 - 3	*16
	00 3C	0000 000a	Hold Pedal Polarity	0 - 1	*17
	00 3D	0000 000a	Bank Select Group1 Switch	0 - 1	(<OFF,ON>)
	00 3E	0aaa aaaa	Bank Select Group1 MSB	0 - 127	(<0 - 127>)
	00 3F	0aaa aaaa	Bank Select Group1 LSB	0 - 127	(<0 - 127>)
	00 40	0000 000a	Bank Select Group2 Switch	0 - 1	(<OFF,ON>)
	00 41	0aaa aaaa	Bank Select Group2 MSB	0 - 127	(<0 - 127>)
	00 42	0aaa aaaa	Bank Select Group2 LSB	0 - 127	(<0 - 127>)
	00 43	0000 000a	Bank Select Group3 Switch	0 - 1	(<OFF,ON>)
	00 44	0aaa aaaa	Bank Select Group3 MSB	0 - 127	(<0 - 127>)
	00 45	0aaa aaaa	Bank Select Group3 LSB	0 - 127	(<0 - 127>)
	00 46	0000 000a	Bank Select Group4 Switch	0 - 1	(<OFF,ON>)
	00 47	0aaa aaaa	Bank Select Group4 MSB	0 - 127	(<0 - 127>)
	00 48	0aaa aaaa	Bank Select Group4 LSB	0 - 127	(<0 - 127>)
	00 49	0000 000a	Bank Select Group5 Switch	0 - 1	(<OFF,ON>)
	00 4A	0aaa aaaa	Bank Select Group5 MSB	0 - 127	(<0 - 127>)
	00 4B	0aaa aaaa	Bank Select Group5 LSB	0 - 127	(<0 - 127>)
	00 4C	0000 000a	Bank Select Group6 Switch	0 - 1	(<OFF,ON>)
	00 4D	0aaa aaaa	Bank Select Group6 MSB	0 - 127	(<0 - 127>)
	00 4E	0aaa aaaa	Bank Select Group6 LSB	0 - 127	(<0 - 127>)
	00 4F	0000 000a	Bank Select Group7 Switch	0 - 1	(<OFF,ON>)
	00 50	0aaa aaaa	Bank Select Group7 MSB	0 - 127	(<0 - 127>)
	00 51	0aaa aaaa	Bank Select Group7 LSB	0 - 127	(<0 - 127>)
	00 52	0aaa aaaa	Pedal3 Assign	1 - 104	*15
	00 53	0000 00aa	Pedal3 Output Mode	0 - 3	*16
	00 54	0000 000a	Pedal3 Polarity	0 - 1	*17
	00 55	0aaa aaaa	Pedal4 Assign	1 - 104	*15
	00 56	0000 00aa	Pedal4 Output Mode	0 - 3	*16
	00 57	0000 000a	Pedal4 Polarity	0 - 1	*17
	00 58	00aa aaaa	Arpeggio Style	0 - 32	(<1 - 33>)
	00 59	00aa aaaa	Arpeggio Motif	0 - 33	(<1 - 34>)
	00 5A	00aa aaaa	Arpeggio Beat Pattern	0 - 60	(<1 - 61>)
	00 5B	0aaa aaaa	Arpeggio Accent Rate	0 - 100	(<0 - 100>)
	00 5C	0aaa aaaa	Arpeggio Shuffle Rate	50 - 90	(<50 - 90>)
	00 5D	0aaa aaaa	Arpeggio Keyboard Velocity	0 - 127	*19
	00 5E	0000 0aaa	Arpeggio Octave Range	0 - 6	(<-3 - +3>)
	00 5F	0000 aaaa	Arpeggio Part Number	0 - 15	*20
#	00 60	0000 aaaa	System Tempo	20 - 250	
		0000 bbbb			
	Total size	00 00 00 62			

*1: PERFORMANCE, PATCH, GM
*2: USER:01 - USER:32, CARD:01 - CARD:32, PR-A:01 - PR-A:32, PR-B:01 - PR-B:32
*3: USER&PRESET, <PCM>, EXP
*4: 427.4 - 452.6
*5: OFF, HOLD-1, SOSTENUTO, SOFT, HOLD-2
*6: VOLUME, VOL&EXP
*7: CHANNEL, POLY, CH&POLY
*8: CC01 - CC05, CC07 - CC31, CC64 - CC95, PITCH BEND, AFTERTOUCH
*9: PNL, PNL&MIDI
*10: SINGLE, CHORD, PHRASE
*11: OFF, 1 - 127
*12: <1 - 16, RX-CH, OFF>
*13: <REAL, 1 - 127>
*14: <LIGHT, STANDARD, HEAVY>
*15: <CC01 - CC05, CC07 - CC31, CC64 - CC95, PITCH BEND, AFTERTOUCH, PROG-UP, PROG-DOWN, START/STOP, PUNCH-IN/OUT, TAP-TEMPO, OCTAVE-UP, OCTAVE-DOWN>
*16: <OFF, INT, MIDI, INT&MIDI>
*17: <STANDARD, REVERSE>
*18: <CC01 - CC05, CC07 - CC31, CC64 - CC95, PITCH BEND, AFTERTOUCH>
*19: <REAL,1 - 127>
*20: <PART1 - PART16>

■ 1-1-2.Scale Tune

Offset Address	Size	Description	Data (Value)
00 00	0aaa aaaa	Scale Tune for C	0 - 127 (-64 - +63)
00 01	0aaa aaaa	Scale Tune for C#	0 - 127 (-64 - +63)
00 02	0aaa aaaa	Scale Tune for D	0 - 127 (-64 - +63)
00 03	0aaa aaaa	Scale Tune for D#	0 - 127 (-64 - +63)
00 04	0aaa aaaa	Scale Tune for E	0 - 127 (-64 - +63)
00 05	0aaa aaaa	Scale Tune for F	0 - 127 (-64 - +63)
00 06	0aaa aaaa	Scale Tune for F#	0 - 127 (-64 - +63)
00 07	0aaa aaaa	Scale Tune for G	0 - 127 (-64 - +63)
00 08	0aaa aaaa	Scale Tune for G#	0 - 127 (-64 - +63)
00 09	0aaa aaaa	Scale Tune for A	0 - 127 (-64 - +63)
00 0A	0aaa aaaa	Scale Tune for A#	0 - 127 (-64 - +63)
00 0B	0aaa aaaa	Scale Tune for B	0 - 127 (-64 - +63)
Total size	00 00 00 0C		

■ 1-2.Performance

Offset Address	Description	
00 00	Performance Common	1-2-1
10 00	Performance Part 1	1-2-2
11 00	Performance Part 2	
:		
1F 00	Performance Part 16	

■ 1-2-1.Performance Common

Offset Address	Size	Description	Data (Value)
00 00	0aaa aaaa	Performance Name 1	32 - 125
00 01	0aaa aaaa	Performance Name 2	32 - 125
00 02	0aaa aaaa	Performance Name 3	32 - 125
00 03	0aaa aaaa	Performance Name 4	32 - 125
00 04	0aaa aaaa	Performance Name 5	32 - 125
00 05	0aaa aaaa	Performance Name 6	32 - 125
00 06	0aaa aaaa	Performance Name 7	32 - 125
00 07	0aaa aaaa	Performance Name 8	32 - 125
00 08	0aaa aaaa	Performance Name 9	32 - 125
00 09	0aaa aaaa	Performance Name 10	32 - 125
00 0A	0aaa aaaa	Performance Name 11	32 - 125
00 0B	0aaa aaaa	Performance Name 12	32 - 125
00 0C	0000 aaaa	EFX-A Source	0 - 15 *1
00 0D	00aa aaaa	EFX Type	0 - 39 (1 - 40)
00 0E	0aaa aaaa	EFX Parameter 1	0 - 127
00 0F	0aaa aaaa	EFX Parameter 2	0 - 127
00 10	0aaa aaaa	EFX Parameter 3	0 - 127
00 11	0aaa aaaa	EFX Parameter 4	0 - 127
00 12	0aaa aaaa	EFX Parameter 5	0 - 127
00 13	0aaa aaaa	EFX Parameter 6	0 - 127
00 14	0aaa aaaa	EFX Parameter 7	0 - 127
00 15	0aaa aaaa	EFX Parameter 8	0 - 127
00 16	0aaa aaaa	EFX Parameter 9	0 - 127
00 17	0aaa aaaa	EFX Parameter 10	0 - 127
00 18	0aaa aaaa	EFX Parameter 11	0 - 127
00 19	0aaa aaaa	EFX Parameter 12	0 - 127
00 1A	0000 00aa	EFX Output Assign	0 - 2 *2
00 1B	0aaa aaaa	EFX Mix Out Send Level	0 - 127
00 1C	0aaa aaaa	EFX Chorus Send Level	0 - 127
00 1D	0aaa aaaa	EFX Reverb Send Level	0 - 127
00 1E	0000 aaaa	EFX Control Source 1	0 - 10 *3
00 1F	0aaa aaaa	EFX Control Depth 1	0 - 126 (-63 - +63)
00 20	0000 aaaa	EFX Control Source 2	0 - 10 *3
00 21	0aaa aaaa	EFX Control Depth 2	0 - 126 (-63 - +63)
00 22	0aaa aaaa	Chorus Level	0 - 127
00 23	0aaa aaaa	Chorus Rate	0 - 127
00 24	0aaa aaaa	Chorus Depth	0 - 127
00 25	0aaa aaaa	Chorus Pre-Delay	0 - 127
00 26	0aaa aaaa	Chorus Feedback	0 - 127
00 27	0000 00aa	Chorus Output	0 - 2 *4
00 28	0000 0aaa	Reverb Type	0 - 7 *5
00 29	0aaa aaaa	Reverb Level	0 - 127
00 2A	0aaa aaaa	Reverb Time	0 - 127
00 2B	000a aaaa	Reverb HF Damp	0 - 17 *6
00 2C	0aaa aaaa	Delay Feedback	0 - 127
# 00 2D	0000 aaaa 0000 bbbb	Performance Tempo	20 - 250
00 2F	0000 000a	Keyboard Range Switch	0 - 1 (OFF,ON)
00 30	0aaa aaaa	Voice Reserve 1	0 - 64
00 31	0aaa aaaa	Voice Reserve 2	0 - 64
00 32	0aaa aaaa	Voice Reserve 3	0 - 64
00 33	0aaa aaaa	Voice Reserve 4	0 - 64
00 34	0aaa aaaa	Voice Reserve 5	0 - 64
00 35	0aaa aaaa	Voice Reserve 6	0 - 64
00 36	0aaa aaaa	Voice Reserve 7	0 - 64
00 37	0aaa aaaa	Voice Reserve 8	0 - 64
00 38	0aaa aaaa	Voice Reserve 9	0 - 64
00 39	0aaa aaaa	Voice Reserve 10	0 - 64
00 3A	0aaa aaaa	Voice Reserve 11	0 - 64
00 3B	0aaa aaaa	Voice Reserve 12	0 - 64
00 3C	0aaa aaaa	Voice Reserve 13	0 - 64
00 3D	0aaa aaaa	Voice Reserve 14	0 - 64
00 3E	0aaa aaaa	Voice Reserve 15	0 - 64
00 3F	0aaa aaaa	Voice Reserve 16	0 - 64
00 40	0000 000a	Keyboard Mode	0 - 1 *7
00 41	0000 000a	Clock Source	0 - 1 *8
00 42	0000 aaaa	EFX-B Source	0 - 15 *1
00 43	0000 aaaa	EFX-C Source	0 - 15 *1
Total size	00 00 00 44		

*1: PERFORM, 1 - 9, 11 - 16
*2: MIX, DIR1, DIR2
*3: OFF, SYS-CTRL1, SYS-CTRL2, MODULATION, BREATH, FOOT, VOLUME, PAN, EXPRESSION, PITCH BEND, AFTERTOUCH
*4: MIX, REVERB, MIX+REV
*5: ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DLY
*6: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS
*7: <LAYER,SINGLE>
*8: PERFORMANCE, SYSTEM

■ 1-2-2.Performance Part

Offset Address	Size	Description	Data (Value)
00 00	0000 000a	Receive Switch	0 - 1 (OFF,ON)
00 01	0000 aaaa	MIDI Channel	0 - 15 (1 - 16)
00 02	0000 00aa	Patch Group Type	0 - 2 *1
00 03	0aaa aaaa	Patch Group ID	0 - 127
# 00 04	0000 aaaa 0000 bbbb	Patch Number	0 - 254 (001 - 255)
00 06	0aaa aaaa	Part Level	0 - 127
00 07	0aaa aaaa	Part Pan	0 - 127 (L64 - 63R)
00 08	0aaa aaaa	Part Coarse Tune	0 - 96 (-48 - +48)
00 09	0aaa aaaa	Part Fine Tune	0 - 100 (-50 - +50)
00 0A	0000 0aaa	Output Assign	0 - 4 *2
00 0B	0aaa aaaa	Mix/EFX Send Level	0 - 127
00 0C	0aaa aaaa	Chorus Send Level	0 - 127
00 0D	0aaa aaaa	Reverb Send Level	0 - 127
00 0E	0000 000a	Receive Program Change Switch	0 - 1 (OFF,ON)
00 0F	0000 000a	Receive Volume Switch	0 - 1 (OFF,ON)
00 10	0000 000a	Receive Hold-1 Switch	0 - 1 (OFF,ON)
00 11	0aaa aaaa	Keyboard Range Lower	0 - 127 *3
00 12	0aaa aaaa	Keyboard Range Upper	0 - 127 *4
00 13	0000 0aaa	Octave Shift	0 - 6 (<-3 - +3>)
00 14	0000 000a	Local Switch	0 - 1 (<OFF,ON>)
00 15	0000 000a	Transmit Switch	0 - 1 (<OFF,ON>)
00 16	0000 0aaa	Transmit Bank Select Group	0 - 7 *5
# 00 17	0000 aaaa 0000 bbbb	Transmit Volume	0 - 128 (<0 - 127,OFF>)
00 19	0000 00aa	Output Select	0 - 2 (A,B,C)
Total size	00 00 00 1A		

*1: USER&PRESET, <PCM>, EXP
*2: MIX, EFX, DIR1, DIR2, PAT
*3: C-1 - Upper
*4: Lower - G9
*5: <PATCH, GROUP1 - GROUP7>

■ 1-3.Patch

Offset Address	Description	
00 00	Patch Common	1-3-1
10 00	Patch Tone 1	1-3-2
12 00	Patch Tone 2	
14 00	Patch Tone 3	
16 00	Patch Tone 4	

■ 1-3-1.Patch Common

Offset Address	Size	Description	Data (Value)
00 00	0aaa aaaa	Patch Name 1	32 - 125
00 01	0aaa aaaa	Patch Name 2	32 - 125
00 02	0aaa aaaa	Patch Name 3	32 - 125
00 03	0aaa aaaa	Patch Name 4	32 - 125
00 04	0aaa aaaa	Patch Name 5	32 - 125
00 05	0aaa aaaa	Patch Name 6	32 - 125
00 06	0aaa aaaa	Patch Name 7	32 - 125
00 07	0aaa aaaa	Patch Name 8	32 - 125
00 08	0aaa aaaa	Patch Name 9	32 - 125
00 09	0aaa aaaa	Patch Name 10	32 - 125
00 0A	0aaa aaaa	Patch Name 11	32 - 125
00 0B	0aaa aaaa	Patch Name 12	32 - 125
00 0C	00aa aaaa	EFX Type	0 - 39 (1 - 40)
00 0D	0aaa aaaa	EFX Parameter 1	0 - 127
00 0E	0aaa aaaa	EFX Parameter 2	0 - 127
00 0F	0aaa aaaa	EFX Parameter 3	0 - 127
00 10	0aaa aaaa	EFX Parameter 4	0 - 127
00 11	0aaa aaaa	EFX Parameter 5	0 - 127
00 12	0aaa aaaa	EFX Parameter 6	0 - 127
00 13	0aaa aaaa	EFX Parameter 7	0 - 127
00 14	0aaa aaaa	EFX Parameter 8	0 - 127
00 15	0aaa aaaa	EFX Parameter 9	0 - 127
00 16	0aaa aaaa	EFX Parameter 10	0 - 127
00 17	0aaa aaaa	EFX Parameter 11	0 - 127
00 18	0aaa aaaa	EFX Parameter 12	0 - 127
00 19	0000 00aa	EFX Output Assign	0 - 2 *1
00 1A	0aaa aaaa	EFX Mix Out Send Level	0 - 127
00 1B	0aaa aaaa	EFX Chorus Send Level	0 - 127
00 1C	0aaa aaaa	EFX Reverb Send Level	0 - 127
00 1D	0000 aaaa	EFX Control Source 1	0 - 10 *2
00 1E	0aaa aaaa	EFX Control Depth 1	0 - 126 (-63 - +63)
00 1F	0000 aaaa	EFX Control Source 2	0 - 10 *2
00 20	0aaa aaaa	EFX Control Depth 2	0 - 126 (-63 - +63)
00 21	0aaa aaaa	Chorus Level	0 - 127
00 22	0aaa aaaa	Chorus Rate	0 - 127
00 23	0aaa aaaa	Chorus Depth	0 - 127
00 24	0aaa aaaa	Chorus Pre-Delay	0 - 127
00 25	0aaa aaaa	Chorus Feedback	0 - 127
00 26	0000 00aa	Chorus Output	0 - 2 *3
00 27	0000 0aaa	Reverb Type	0 - 7 *4
00 28	0aaa aaaa	Reverb Level	0 - 127
00 29	0aaa aaaa	Reverb Time	0 - 127
00 2A	000a aaaa	Reverb HF Damp	0 - 17 *5
00 2B	0aaa aaaa	Delay Feedback	0 - 127
# 00 2C	0000 aaaa 0000 bbbb	Patch Tempo	20 - 250
00 2E	0aaa aaaa	Patch Level	0 - 127
00 2F	0aaa aaaa	Patch Pan	0 - 127 (L64 - 63R)
00 30	0aaa aaaa	Analog Feel	0 - 127
00 31	0000 aaaa	Bend Range Up	0 - 12
00 32	00aa aaaa	Bend Range Down	0 - 48 (0 - -48)
00 33	0000 000a	Key Assign Mode	0 - 1 (POLY,SOLO)
00 34	0000 000a	Solo Legato	0 - 1 (OFF,ON)

00 35	0000 000a	Portamento Switch	0 - 1	(OFF,ON)
00 36	0000 000a	Portamento Mode	0 - 1	*6
00 37	0000 000a	Portamento Type	0 - 1	(RATE,TIME)
00 38	0000 000a	Portamento Start	0 - 1	(PITCH,NOTE)
00 39	0aaa aaaa	Portamento Time	0 - 127	
00 3A	0000 aaaa	Patch Control Source 2	0 - 15	*7
00 3B	0000 aaaa	Patch Control Source 3	0 - 15	*7
00 3C	0000 00aa	EFX Control Hold/Peak	0 - 2	*8
00 3D	0000 00aa	Control 1 Hold/Peak	0 - 2	*8
00 3E	0000 00aa	Control 2 Hold/Peak	0 - 2	*8
00 3F	0000 00aa	Control 3 Hold/Peak	0 - 2	*8
00 40	0000 000a	Velocity Range Switch	0 - 1	(OFF,ON)
00 41	0000 0aaa	Octave Shift	0 - 6	(-3 - +3)
00 42	0000 00aa	Stretch Tune Depth	0 - 3	(OFF,1 - 3)
00 43	0000 000a	Voice Priority	0 - 1	*9
00 44	0000 aaaa	Structure Type 1&2	0 - 9	(1 - 10)
00 45	0000 00aa	Booster 1&2	0 - 3	*10
00 46	0000 aaaa	Structure Type 3&4	0 - 9	(1 - 10)
00 47	0000 00aa	Booster 3&4	0 - 3	*10
00 48	0000 000a	Clock Source	0 - 1	*11
00 49	0aaa aaaa	Patch Category	0 - 127	*12
Total size	00 00 00 4A			

*1: MIX, DIR1, DIR2
*2: OFF, SYS-CTRL1, SYS-CTRL2, MODULATION, BREATH, FOOT, VOLUME, PAN, EXPRESSION, PITCH BEND, AFTERTOUCH
*3: MIX, REVERB, MIX+REV
*4: ROOM1, ROOM2, STAGE1, STAGE2, HALL1, HALL2, DELAY, PAN-DLY
*5: 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, BYPASS
*6: NORMAL, LEGATO
*7: OFF, SYS-CTRL1, SYS-CTRL2, MODULATION, BREATH, FOOT, VOLUME, PAN, EXPRESSION, PITCH BEND, AFTERTOUCH, LFO1, LFO2, VELOCITY, KEYFOLLOW, PLAYMATE
*8: OFF, HOLD, PEAK
*9: LAST, LOUDEST
*10: 0, +6, +12, +18
*11: PATCH, SYSTEM
*12: NO ASSIGN, AC.PIANO, EL.PIANO, KEYBOARDS, BELL, MALLET, ORGAN, ACCORDION, HARMONICA, 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 (0—38)

■ 1-3-2.Patch Tone

	Offset Address	Size	Description	Data (Value)	
	00 00	0000 000a	Tone Switch	0 - 1	(OFF,ON)
	00 01	0000 00aa	Wave Group Type	0 - 2	*1
	00 02	0aaa aaaa	Wave Group ID	0 - 127	
#	00 03	0000 aaaa	Wave Number	0 - 254	
		0000 bbbb			(001 - 255)
	00 05	0000 00aa	Wave Gain	0 - 3	*2
	00 06	0000 000a	FXM Switch	0 - 1	(OFF,ON)
	00 07	0000 00aa	FXM Color	0 - 3	(1 - 4)
	00 08	0000 aaaa	FXM Depth	0 - 15	(1 - 16)
	00 09	0000 0aaa	Tone Delay Mode	0 - 7	*3
	00 0A	0aaa aaaa	Tone Delay Time	0 - 127	
	00 0B	0aaa aaaa	Velocity Cross Fade	0 - 127	
	00 0C	0aaa aaaa	Velocity Range Lower	1 - 127	*4
	00 0D	0aaa aaaa	Velocity Range Upper	1 - 127	*5
	00 0E	0aaa aaaa	Keyboard Range Lower	0 - 127	*6
	00 0F	0aaa aaaa	Keyboard Range Upper	0 - 127	*7
	00 10	0000 000a	Redamper Control Switch	0 - 1	(OFF,ON)
	00 11	0000 000a	Volume Control Switch	0 - 1	(OFF,ON)
	00 12	0000 000a	Hold-1 Control Switch	0 - 1	(OFF,ON)
	00 13	0000 000a	Pitch Bend Control Switch	0 - 1	(OFF,ON)
	00 14	0000 00aa	Pan Control Switch	0 - 2	*8
	00 15	000a aaaa	Controller 1 Destination 1	0 - 18	*9
	00 16	0aaa aaaa	Controller 1 Depth 1	0 - 126	(-63 - +63)
	00 17	000a aaaa	Controller 1 Destination 2	0 - 18	*9
	00 18	0aaa aaaa	Controller 1 Depth 2	0 - 126	(-63 - +63)
	00 19	000a aaaa	Controller 1 Destination 3	0 - 18	*9
	00 1A	0aaa aaaa	Controller 1 Depth 3	0 - 126	(-63 - +63)
	00 1B	000a aaaa	Controller 1 Destination 4	0 - 18	*9
	00 1C	0aaa aaaa	Controller 1 Depth 4	0 - 126	(-63 - +63)
	00 1D	000a aaaa	Controller 2 Destination 1	0 - 18	*9
	00 1E	0aaa aaaa	Controller 2 Depth 1	0 - 126	(-63 - +63)
	00 1F	000a aaaa	Controller 2 Destination 2	0 - 18	*9
	00 20	0aaa aaaa	Controller 2 Depth 2	0 - 126	(-63 - +63)
	00 21	000a aaaa	Controller 2 Destination 3	0 - 18	*9
	00 22	0aaa aaaa	Controller 2 Depth 3	0 - 126	(-63 - +63)
	00 23	000a aaaa	Controller 2 Destination 4	0 - 18	*9
	00 24	0aaa aaaa	Controller 2 Depth 4	0 - 126	(-63 - +63)
	00 25	000a aaaa	Controller 3 Destination 1	0 - 18	*9
	00 26	0aaa aaaa	Controller 3 Depth 1	0 - 126	(-63 - +63)
	00 27	000a aaaa	Controller 3 Destination 2	0 - 18	*9
	00 28	0aaa aaaa	Controller 3 Depth 2	0 - 126	(-63 - +63)
	00 29	000a aaaa	Controller 3 Destination 3	0 - 18	*9
	00 2A	0aaa aaaa	Controller 3 Depth 3	0 - 126	(-63 - +63)
	00 2B	000a aaaa	Controller 3 Destination 4	0 - 18	*9
	00 2C	0aaa aaaa	Controller 3 Depth 4	0 - 126	(-63 - +63)
	00 2D	0000 0aaa	LFO1 Waveform	0 - 7	*10
	00 2E	0000 000a	LFO1 Key Trigger	0 - 1	(OFF,ON)
	00 2F	0aaa aaaa	LFO1 Rate	0 - 127	
	00 30	0000 0aaa	LFO1 Offset	0 - 4	*11
	00 31	0aaa aaaa	LFO1 Delay Time	0 - 127	
	00 32	0000 00aa	LFO1 Fade Mode	0 - 3	*12
	00 33	0aaa aaaa	LFO1 Fade Time	0 - 127	
	00 34	0000 00aa	LFO1 External Sync	0 - 2	*13
	00 35	0000 0aaa	LFO2 Waveform	0 - 7	*10
	00 36	0000 000a	LFO2 Key Trigger	0 - 1	(OFF,ON)
	00 37	0aaa aaaa	LFO2 Rate	0 - 127	
	00 38	0000 0aaa	LFO2 Offset	0 - 4	*11
	00 39	0aaa aaaa	LFO2 Delay Time	0 - 127	
	00 3A	0000 00aa	LFO2 Fade Mode	0 - 3	*12
	00 3B	0aaa aaaa	LFO2 Fade Time	0 - 127	
	00 3C	0000 00aa	LFO2 External Sync	0 - 2	*13
	00 3D	0aaa aaaa	Coarse Tune	0 - 96	(-48 - +48)
	00 3E	0aaa aaaa	Fine Tune	0 - 100	(-50 - +50)
	00 3F	000a aaaa	Random Pitch Depth	0 - 30	*14
	00 40	0000 aaaa	Pitch Keyfollow	0 - 15	*15
	00 41	000a aaaa	Pitch Envelope Depth	0 - 24	(-12 - +12)
	00 42	0aaa aaaa	Pitch Envelope Velocity Sens	0 - 125	*16
	00 43	0000 aaaa	Pitch Envelope Velocity Time1	0 - 14	*17
	00 44	0000 aaaa	Pitch Envelope Velocity Time4	0 - 14	*17
	00 45	0000 aaaa	Pitch Envelope Time Keyfollow	0 - 14	*17
	00 46	0aaa aaaa	Pitch Envelope Time 1	0 - 127	
	00 47	0aaa aaaa	Pitch Envelope Time 2	0 - 127	
	00 48	0aaa aaaa	Pitch Envelope Time 3	0 - 127	
	00 49	0aaa aaaa	Pitch Envelope Time 4	0 - 127	
	00 4A	0aaa aaaa	Pitch Envelope Level 1	0 - 126	(-63 - +63)
	00 4B	0aaa aaaa	Pitch Envelope Level 2	0 - 126	(-63 - +63)
	00 4C	0aaa aaaa	Pitch Envelope Level 3	0 - 126	(-63 - +63)
	00 4D	0aaa aaaa	Pitch Envelope Level 4	0 - 126	(-63 - +63)
	00 4E	0aaa aaaa	Pitch LFO1 Depth	0 - 126	(-63 - +63)
	00 4F	0aaa aaaa	Pitch LFO2 Depth	0 - 126	(-63 - +63)
	00 50	0000 0aaa	Filter Type	0 - 4	*18
	00 51	0aaa aaaa	Cutoff Frequency	0 - 127	
	00 52	0000 aaaa	Cutoff Keyfollow	0 - 15	*15
	00 53	0aaa aaaa	Resonance	0 - 127	
	00 54	0aaa aaaa	Resonance Velocity Sens	0 - 125	*16
	00 55	0aaa aaaa	Filter Envelope Depth	0 - 126	(-63 - +63)
	00 56	0000 0aaa	Filter Envelope Velocity Curve	0 - 6	(1 - 7)
	00 57	0aaa aaaa	Filter Envelope Velocity Sens	0 - 125	*16
	00 58	0000 aaaa	Filter Envelope Velocity Time1	0 - 14	*17
	00 59	0000 aaaa	Filter Envelope Velocity Time4	0 - 14	*17
	00 5A	0000 aaaa	Filter Envelope Time Keyfollow	0 - 14	*17
	00 5B	0aaa aaaa	Filter Envelope Time 1	0 - 127	
	00 5C	0aaa aaaa	Filter Envelope Time 2	0 - 127	
	00 5D	0aaa aaaa	Filter Envelope Time 3	0 - 127	
	00 5E	0aaa aaaa	Filter Envelope Time 4	0 - 127	
	00 5F	0aaa aaaa	Filter Envelope Level 1	0 - 127	
	00 60	0aaa aaaa	Filter Envelope Level 2	0 - 127	
	00 61	0aaa aaaa	Filter Envelope Level 3	0 - 127	
	00 62	0aaa aaaa	Filter Envelope Level 4	0 - 127	
	00 63	0aaa aaaa	Filter LFO1 Depth	0 - 126	(-63 - +63)
	00 64	0aaa aaaa	Filter LFO2 Depth	0 - 126	(-63 - +63)
	00 65	0aaa aaaa	Tone Level	0 - 127	
	00 66	0000 00aa	Bias Direction	0 - 3	*19
	00 67	0aaa aaaa	Bias Position	0 - 127	(C-1 - G9)
	00 68	0000 aaaa	Bias Level	0 - 14	*17
	00 69	0000 0aaa	Level Envelope Velocity Curve	0 - 6	(1 - 7)
	00 6A	0aaa aaaa	Level Envelope Velocity Sens	0 - 125	*16
	00 6B	0000 aaaa	Level Envelope Velocity Time1	0 - 14	*17
	00 6C	0000 aaaa	Level Envelope Velocity Time4	0 - 14	*17
	00 6D	0000 aaaa	Level Envelope Time Keyfollow	0 - 14	*17
	00 6E	0aaa aaaa	Level Envelope Time 1	0 - 127	
	00 6F	0aaa aaaa	Level Envelope Time 2	0 - 127	
	00 70	0aaa aaaa	Level Envelope Time 3	0 - 127	
	00 71	0aaa aaaa	Level Envelope Time 4	0 - 127	
	00 72	0aaa aaaa	Level Envelope Level 1	0 - 127	
	00 73	0aaa aaaa	Level Envelope Level 2	0 - 127	
	00 74	0aaa aaaa	Level Envelope Level 3	0 - 127	
	00 75	0aaa aaaa	Level LFO1 Depth	0 - 126	(-63 - +63)
	00 76	0aaa aaaa	Level LFO2 Depth	0 - 126	(-63 - +63)
	00 77	0aaa aaaa	Tone Pan	0 - 127	(L64 - 63R)
	00 78	0000 aaaa	Pan Keyfollow	0 - 14	*17
	00 79	00aa aaaa	Random Pan Depth	0 - 63	
	00 7A	0aaa aaaa	Alternate Pan Depth	1 - 127	(L63 - 63R)
	00 7B	0aaa aaaa	Pan LFO1 Depth	0 - 126	(L63 - 63R)
	00 7C	0aaa aaaa	Pan LFO2 Depth	0 - 126	(L63 - 63R)
	00 7D	0000 00aa	Output Assign	0 - 3	*20
	00 7E	0aaa aaaa	Mix/EFX Send Level	0 - 127	
	00 7F	0aaa aaaa	Chorus Send Level	0 - 127	
	01 00	0aaa aaaa	Reverb Send Level	0 - 127	
Total size	00 00 01 01				

*1: INT, <PCM>, EXP
*2: -6, 0, +6, +12
*3: NORMAL, HOLD, PLAYMATE, CLOCK-SYNC, <TAP-SYNC>, KEY-OFF-N, KEY-OFF-D, TEMPO-SYNC
*4: 1 - Upper
*5: Lower - 127
*6: C-1 - Upper
*7: Lower - G9
*8: OFF, CONTINUOUS, KEY-ON
*9: OFF, PCH, CUT, RES, LEV, PAN, MIX, CHO, REV, PL1, PL2, FL1, FL2, AL1, AL2, pL1, pL2, L1R, L2R
*10: TRI, SIN, SAW, SQR, TRP, S&H, RND, CHS
*11: -100, -50, 0, +50, +100
*12: ON-IN, ON-OUT, OFF-IN, OFF-OUT
*13: OFF, CLOCK, <TAP>
*14: 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
*15: -100, -70, -50, -30, -10, 0, +10, +20, +30, +40, +50, +70, +100, +120, +150, +200
*16: -100 - +150
*17: -100, -70, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +70, +100
*18: OFF, LPF, BPF, HPF, PKG
*19: LOWER, UPPER, LOW&UP, ALL
*20: MIX, EFX, DIR1, DIR2

■ 1-4.Rhythm Setup

Offset Address	Description	
00 00	Rhythm Common	1-4-1
23 00	Rhythm Note for Key# 35	1-4-2
24 00	Rhythm Note for Key# 36	
:		
62 00	Rhythm Note for Key# 98	

■ 1-4-1.Rhythm Common

Offset Address	Size	Description	Data (Value)
00 00	0aaa aaaa	Rhythm Name 1	32 - 125
00 01	0aaa aaaa	Rhythm Name 2	32 - 125
00 02	0aaa aaaa	Rhythm Name 3	32 - 125
00 03	0aaa aaaa	Rhythm Name 4	32 - 125
00 04	0aaa aaaa	Rhythm Name 5	32 - 125
00 05	0aaa aaaa	Rhythm Name 6	32 - 125
00 06	0aaa aaaa	Rhythm Name 7	32 - 125
00 07	0aaa aaaa	Rhythm Name 8	32 - 125
00 08	0aaa aaaa	Rhythm Name 9	32 - 125
00 09	0aaa aaaa	Rhythm Name 10	32 - 125
00 0A	0aaa aaaa	Rhythm Name 11	32 - 125
00 0B	0aaa aaaa	Rhythm Name 12	32 - 125
Total size	00 00 00 0C		

■ 1-4-2.Rhythm Note

Offset Address	Size	Description	Data (Value)
00 00	0000 000a	Tone Switch	0 - 1 (OFF,ON)
00 01	0000 00aa	Wave Group Type	0 - 2 *1
00 02	0aaa aaaa	Wave Group ID	0 - 127
# 00 03	0000 aaaa	Wave Number	0 - 254
	0000 bbbb		(001 - 255)
00 05	0000 00aa	Wave Gain	0 - 3 *2
00 06	0000 aaaa	Bend Range	0 - 12
00 07	000a aaaa	Mute Group	0 - 31 (OFF,1 - 31)
00 08	0000 000a	Envelope Mode	0 - 1 *3
00 09	0000 000a	Volume Control Switch	0 - 1 (OFF,ON)
00 0A	0000 000a	Hold-1 Control Switch	0 - 1 (OFF,ON)
00 0B	0000 00aa	Pan Control Switch	0 - 2 *4
00 0C	0aaa aaaa	Source Key	0 - 127 (C-1 - G9)
00 0D	0aaa aaaa	Fine Tune	0 - 100 (-50 - +50)
00 0E	000a aaaa	Random Pitch Depth	0 - 30 *5
00 0F	000a aaaa	Pitch Envelope Depth	0 - 24 (-12 - +12)
00 10	0aaa aaaa	Pitch Envelope Velocity Sens	0 - 125 *6
00 11	0000 aaaa	Pitch Envelope Velocity Time	0 - 14 *7
00 12	0aaa aaaa	Pitch Envelope Time 1	0 - 127
00 13	0aaa aaaa	Pitch Envelope Time 2	0 - 127
00 14	0aaa aaaa	Pitch Envelope Time 3	0 - 127
00 15	0aaa aaaa	Pitch Envelope Time 4	0 - 127
00 16	0aaa aaaa	Pitch Envelope Level 1	0 - 126 (-63 - +63)
00 17	0aaa aaaa	Pitch Envelope Level 2	0 - 126 (-63 - +63)
00 18	0aaa aaaa	Pitch Envelope Level 3	0 - 126 (-63 - +63)
00 19	0aaa aaaa	Pitch Envelope Level 4	0 - 126 (-63 - +63)
00 1A	0000 0aaa	Filter Type	0 - 4 *8
00 1B	0aaa aaaa	Cutoff Frequency	0 - 127
00 1C	0aaa aaaa	Resonance	0 - 127
00 1D	0aaa aaaa	Resonance Velocity Sens	0 - 125 *6
00 1E	0aaa aaaa	Filter Envelope Depth	0 - 126 (-63 - +63)
00 1F	0aaa aaaa	Filter Envelope Velocity Sens	0 - 125 *6
00 20	0000 aaaa	Filter Envelope Velocity Time	0 - 14 *7
00 21	0aaa aaaa	Filter Envelope Time 1	0 - 127
00 22	0aaa aaaa	Filter Envelope Time 2	0 - 127
00 23	0aaa aaaa	Filter Envelope Time 3	0 - 127
00 24	0aaa aaaa	Filter Envelope Time 4	0 - 127
00 25	0aaa aaaa	Filter Envelope Level 1	0 - 127
00 26	0aaa aaaa	Filter Envelope Level 2	0 - 127
00 27	0aaa aaaa	Filter Envelope Level 3	0 - 127
00 28	0aaa aaaa	Filter Envelope Level 4	0 - 127
00 29	0aaa aaaa	Tone Level	0 - 127
00 2A	0aaa aaaa	Level Envelope Velocity Sens	0 - 125 *6
00 2B	0000 aaaa	Level Envelope Velocity Time	0 - 14 *7
00 2C	0aaa aaaa	Level Envelope Time 1	0 - 127
00 2D	0aaa aaaa	Level Envelope Time 2	0 - 127
00 2E	0aaa aaaa	Level Envelope Time 3	0 - 127
00 2F	0aaa aaaa	Level Envelope Time 4	0 - 127
00 30	0aaa aaaa	Level Envelope Level 1	0 - 127
00 31	0aaa aaaa	Level Envelope Level 2	0 - 127
00 32	0aaa aaaa	Level Envelope Level 3	0 - 127
00 33	0aaa aaaa	Tone Pan	0 - 127 (L64 - 63R)
00 34	00aa aaaa	Random Pan Depth	0 - 63
00 35	0aaa aaaa	Alternate Pan Depth	1 - 127 (L63 - 63R)
00 36	0000 00aa	Output Assign	0 - 3 *9
00 37	0aaa aaaa	Mix/EFX Send Level	0 - 127
00 38	0aaa aaaa	Chorus Send Level	0 - 127
00 39	0aaa aaaa	Reverb Send Level	0 - 127
Total size	00 00 00 3A		

*1: INT, <PCM>, EXP
*2: -6, 0, +6, +12
*3: NO-SUS, SUSTAIN
*4: OFF, CONTINUOUS, KEY-ON
*5: 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
*6: -100 - +150
*7: -100, -70, -50, -40, -30, -20, -10, 0, +10, +20, +30, +40, +50, +70, +100
*8: OFF, LPF, BPF, HPF, PKG
*9: MIX, EFX, DIR1, DIR2

■ 2.GS (Model ID = 42H)

Start address	Description	
40 10 00	Scale Tune Part10	2-1
40 11 00	: Part1	
40 12 00	: Part2	
40 13 00	: Part3	
40 14 00	: Part4	
40 15 00	: Part5	
40 16 00	: Part6	
40 17 00	: Part7	
40 18 00	: Part8	
40 19 00	: Part9	
40 1A 00	: Part11	
40 1B 00	: Part12	
40 1C 00	: Part13	
40 1D 00	: Part14	
40 1E 00	: Part15	
40 1F 00	: Part16	

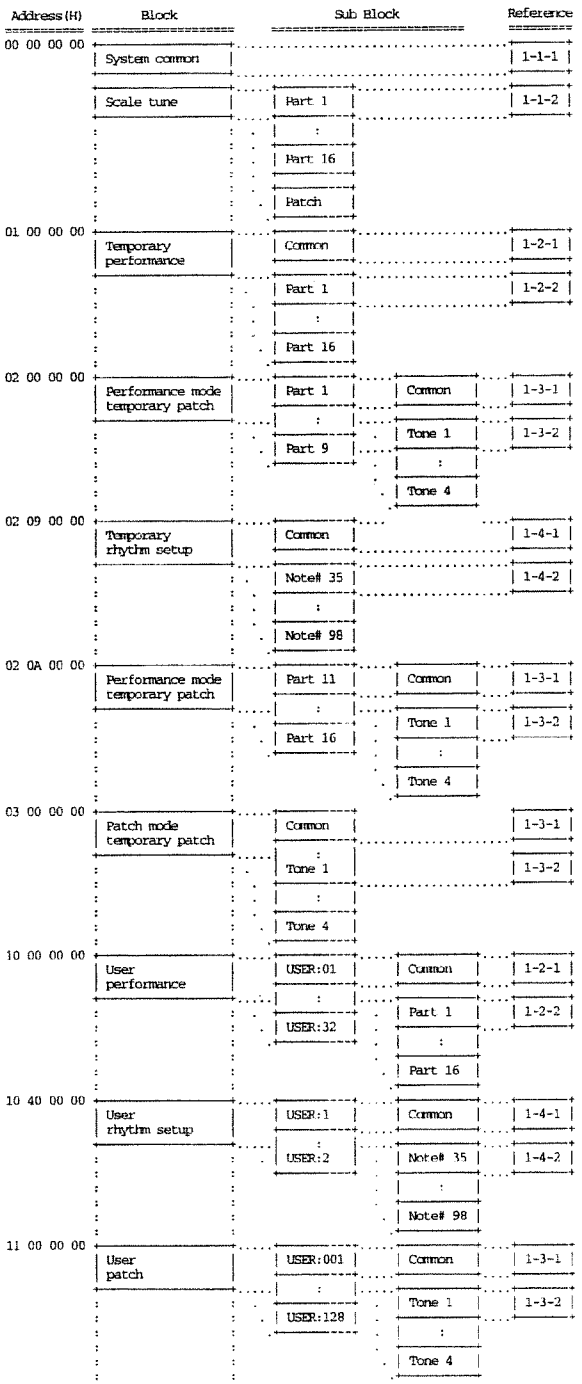
■ 2-1.Scale Tune

Offset Address	Size	Description	Data (Value)
40	0aaa aaaa	Scale Tune for C	0 - 127 (-64 - +63)
41	0aaa aaaa	Scale Tune for C#	0 - 127 (-64 - +63)
42	0aaa aaaa	Scale Tune for D	0 - 127 (-64 - +63)
43	0aaa aaaa	Scale Tune for Eb	0 - 127 (-64 - +63)
44	0aaa aaaa	Scale Tune for E	0 - 127 (-64 - +63)
45	0aaa aaaa	Scale Tune for F	0 - 127 (-64 - +63)
46	0aaa aaaa	Scale Tune for F#	0 - 127 (-64 - +63)
47	0aaa aaaa	Scale Tune for G	0 - 127 (-64 - +63)
48	0aaa aaaa	Scale Tune for G#	0 - 127 (-64 - +63)
49	0aaa aaaa	Scale Tune for A	0 - 127 (-64 - +63)
4A	0aaa aaaa	Scale Tune for Bb	0 - 127 (-64 - +63)
4B	0aaa aaaa	Scale Tune for B	0 - 127 (-64 - +63)
Total size	00 00 0C		

Note: In order for a GS Exclusive message to be correctly received by the JV-2080, the starting address of the message must be the Start address of each Part (the address of Scale Tune C, i.e., offset 40).

■ Address block map

The following is an outline of the address map for Exclusive messages.



4. Supplementary material

■ Decimal/Hexadecimal table

MIDI uses 7-bit hexadecimal values to indicate data values and the address and size of exclusive messages. The following table shows the correspondence between decimal and hexadecimal numbers.

* Hexadecimal values are indicated by a following 'H'.

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 expressions such as used for MIDI channel, Bank Select, and Program Change will be the value 1 greater than the decimal value given in the above table.
* Since each MIDI byte carries 7 significant data bits, each byte can express a maximum of 128 different values. Data for which higher resolution is required must be transmitted using two or more bytes. For example a value indicated as a two-byte value of aa bbH would have a value of aa x 128 + bb.
* For a signed number (+/-), 00H = -64, 40H = +/-0, and 7FH = +63. I.e., the decimal equivalent will be 64 less than the decimal value given in the above table. For a two-byte signed number, 00 00H = -8192, 40 00H = +/-0, and 7F 7FH = +8191. For example the decimal expression of aa bbH would be aa bbH - 40 00H = (aa x 128 + bb - 64 x 128.
* Hexadecimal notation in two 4-bit units is used for data indicated as "nibbled". The nibbled two-byte value of 0a 0b H would be a x 16 + b.

<Example 1> What is the decimal equivalent of 5AH?
From the above table, 5AH = 90.

<Example 2> What is the decimal equivalent of the 7-bit hexadecimal values 12 34H?
From the above table, 12H = 18 and 34H = 52
Thus, 18 x 128 + 52 = 2356

<Example 3> What is the decimal equivalent of the nibbled expression 0A 03 09 0DH?
From the above table, 0AH = 10, 03H = 3, 09H = 9, 0DH = 13
Thus, the result is ((10 x 16 + 3) x 16 + 9) x 16 + 13 = 41885

<Example 4> What is the nibbled equivalent of the decimal number 1258?

16) 1258
16) 78 ...10
16) 4 ...14
0 ... 4

From the above table, 0=00H, 4=04H, 14=0EH, 10=0AH
Thus the result is 00 04 0E 0AH

■ ASCII code table

D	H	Char	D	H	Char	D	H	Char
32	20H	SP	64	40H	@	96	60H	`
33	21H	!	65	41H	A	97	61H	a
34	22H	"	66	42H	B	98	62H	b
35	23H	#	67	43H	C	99	63H	c
36	24H	$	68	44H	D	100	64H	d
37	25H	%	69	45H	E	101	65H	e
38	26H	&	70	46H	F	102	66H	f
39	27H	'	71	47H	G	103	67H	g
40	28H	(	72	48H	H	104	68H	h
41	29H	)	73	49H	I	105	69H	i
42	2AH	*	74	4AH	J	106	6AH	j
43	2BH	+	75	4BH	K	107	6BH	k
44	2CH	,	76	4CH	L	108	6CH	l
45	2DH	-	77	4DH	M	109	6DH	m
46	2EH	.	78	4EH	N	110	6EH	n
47	2FH	/	79	4FH	O	111	6FH	o
48	30H	0	80	50H	P	112	70H	p
49	31H	1	81	51H	Q	113	71H	q
50	32H	2	82	52H	R	114	72H	r
51	33H	3	83	53H	S	115	73H	s
52	34H	4	84	54H	T	116	74H	t
53	35H	5	85	55H	U	117	75H	u
54	36H	6	86	56H	V	118	76H	v
55	37H	7	87	57H	W	119	77H	w
56	38H	8	88	58H	X	120	78H	x
57	39H	9	89	59H	Y	121	79H	y
58	3AH	:	90	5AH	Z	122	7AH	z
59	3BH	;	91	5BH	[	123	7BH	{
60	3CH	<	92	5CH	\	124	7CH	|
61	3DH	=	93	5DH	]	125	7DH	}
62	3EH	>	94	5EH	^			
63	3FH	?	95	5FH	_			

D:decimal
H:hexadecimal

Note: SP indicates "space".

■ 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 of MIDI CH = 3, note number 62 (note name 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 of MIDI CH = 15, Program number 74 (in the GS sound map, Flute).

<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 of the Pitch Bend value, and the 3rd byte (28H=40) is the MSB. However since the Pitch Bend is a signed number with 0 at 40 00H (= 64 x 128 + 0 = 8192), the Pitch Bend value in this case is
28 00H - 40 00H = 40 x 128 + 0 - (64 x 128 + 0) = 5120 - 8192 = -3072

If we assume that the Pitch Bend Sensitivity is set to two semitones, the pitch will change only -200 cents for a Pitch Bend value of -8192 (00 00H). Thus, this message is specifying a Pitch Bend of -200 x (-3072) ÷ (-8192) = -75 cents on MIDI CH = 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. In Control Change messages, the 2nd byte is the controller number, and the 3rd byte is the parameter value. MIDI allows what is known as "running status," when if messages of the the same status follow each other, it is permitted to omit the second and following status bytes. In the message above, running status is being used, meaning that the message has the following content.

B3 64 00	MIDI CH = 4, RPN parameter number LSB	: 00H
(B3) 65 00	MIDI CH = 4, RPN parameter number MSB	: 00H
(B3) 06 0C	MIDI CH = 4, parameter value MSB	: 0CH
(B3) 26 00	MIDI CH = 4, parameter value LSB	: 00H
(B3) 64 7F	MIDI CH = 4, RPN parameter number LSB	: 7FH
(B3) 65 7F	MIDI CH = 4, RPN parameter number MSB	: 7FH

Thus, this message transmits a parameter value of 0C 00H to RPN parameter number 00 00H on MIDI CH = 4, and then sets the RPN parameter number to 7F 7FH.

The function assigned to RPN parameter number 00 00H is Pitch Bend Sensitivity, and the MSB of the parameter value indicates semitone steps. Since the MSB of this parameter value is 0CH = 12, the maximum width of pitch bend is being set to ±12 semitones (1 octave) (GS sound sources ignore the LSB of Pitch Bend Sensitivity, but it is best to transmit the LSB (parameter value 0) as well, so that the message can be correctly received by any device.

Once the parameter number has been set for RPN or NRPN, all subsequent Data Entry messages on that channel will be effective. Thus, it is recommended that after you have made the change you want, you set the parameter number to 7F 7FH (an "unset" or "null" setting). The final (B3) 64 7F (B3) 65 7F is for this purpose.

It is not a good idea to store many events within the data of a song (e.g., a Standard MIDI File song) using running status as shown in <Example 4>. When the song is paused, fast-forwarded or rewound, the sequencer may not be able to transmit the proper status, causing the sound source to misinterpret the data. It is best to attach the proper status byte to all events.

It is also important to transmit RPN or NRPN parameter number settings and parameter values in the correct order. In some sequencers, data events recorded in the same clock (or a nearby clock) can sometimes be transmitted in an order other than the order in which they were recorded. It is best to record such events at an appropriate interval (1 tick at TPQN=96, or 5 ticks at TPQN=480).

* TPQN : Ticks Per Quarter Note (i.e., the time resolution of the sequencer)

■ Examples of system exclusive messages and calculating the checksum

Roland exclusive messages (RQ1, DT1) are transmitted with a checksum at the end of the data (before F7) to check that the data was received correctly. The value of the checksum is determined by the address and data (or size) of the exclusive message.

● How to calculate the checksum

The checksum consists of a value whose lower 7 bits are 0 when the address, size and checksum itself are added.
The following formula shows how to calculate the checksum when the exclusive message to be transmitted has an address of aa bb cc ddH, and data or size of ee ffH.

aa + bb + cc + dd + ee + ff = total
total ÷ 128 = quotient ... remainder
128 - remainder = checksum

<Example 1> Setting the Performance Common REVERB TYPE to DELAY (DT1).
The "Parameter address map" indicates that the starting address of the Temporary Performance is 01 00 00 00H, that the Performance Common offset address is 00 00H, and that the REVERB TYPE address is 00 28H. Thus, the address is:

```
  01 00 00 00H
     00 00H
+)   00 28H
  01 00 00 28H
```

Since DELAY is parameter value 06H,

F0	41	10	6A	12	01 00 00 28	06	??	F7
(1)	(2)	(3)	(4)	(5)	address	data	checksum	(6)

(1) Exclusive status (2) ID number (Roland) (3) device ID(17)
(4) model ID (JV-2080) (5) command ID (DT1) (6) EOX

Next we calculate the checksum.

01H + 00H + 00H + 28H + 06H = 1 + 0 + 0 + 40 + 6 = 47 (sum)
47 (total) ÷ 128 = 0 (quotient) ... 47 (remainder)
checksum = 128 - 47 (quotient) = 81 = 51H

This means that the message transmitted will be F0 41 10 6A 12 01 00 00 28 06 51 F7.

<Example 2> Retrieving data for USER:03 Performance Part 3 (RQ1)
The "Parameter address map" indicates that the starting address of USER:03 is 10 02 00 00H, and that the offset address of Performance Part 3 is 12 00H. Thus, the address is:

```
  10 02 00 00H
+)   12 00H
  10 02 12 00H
```

Since the size of the Performance Part is 00 00 00 19H,

F0	41	10	6A	11	10 02 12 00	00 00 00 19	??	F7
(1)	(2)	(3)	(4)	(5)	address	size	checksum	(6)

(1) Exclusive status (2) ID number (Roland) (3) Device ID (17)
(4) Model ID (JV-2080) (5) Command ID (RQ1) (6) EOX

Next we calculate the checksum.

10H + 02H + 12H + 00H + 00H + 00H + 00H + 19H =
16 + 2 + 18 + 0 + 0 + 0 + 0 + 25 = 61 (sum)
61 (total) ÷ 128 = 0 (product) ... 61 (remainder)

checksum = 128 - 61 (remainder) = 67 = 43H

Thus, a message of F0 41 10 6A 11 10 02 12 00 00 00 00 19 43 F7 would be transmitted.

<Example 3> Retrieving data for Temporary Performance (RQ1)

Note: When a data transfer is executed in Utility mode, data that is accessed will be the same as that which is transmitted when the Type parameter is set to PERFORM and the Source parameter is set to TEMP: -PATCH

The "Parameter address map" gives the following start addresses for Temporary Performance data.

01 00 00 00H	Temporary Performance Common
01 00 10 00H	Temporary Performance Part 1
:	
01 00 1F 00H	Temporary Performance Part 16

Since Performance Part has a size of 00 00 00 19H, we add that size to the start address of the Temporary Performance Part 16, resulting in:

```
  01 00 1F 00H
+) 00 00 00 19H
  01 00 1F 19H
```

Thus, the Size for the retrieved data will be:

```
  01 00 1F 19H
-) 01 00 00 00H
  00 00 1F 19H
```

F0	41	10	6A	11	01 00 00 00	00 00 1F 19	??	F7
(1)	(2)	(3)	(4)	(5)	address	size	checksum	(6)

(1) Exclusive status (2) ID number (Roland) (3) device ID(17)
(4) model ID (JV-2080) (5) command ID (RQ1) (6) EOX

Calculating the checksum as shown in <Example 2>, we get a message of F0 41 10 6A 11 01 00 00 00 00 00 1F 19 47 F7 to be transmitted.

<Example 4> Retrieving the Temporary Performance data together with all Temporary Part and Rhythm Set data (RQ1)

Note: When a data transfer is executed in Utility mode, the data that is accessed will be the same as that which is transmitted when the Type parameter is set to PERFORM and the Source parameter is set to TEMP: +PATCH

The "Parameter address map" gives the following start addresses for Temporary Performance, Performance Mode Temporary Patch and Performance Mode Temporary Rhythm.

01 00 00 00H	Temporary Performance
02 00 00 00H	Performance Mode Temporary Patch(part 1)
:	
02 08 00 00H	Performance Mode Temporary Patch(part 9)
02 09 00 00H	Temporary Rhythm Setup
02 0A 00 00H	Performance Mode Temporary Patch(part 11)
:	
02 0F 00 00H	Performance Mode Temporary Patch(part 16)

The Patch offset addresses are as follows.

00 00H	Patch Common
10 00H	Patch Tone 1
:	
16 00H	Patch Tone 4

Since Patch Tone has a size of 00 00 01 01H, we add this size to the start address of Performance Mode Temporary Patch (Part 16) Tone 4, to get:

```
  02 0F 00 00H
     16 00H
+) 00 00 01 01H
  02 0F 17 01H
```

Thus, the size of the retrieved data will be:

```
  02 0F 17 01H
-) 01 00 00 00H
  01 0F 17 01H
```

F0	41	10	6A	11	01 00 00 00	01 0F 17 01	??	F7
(1)	(2)	(3)	(4)	(5)	address	size	checksum	(6)

(1) Exclusive status (2) ID number (Roland) (3) device ID(17)
(4) model ID (JV-2080) (5) command ID (RQ1) (6) EOX

Calculating the checksum as shown in <Example 2>, we get a message of F0 41 10 6A 11 01 00 00 00 01 0F 17 01 57 F7 to be transmitted.

● Scale Tune function (Model ID : 42H (GS), address: 40 1x 40H)

Scale Tune is a function that makes fine adjustments to the pitch of each note C-B. Settings are made for one octave, and applied to the notes of all octaves. By making Scale Tune settings you can use tunings and temperaments other than the standard Equal Temperament. Here we give three types of settings as examples.

* Scale tune messages for any parts are recognized in the patch mode.

○ Equal temperament

This temperament divides the octave into 12 equal steps, and is the temperament most frequently used today, especially in western music. Initially, the Scale Tune function of this instrument is set to Equal Temperament.

○ Just intonation (tonic of C)

The primary triads sound more beautiful in just intonation than in equal temperament. However, this applies only in one key, and chords will be discordant if you play in a different key. The settings here are for a tonic of C.

○ Arabian-type scale

The Scale Tune function allow you to use various tunings of ethnic music. Here is one of the Arabian scales.

Setting examples

Note	Equal Temp.	Just (in C)	Arabian-type scale
C	0	0	-6
C#	0	-8	+45
D	0	+4	-2
E♭	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
B♭	0	+14	-10
B	0	-12	-49

The values in the above table are in units of 1 cent. Convert these values to hexadecimal, and transmit them as exclusive data. For example to set the Scale Tune of Part 1 to an Arabian-type scale, transmit the following data.
F0 41 10 42 12 40 11 40 3A 6D 3E 34 0D 38 6B 3C 6F 40 36 0F 50 F7

SYNTHESIZER MODULE

Model JV-2080

MIDI Implementation Chart

Date : Oct. 30, 1996

Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic	Default	X	1 — 16	
Channel	Changed	X	1 — 16	
Mode	Default	X	Mode 3	
	Messages	X	Mode 3, 4 (M=1)	* 2
	Altered	**********		
Note Number :	True Voice	X **********	0 — 127 0 — 127	
Velocity	Note ON	X	O	
	Note OFF	X	O	
After Touch	Key's	X	O *1	
	Ch's	X	O *1	
Pitch Bend		X	O	
Control Change	0, 32	x	O *1	Bank select
	1	x	O	Modulation
	2	x	O	Breath type
	4	x	O	Foot type
	5	x	O	Portamento time
	6, 38	x	O	Data entry
	7	x	O	Volume
	8	x	O	Balance
	10	x	O	Panpot
	11	x	O	Expression
	64	x	O	Hold 1
	65	x	O	Portamento
	66	x	O	Sostenuto
	67	x	O	Soft
	69	x	O	Hold 2
	71	x	O (Resonance)	Sound Controller 2
	72	x	O (Decay Time)	Sound Controller 3
	73	x	O (Attack Time)	Sound Controller 4
	74	x	O (Cutoff)	Sound Controller 5
	80	x	O (Tone 1 Level)	General Purpose Controller 5
	81	x	O (Tone 2 Level)	General Purpose Controller 6
	82	x	O (Tone 3 Level)	General Purpose Controller 7
	83	x	O (Tone 4 Level)	General Purpose Controller 8
	84	x	O	Portamento control
	91	x	O (Reverb)	General purpose effects 1
	93	x	O (Chorus)	General purpose effects 3
	1 — 5, 7 — 31, 64 — 95 *3	x	O	CC1 (General purpose controller 1)
	1 — 5, 7 — 31, 64 — 95 *3	x	O	CC2 (General purpose controller 2)
	98, 99	x	x	NRPN LSB, MSB
	100, 101	x	O	RPN LSB, MSB
Program Change	: True #	X **********	O *1 0 — 127	Program No. 1—128
System Exclucive		O	O *1	
System Common	: Song Pos	X	X	
	: Song Sel	X	X	
	: Tune	X	X	
System Real Time	: Clock	X	O *1	
	: Commands	X	X	
Aux Message	: All sound off	X	O (120, 126, 127)	
	: Reset all controllers	X	O	
	: Local ON/OFF	X	X	
	: All Notes OFF	X	O (123 — 127)	
	: Active Sense	X	O	
	: System Reset	X	X	
Notes		* 1 O X is selectable. * 2 Recognized as M=1 even if M≠1. * 3 Can be changed settings.		

Mode 1 : OMNI ON, POLY
Mode 2 : OMNI ON, MONO
Mode 3 : OMNI OFF, POLY
Mode 4 : OMNI OFF, MONO

O : Yes
X : No

Specifications

JV-2080 : 64 Voice Synthesizer Module
(Conforms to General MIDI System)

● Parts
16 (Part 10 is Rhythm Part.)

● Maximum Polyphony
64 voices

● Effects
EFX : 40 sets
Reverb : 1 set (8 types)
Chorus : 1 set

** In a Performance mode, three different EFX can be used simultaneously.*

● Memory

	Patches	Rhythm Sets	Performances
USER	1—128	1, 2	1—32
CARD	1—128	1, 2	1—32
(DATA Card (M-512E))			
PR-A	1—128	1, 2	1—32
(Preset-A)			
PR-B	1—128	1, 2	1—32
(Preset-B)			
PR-C	1—128	1, 2	---
(Preset-C)			
PR-D	1—128	1, 2	---
(GM (General MIDI))			
PR-E	1—128	1, 2	---
(Preset-E)			

--- : None

** Preset-D patches and rhythm sets are for General MIDI System.*

** DATA Card (M-512E) is optionally available.*

● Display
320 x 80 dot Graphic LCD (with backlit)

● Connectors
MIX Output jacks (L, R)
DIRECT 1 Output jacks (L, R)
DIRECT 2 Output jacks (L, R)
Headphones jack (stereo)
MIDI connectors (IN, OUT, THRU)
Wave Expansion Board Slots (A—H)
DATA Card Slot

● Power Supply
AC 117 V, AC 230 V, or AC 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
4.9 kg / 10 lbs 13 oz

● Accessories
Quick Start
Owner's Manual
Power-supply cord

● Options
Memory Card (M-512E)
Wave Expansion Board (SR-JV-80 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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A

B

C

D

E

F

G

H

I

J

Q

R

S

T

U

V

W

Others

For Nordic Countries

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.

VARNING!
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

ADVARSEL!
Lithiumbatteri - Eksplosjonsfare.
Ved utskifting benyttes kun batteri som anbefalt av apparatfabrikanten.
Brukt batteri returneres apparatleverandøren.

VAROITUS!
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

For Europe

CE

This product complies with the requirements of European Directives EMC 89/336/EEC and LVD 73/23/EEC.

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

CLASS B **NOTICE**
This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

CLASSE B **AVIS**
Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Règlement des signaux parasites par le ministère canadien des Communications.

Information

When you need repair service, call your local Roland Service Station or the authorized Roland distributor in your country as shown below.

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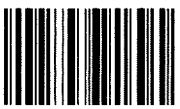

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